Contraindications in Osteopathy

Master Thesis

for the academic grade

Master of Science in Osteopathy

Danube University Krems

and the Vienna School of Osteopathy

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Thalheim, June 2009

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Declaration

I hereby declare to have written this master thesis entirely by myself.

All passages that have been adopted either literally or contextually from published or non-published works are marked accordingly. I have indicated all sources and auxiliary material used in this work. The Thesis in the present version has never before been submitted to another board of examination.

Date: 26. 05. 2009

Anna Gatterbauer

ACKNOWLEDGEMENT

I would like to thank all those who have supported me in writing this thesis.

First and foremost I would like to thank the six osteopaths who agreed to participate in an interview. I would also like to mention Dr. Erich Mayer-Fally, Peter Sommerfeld, Bernard Ligner and the three anonymous experts, whose help was vital for the empirical part of this thesis. Thank you for your time and valuable suggestions.

I also want to thank David Wimmer and Theresa Gatterbauer, who have shown great patience in sharing with me their knowledge of information technology.

Eveline Grolmusz deserves my gratitude for helping me with the time-consuming task of transcribing the interviews. I would also like to thank Susanne Pauer, who has agreed to translate this thesis into English.

And finally, I would like to express my gratitude to Kathie Musil for the supervision of this thesis. Even though she was responsible for the supervision of several theses, she answered my questions quickly and gave me a lot of important suggestions and ideas.

ABSTRACT

Topic: Contraindications in osteopathy

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This thesis aims to give an overview of the contraindications for osteopathic treatment as a whole and for specific osteopathic techniques. The goal of this thesis is to discover whether there is a general consensus on this topic in osteopathy. In the first section, we will take a close look at contraindications in academic literature, and determine whether or not they concur. As there is very little literature, especially on visceral and craniosacral techniques, open interviews, based on a common outline, have been conducted with six experts. The information gained from these interviews has been interpreted using qualitative content analysis according to Mayering (2000) and compared with the findings of academic literature.

Results: In academic literature there seems to be a basic consensus about contraindications in osteopathy. With some clinical contraindications, however, there are different opinions on whether they are absolute or relative contraindications. The experts interviewed mostly agreed with the data found in academic literature, especially on contraindications for visceral techniques. Views on structural and craniosacral techniques are far more divergent. With regard to contraindications for osteopathic treatment, the experts did not contradict academic literature, but elaborated on these ideas. A topic that has caused controversy between the experts is the question of the flexibility of contraindications, that is to say, the issue of whether contraindications for certain osteopathic techniques differ depending on the experience of the therapist. This aspect could be a starting point for further research.

PREFACE

First of all, I would like to provide some explanations that should help the reader in understanding this thesis. The table of contents and the list of tables in the beginning of this thesis give an overview and help to find certain topics quickly. At the end of this paper, you will find a list of abbreviations and used terms (see chapter 8 and 9, the bibliography (see chapter 7) and the interview outline (see chapter 10.1). Due to space considerations, transcripts of the interviews have not been added to this thesis. All words printed in bold in the body of the text can be found in alphabetical order in the list of terms (see chapter 9). Also in alphabetical order, you will find the quoted authors and the exact bibliographical reference (see bibliography, chapter 7). I would also like to point out that in this thesis 'he' has been used in certain contexts to mean 'he or she' in a general sense.

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1 INTRODUCTION

In osteopathic treatment, knowledge about contraindications is vital for safe and responsible therapy (Mayer-Fally, 2007). In this master thesis, we are going to take a closer look at the following questions: "What contraindications are there in Osteopathy? To what extent are these assessed in the same way by the experts questioned as by the literature?". My interest in this topic was ignited by personal experiences as well as information I gained in lectures.

It is a fact that more and more patients arrive in our practices without having consulted a doctor first. In this situation it is vital to find out if an osteopathic treatment is advisable, if another form of therapy would be more beneficial in this case or if a doctor should be consulted. Even if a therapy has been decided on, the therapist has to know exactly which risks are associated with different treatments, to ensure that the patient benefits from the therapy instead of suffering from side effects.

The lectures I have attended at the Vienna School of Osteopathy have made it clear for me that even lecturers do not always agree on contraindications for different techniques. One example is the manipulation (HVLA technique) of a vertebral segment when treating a slipped disk; a topic even academic literature disagrees on. Greenman (2005) for example explains that proponents of manipulation see it as the treatment of choice, while others see a slipped disk as a contraindication for manipulation. He explains that he has achieved good results with manipulation when treating radiographically established cases of slipped disk:

"Die Verfechter der Manipulation sehen in ihr die Therapie der Wahl, wohingegen in anderen Schulen eine Diskushernie als Kontraindikation für eine Manipulation gilt. Der Autor selbst hat bei bekannten radiologisch gesicherten Bandscheibenvorfällen Manipulationstechniken Erfolge erzielt." mit gute (Greenman, 2005, p.114)

A study into the side effects and risks of manipulating the vertebral column paints a less positive picture:

"Serious Adverse Events: A comprehensive review of the literature published in 1996 identified 295 cases of complications following spinal manipulation. These included 165 vertebrobasilar accidents, 61 cases of disk herniation or progression of radicular symptoms to cauda equine syndrome, and 13 other cerebral complications." (Stevinson and Ernst, 2002, p.567)

It is the existence of such contrasting statements as those given above that has given me the idea of taking a closer look at the topic of contraindications in osteopathy.

In the field of osteopathy, this is especially important for the creation of a common standard that all osteopaths can adhere to. Such a standard could help to establish a consensus on which treatment pathways are appropriate for patients. Only if such a common consensus, which already exists in mainstream medicine and the health system as a whole, is reached, can osteopathy hope to be generally recognised as a valid form of treatment (Mayer-Fally, 2007).

Hopefully, this thesis will help to ensure safer osteopathic treatment for patients and protect them from side effects of osteopathic techniques, in addition it is hoped that this thesis will inform doctors and the general public about the topic. It is vital to create a general standard that helps to decide when osteopathy is indicated and when it is not.

This thesis, which is based on qualitative research, consists of two parts – a comparison of academic literature and interviews with experts. I will begin by defining the term contraindication and by discussing the topic contraindications for osteopathic therapy. Secondly, I will take a closer look at contraindications for specific osteopathic techniques. The chapter on structural techniques will mainly

focus on divergent views on the topic of manipulation. As contraindications for **visceral** and cranial techniques have not yet been covered very extensively in academic literature, I will limit myself to the results of the interviews, as fare as these topics are concerned. Finally, I will summarise and discuss what can be called a general consensus about contraindications in osteopathic treatment.

2 CONTRAINDICATION - A DEFINITION

The word contraindication is derived from the Latin "contra" = against and "indicare" = indicate. In medicine, an indication is a cogent reason for the use of a certain medicine or therapeutic method to cure a specific illness. The less indicated a method is, the stricter is the duty to inform the patient about possible risks. A contraindication is a circumstance under which a certain therapeutic method is not advised, because it might cause the patient harm (Mayer-Fally, 2007).

In medicine, there is also the distinction between an "absolute" and a "relative" contraindication. An absolute contraindication is a circumstance which absolutely rules out the use of a therapeutic method which would otherwise be indicated. For example, a patient who has had an allergic reaction to penicillin once can never again be treated with this substance. A relative contraindication means that the risks of a treatment have to be carefully assessed before that treatment is initiated, and it can only be administered if its benefits to the patient are greater than its risks (Pschyrembel, 1994). One example would be the use of X-rays in pregnant women. Pregnancy is normally a contraindication for X-rays, because the unborn child could be harmed - the only exception is an absolute necessity for the health of the mother (MedTerms, 2003).

The following quote might outline the term contraindication in a therapeutic context:

"Contraindications provide a basic framework for understanding when, and under what circumstances, a particular therapeutic intervention is appropriate for treating the patient/client with minimal risk of injury. Therefore, contraindications serve as a guideline to help us determine if we should institute certain precautions in treatment, withhold treatment altogether, or recommend alternative treatments that would be more appropriate." (Batavia, 2003) In the context of osteopathy, a contraindication for osteopathic treatment or techniques can be very clear in some cases, for example if the life of the patient is endangered. In other cases, the indication or contraindication for a therapeutic method is not as clear and depends on various factors, which will be explained in more detail in the following chapters.

3 CONTRAINDICATIONS FOR OSTEOPATHIC TREATMENT

This chapter will provide an outline of the principal viewpoints to be found in academic literature on the subject of contraindications for osteopathic treatment. The main sources for these opinions are reference books on medicine and osteopathy. Only one of the authors of reference books on osteopathy whom I have quoted here (Croibier, 2006) uses mainly textbooks on osteopathy and anatomy as their main sources. The other authors (Liem and Dobler, 2002; Hartman, 1996; Ingram, s. a.) also use articles from professional journals. On the topic of medical law and ethics, the sources are legislation (for example the Austrian Civil Code, 1 ABGB) or professional journals and collections of essays.

3.1 Absolute contraindications

No system of medical treatment is free from contraindications with regard to use, duration and dosage of treatment. There are many possible views on contraindications for osteopathic treatment (Hartman, 1996). According to Liem and Dobler (2002), an osteopathic treatment should never be administered (absolute contraindication), if no diagnosis exists, contraindications have not been established, the patient has not given permission, the patient has not been examined thoroughly or if due to pain it is not possible for the patient to assume a relaxed position. Ingram (s. a.), describes contraindications for osteopathic treatment in his master thesis on the topic "The manipulation of a lumbar spine prolapsed intervertebral disk - risk or relief". He states the following: A contraindication is established by combining the medical history of the patient, their symptoms and the examination and shows the possible risks of a treatment. All these statements show the importance of the diagnosis for osteopathic treatment. A diagnosis by exclusion is made whenever the osteopath encounters ailments in a patient that exceed his area of expertise (Croibier, 2006). For the sake of clarity, the above mentioned contraindications will now be ranked by the frequency of their occurrence in the works of different authors (see Table 1).

Mentioned by several authors	Absolute contraindication - osteopathic treatment – factors independent of therapist
Liem and Dobler, 2002	No permission given by patient
Mayer-Fally, 2007	
Missliwetz and Ellinger, 1992	
Sass, 1989	
Mentioned by some few	Absolute contraindications - osteopathic
autions	treatment – factors dependent on therapist
Liem and Dobler, 2002	treatment – factors dependent on therapist No diagnosis
Liem and Dobler, 2002 Croibier, 2006	No diagnosis Contraindications not established
Liem and Dobler, 2002 Croibier, 2006	treatment – factors dependent on therapistNo diagnosisContraindications not establishedNo thorough examination of the patient has been conducted

Table 1: Absolute contraindications for osteopathic treatment

An important criterion when considering contraindications from a legal point of view are the rights and duties of the doctor, the therapist and the patient. Every treatment is based on a contract governing medical treatment – for doctors this is a contract of service without guarantee of recovery. This contract is established as soon as doctor and patient have agreed on a course of treatment. For the doctor or therapist, this agreement can only be reached after having informed the patient comprehensively about the treatment and the possible risks. The character and extent of the doctor's duty of disclosure is not defined by law. This means that a doctor has a duty to inform their patient about the intervention and its extent as well as about the most likely complications and the greatest risks. They are not, however, obliged to mention every possible side effect (Missliwetz and Ellinger, 1992). Therapists also have a duty to inform patients about all details relevant to the treatment and to alert them to possible risks. The extent of this disclosure has to be decided on an individual basis so as to provide a sound basis for the decision of the patient. The lower the degree of medical necessity and the higher

the likelihood of complications, the more extensive the information provided to the patient needs to be (Görny, 2007). After the patient has been informed, it is their decision, whether or not they are going to give their consent to the treatment. Without the consent of the patient, treatment cannot start (Missliwetz and Ellinger, 1992; Görny, 2007). This applies to doctors as well as to therapists and is an important absolute contraindication for a therapeutic, osteopathic or medical treatment.

Another absolute contraindication is any ailment or illness that puts the patient in mortal danger and calls for a medical or surgical emergency treatment (Croibier, 2006). These emergencies are disorders related to internal medicine, vascular diseases as well as neurological, gynaecological and psychiatric illnesses (see Table 2). If any of these circumstances apply, the patient has to receive medical care (Mayer-Fally, 2007).

Mentioned by some few authors	Absolute contraindications – osteopathic treatment - patient is in mortal danger	
Croibier, 2006	Patients is in need of medical or surgical emergency treatment	
Mayer-Fally, 2007	Afflictions related to internal medicine:	
	Hypertonic crisis (blood pressure from 190/110 with related symptoms)	
	Acute abdominal pain (for example strong pain with abdominal guarding)	
	Sudden, inexplicable, strong vomiting and/or diarrhoea	
	Tendency to collapse (low blood pressure, vertigo, nausea, sweating)	
	Thoracic pain (with vegetative symptoms)	
	Untreated cardiac insufficiency II-IV (shortness of breath, obvious oedema)	
	Untreated tachycardiac-bradycardiac dysrhythmia (arrythmic pulse and/or pulse rate of over 95 or under 50 in a resting adult)	

Table 2: Absolute clinical contraindications for osteopathic treatment

	Vascular disorders:
	Suspected acute vascular obliterations (<i>venous:</i> unclear oedema, tenderness; <i>arterial:</i> Pale extremity, livid colouring, no pulse in extremities, strong pain)
	Neurological disorders:
	Acute, strong headache (possibly in combination with vomiting and nausea)
	Acute neck stiffness (in combination with fever and signs of meningism)
	Strong unexplained vertigo
	Unclear, acute paresis
	Conus-cauda syndrome
	Unexplained sudden visual disturbance
	Gynaecological disorders:
	Danger of fetal loss (vaginal bleeding, contractions)
	Strong, unexplained vaginal bleeding with strong pain or tendency to collapse
	Psychiatric disorders:
	Untreated, acute psychotic episodes
	Under-age or mentally incompetent patients without consent of the legal guardian
	Acute danger of suicide

The following excursion into medical ethics will show how complex the topic of contraindications and of the relationship between doctor and patient can be. Ethics is a branch of philosophy which seeks to address questions of moral intentions and behaviour in different situations and tries to identify moral values. When a doctor graduates from university, they swear an oath which includes the following important points: to always act for the benefit of the patient, to save lives, to do no harm, to respect the dignity of all persons and to be worthy of their patients' trust (Missliwetz and Ellinger, 1992). A doctor must always be able to justify their decisions - with regard to their own conscience, ethical norms, the rules of their profession and their patients. As mentioned before in the section about legal

regulations, a medical treatment must never begin without the consent of the patient. The patient, however, does not have the right to demand a certain form of treatment from his doctor. Generally it can be stated, that every human deed is always unique and irrevocable. This is why every person (doctor or therapist) has to be aware of the possible effects of their decisions (for example for a certain osteopathic treatment) and has to take the sole responsibility for their acts. This is made even more difficult by the fact that a doctor can never guarantee the success of a therapy and therefore never be a hundred percent sure of the effects of his decisions. One reason for this is that he can never have full knowledge of the life of his patients and all factors influencing their health. Another reason why success can never be guaranteed is that the results of all human acts have a fanshaped structure. That means that they always have results other than the ones intended. In medicine, these results are called side effects. But even if a doctor can never guarantee success, he is nevertheless obligated to be careful and diligent in the planning of his actions, so that he can guarantee that his own commitment and attitude is beyond reproach (Sass, 1989). This introduction in ethical questions should demonstrate that the decision for a certain form of therapy is not always easy or clear. We will now take a closer look at several aspects of relative contraindications for osteopathic therapy.

3.2 Relative contraindications

If no mortal danger exists for the patient, a decision for or against an osteopathic treatment is not always easy to take. A therapy must never inflict harm on a patient and if there is any risk to the patient, one should refrain from using this treatment. One example would be a manipulation on a patient when there is a risk of bleeding (see chapter 4.1.1). This underlines again the importance of knowing exactly what the contraindications are for certain techniques. If in doubt, caution is always the better course of action (Hartman, 1996).

Another example would be a situation in which osteopathic treatment does not improve an ailment - if the symptoms do not improve after three or four sessions or if the condition of the patient deteriorates. This can happen if osteopathic treatment is not the right treatment for this patient. In this case, another form of therapy, for example mainstream medicine or psychotherapy, might be much more beneficial and no time should be wasted, as the patient should undergo the right form of treatment as soon as possible (Croibier, 2006).

In this situation, the patient not only loses time, they do not even benefit from the therapy. A patient who suffers from a diagnosed systemic illness can get osteopathic therapy as a complementary or alternative treatment to mainstream medicine. In most cases this is beneficial to the healing process. If a patient suffers from the flu, however, osteopathic treatment will do little good for their back pain, as muscles and tissue will not be able to react adequately to the therapy due to the systemic disorder (Hartman, 1996).

If osteopathic treatment does not produce any obvious beneficial effect, a change to another therapist or form of therapy has to be considered. This brings us to another important point with regard to contraindications, the self-assessment of the therapist. A good therapist must know his limits and must never venture beyond his area of expertise. I would like to conclude this chapter with a quotation by Benedetto: *"Osteopathy has no limits, it's the osteopaths that are limited!"* (Benedetto, quotation by Croibier, 2007, p.38) The following table should give a clearer overview of the relative contraindications mentioned above (see Table 3).

Mentioned by some few authors	Relative contraindications – osteopathic treatment
Croibier, 2006	The therapy might present a risk to the patient (it cannot be guaranteed that the patient might not come to harm)
	Delay of time (if another form of therapy might be more effective)
	Wrong self-assessment by the therapist (to know own limits)
Hartman, 1996	Therapy does not benefit the patient

Table '	3. Polativo	contraindications for	osteonathic trea	tmont
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4 CONTRAINDICATIONS FOR OSTEOPATHIC TECHNIQUES

The following chapter will present and compare the most important opinions on the topic of contraindications for specific osteopathic techniques found in academic literature. To provide a clear structure, osteopathic techniques have been divided into three fields: the structural, the **visceral** and the **craniosacral** fields. These fields will be explained further in the respective chapters (see chapter 4.1, 4.2 and 4.3).

4.1 Structural techniques

Structural osteopathy uses techniques which work on the musculoskeletal system. The therapist mobilises and corrects structures like bones, muscles, joints, ligaments and **fasciae**. There are a great number of different structural techniques, some of which are very gentle, others rather intense (Liem and Dobler, 2002). Some techniques, namely those where shifted disks are realigned through manipulation, are part of the field of chiropractics (Pschyrembel, 1994). In osteopathy, these techniques are called manipulation or HVLA techniques. This is why the field of structural techniques is subdivided into manipulation (HVLA) and non-manipulation techniques.

4.1.1 Spinal manipulation techniques (HVLA techniques)

Before a therapist uses manipulation, the direction of the restricted movement of a specific segment of the spine is established and the patient is positioned for treatment. Through the use of well dosed force and speed, the joint is loosened in the direction of the restriction. The name "HVLA technique" describes a technique using high velocity and low amplitude thrusts (Liem and Dobler, 2002). The movement does not violate the anatomical limits of the body and lies within the body's normal range of movement (low amplitude). The aim of this technique is to

re-establish the mobility of the joint (Lesho, 1999). Physiological and neurological effects on the manipulated joint are also being discussed (Liem and Dobler, 2002).

Thrust techniques have the highest number of contraindications compared to other osteopathic techniques (Wainapel and Fast, 2003). In the following, we will look separately at clinical and technical contraindications.

4.1.1.1 Clinical contraindications

We will start with the clinical contraindications, or clinical pictures, which are considered a contraindication for the use of a HVLA technique. Clinical contraindications can be divided into relative and absolute contraindications (see chapter 2).

Absolute contraindications are bone diseases which lead to a considerable weakening, like for example tumours, metastases, infections (e.g. tuberculosis), metabolic processes (e.g. **osteomalacia**), congenital conditions (e.g. **dysplasia**), **iatrogenic** factors (e.g. long term treatment with **corticosteroids**/cortisone), inflammations like serious rheumatic **arthritis** (Polyarthritis, **ankylosing spondylitis**, **Reiter's disease**) and traumatic injuries (e.g. bone fractures). An absolute contraindication also exists if the patient suffers from a neurological disorder (e.g. **cervical myelopathy**), spinal cord compression, **cauda equina** compression or nerve root compression with increasing neurologic deficits. A third major area of contraindications is vascular disease: diagnosed **vertebrobasilar arterial insufficiency, aortic aneurysm** and bleeding diatheses, for example serious **haemophilia** (Gibbons and Tehan, 2004; Liem and Dobler, 2002, Mayer-Fally, 2007).

Croibier (2006) publishes a very extensive list of absolute contraindications in his book. In addition to the above mentioned, Croibier lists further vascular diseases,

namely venous thrombosis, angina pectoris, heart attack and medicamentous anticoagulation. He also mentions congenital or acquired morphological disorders. These could be deformations of the spine, for example, which lead to the formation of fused vertebrae or instabilities such as fused vertebrae, spina bifida, abnormalities of the lumbosacral or craniocervical junction and vertebral osteosynthesis. Greenman (2005) also mentions genetic disorders such as Down Syndrome, because they can lead to congenital abnormalities of the cervical spine. Vickers and Zollmann (1999) draw attention to another important area of contraindications - unstable joints. They mention post-traumatic instability like dislocation, luxation and ruptured ligaments. Another contraindication for manipulation techniques according to Giles and Singer (1997, 2000) is visceral referred pain, obvious spinal deformity, congenital general hypermobility and synovial cysts in the area of the thoracic spine. For Koss (1990), acute injury of the cervical spine like whiplash, acute vertigo without clarification and acute slipped disk are absolute contraindications during the 72 hours after the incident, if the manipulation is to be administered on the affected segment. According to Wainapel and Fast (2003), in addition to an acute slipped disk with radiculopathy, osteoporosis and spondylolisthesis are absolute contraindications for an HVLA technique. For a better overview, all absolute clinical contraindications mentioned above will be shown in the following table. Contraindications which are considered to be absolute as well as relative contraindications in academic literature, are written in *italics* (see Table 4).

Mentioned by several authors	Absolute clinical contraindications - manipulation
Gibbons und Tehan , 2004	Bone diseases:
Liem und Dobler, 2002	Tumours, metastases
Mayer-Fally, 2007	Infections (bone tuberculosis, discitis)
Wainapel und Fast, 2003	Metabolic (osteomalacia)
Koss, 1990	Congenital (spina bifida, dysplasia, deformations of the spine)
	latrogenic (long treatment with cortisone)

Table 4: Absolute clinical	contraindications for mani	pulation techniques

	Inflammation (rheumatological disorders)
	Traumata (fractures)
	Neurological disorders:
	Slipped disk with neurological symptoms
	Cervical myelopathy
	Cord compression
	Cauda equina syndrome
	Vascular disorders:
	Serious bleeding diathesis (haemophilia, <i>anticoagulation</i>)
	Insufficiency/stenosis of the vertebral/carotid artery
	Aortic aneurysm
Mentioned by some few authors	Absolute clinical contraindications - manipulation
Croibier, 2006	Vascular and morphological pathology:
	Venous thrombosis
	Angina pectoris
	Heart attack
	Abnormalities of the lumbosacral/craniocervical junction
	Vertebral osteosynthesis
Greenman, 2005	Genetic disorders (Down Syndrome)
Vickers and Zollmann,1990 Mayer-Fally, 2007	Acute posttraumatic instability (dislocation, luxation and ruptured ligaments)
Giles and Singer, 1997	Congenital general hypermobility
Giles and Singer, 2000	Synovial cysts in the area of the thoracic spine
	Visceral referred pain
	Obvious spinal deformity
	General hypermobility
Koss, 1990	Acute whiplash
	Acute vertigo
Wainapel and Fast, 2003	Osteoporosis
	Spondylolisthesis

Relative contraindications include the following disorders of the musculoskeletal system: disk prolapse and protrusion, inflammatory joint processes, hypermobility or ligamentous laxity, spondylolisthesis, minor osteoporosis, serious degenerative joint diseases and **spondylosis**. In the field of vascular disorders, arterial calcification, arterial hypertension and the intake of anticoagulants are mentioned as relative contraindications. Other relative contraindications for a thrust technique are mental disorders (hysteria, neuroses, vertigo, pregnancy, systemic infections and psychoses). psychological dependence upon manipulation (Gibbons and Tehan, 2004; Liem and Dobler, 2002). According to Eck and Circolole (2000), acute soft-tissue injuries and postsurgical joints are also to be considered as relative contraindications. Vickers and Zollmann (1999) are more specific in their description of postsurgical joints they refer to postsurgical joints with clinical signs of acute inflammation and instability. Giles and Singer (1997, 2000) also mention non-diagnosed pain with a psychological overlay and herpes zoster on the thoracic spine as relative contraindications. According to Croibier (2006), risk and benefit also have to be carefully evaluated where growing children (skeletal growth), peripheral nerve entrapment, serious scoliosis/kyphosis and serious spinal arthritis are concerned. The following table shows all the relative clinical contraindications mentioned above. Contraindications which in academic literature are considered to be absolute as well as relative contraindications are written in *italics* (see Table 5).

Mentioned by several authors	Relative clinical contraindications – manipulation
Gibbons und Tehan, 2004	Bone and joint diseases:
Liem und Dobler, 2002	Disk herniation and disk protrusion
Croibier, 2006	Inflammatory joint processes
Hartman, 1996	Hypermobility or ligamentous laxity
Koss, 1990	Spondylolisthesis
	Minor osteoporosis
	Serious degenerative joint diseases

Table 5: Relative clinical contraindications for manipulation techniques

	<u>Vascular disorders:</u> Arterial calcification <i>Medicamentous anticoagulation</i> Arterial hypertension	
	Mental disorders:	
	Hysteria	
	Neurosis	
	Psychosis	
Mentioned by some few authors	Relative clinical contraindications - manipulation	
Eck and Circolone, 2000	Acute soft-tissue injuries	
Vickers and Zollmann (1999)	Postsurgical joints with clinical signs of acute inflammation and instability	
Giles and Singer, 1997	Pain with a psychological overlay	
Giles and Singer, 2000	Herpes zoster on the thoracic spine	
Croibier, 2006	Growing children	
	Serious kyphosis and scoliosis	
	Peripheral nerve entrapment	
Gibbons and Tehan, 2004	Vertigo	
	Systemic infections	
	Psychological dependence upon manipulation	
	Long term treatment with cortisone	
	Pregnancy	

It is already becoming clear that literature does not always agree on whether a particular affliction or situation should be considered an absolute or a relative contraindication. In the following, we will have a closer look at those aspects on which academic literature is not entirely in agreement.

We will begin with the much discussed topic of manipulation on patients who suffer from a slipped disk. Some authors see an acute **disk herniation** with neurological

symptoms as an absolute contraindication for the use of the HVLA technique (Wainapel and Fast, 2003; Koss 1990). One reason for this can be found in Raoux (1995-1996),who mentions disk prolapse in his diploma thesis. "Contraindications to spinal manipulation", as an absolute contraindication, because no clinical trials exist on the specific effects of a thrust technique on a patient suffering from a slipped disk. Most other authors, however (Gibbons and Tehan, 2004; Hartman, 1996; Liem and Dobler, 2002; Giles and Singer, 1997) see a slipped disk or a disk protrusion only as a relative contraindication. Koss (1990) sees a chronic disk disease as a relative contraindication, but considers an acute slipped disk an absolute contraindication of an HVLA technique. It is vital to assess the risks and benefits before using impulse manipulation, because the danger of increasing the damage to the spine and possible nerve compressions is very high. Greenman (2005) differs completely here. For him, a disk prolapse is an indication not against, but for the thrust technique. The author has successfully treated radiologically established slipped disks with manipulation techniques. After the manipulation, medical imaging did not show any significant changes in the disk tissue. Also Giles and Singer (1997) state that an uncomplicated slipped disk can be treated effectively with the help of manipulation therapy.

Vascular disorders are another topic that sparks dissent, like for example **aneurysms** and medicamentous **anticoagulation**. For most authors (Vickers and Zollmann, 1999; Wainapel and Fast, 2003; Koss, 1990; Croibier, 2006; Gibbons and Tehan, 2004; Liem and Dobler, 2002), **aortic aneurysms** as well as **aneurysms** of the head and neck, if detected, constitute an absolute contraindication for manipulation techniques, while Eck and Circolone (2002) see **aneurysms** as a relative contraindication. On the other hand, most authors (Vickers and Zollmann, 1999; Eck and Circolone, 2000; Giles and Singer, 1997; Giles and Singer, 2000) classify **anticoagulants** as a relative contraindication for an HLVA technique, while for others they constitute an absolute contraindication (Wainapel and Fast, 2003; Koss, 1990; Croibier, 2006).

Another controversial topic is **osteoporosis**. Most of the authors (Vickers and Zollmann, 1999; Eck and Cicolone, 2000; Croibier, 2006; Liem and Dobler, 2002; Gibbons and Tehan, 2004) consider this a relative contraindication. In their opinion, an individual decision, based on the severity of the **osteoporosis** and the individual knowledge and experience of the therapist, has to be taken for every patient (Croibier, 2006). Some authors however (Giles and Singer, 1997; Wainapel and Fast, 2003; Koss 1990; Ernst, 2001) are stricter in their views on this topic. They argue that there is a risk of causing a pathologic spine fracture. To establish the risk of a fracture, the bone density must be measured.

Furthermore, no consensus can be found regarding spondylolisthesis and morphological deformations as contraindications. severe Instability and **spondylolithesis** are mostly quoted as relative contraindications (Croibier, 2006; Gibbons and Tehan, 2004; Liem and Dobler, 2002; Vickers and Zollmann, 1999; Eck and Circolone, 2000). But some authors (Greenmann, 2005; Giles and Singer, 2000; Wainapel and Fast, 2003) consider these clinical presentations as an absolute contraindication for thrust techniques. The use of HVLA technique on a hypermobile joint is questionable, as the aim of manipulation is the reestablishment of the joint's mobility. When treating a patient with hypermobility, the therapist should examine the neighbouring segments and find out if any restriction of motion exists there.

Congenital and acquired spinal deformity is normally seen as an absolute contraindication (Giles and Singer, 1997; Giles and Singer, 2000; Gibbons and Tehan, 2004; Liem and Dobler, 2002). Giles and Singer (1997, 2000) consider severe spinal deformity as an absolute contraindication, but on the other hand they see mild vertebral **anomalies** as a relative contraindication. Some authors (Greenman, 2005; Croibier, 2006) also list severe **kyphosis** and **scoliosis**, an **anomaly** of the **dens axis** and Down syndrome as relative contraindications. Even if the bone structure is altered, an HVLA technique can be used if the therapist

localises the spot exactly and administers the mobilisation with extreme care. In this case, the mobility of the joint can be re-established (Greenman, 2005).

In summary it can be said that some contraindications for manipulation techniques on the spine are seen in very different ways by different authors. The literature used in this chapter mainly consists of articles from professional journals, because even the authors of the books mentioned above (Gibbons and Tehan, 2004; Giles and Singer, 1997; Giles and Singer, 2000; Liem and Dobler, 2002) used mainly professional journals as their sources. It has to be stated, however, that most of the professional articles that are quoted in the books have been published at an earlier date than the articles used directly.

4.1.1.2 Technical contraindications

will discuss technical contraindications In this chapter. those we contraindications that are individually dependent on the therapist and the patient. First of all, the selection of a patient has to be mentioned. When a patient first comes to see an osteopath, an osteopathic diagnosis has to be established from the **case history**, the examination and existing diagnostic findings (for example Xray). This diagnosis helps the therapist to decide which techniques can and cannot be used on this particular patient. A missing, unclear or incorrect diagnosis by the therapist is a contraindication for the use of an HVLA technique. This is why it is vital for a therapist to know how to establish a diagnosis (clinical reasoning), to assess the patient's health correctly (Liem and Dobler, 2002; Raoux, 1995-1996). Another contraindication exists, if it is clear before the start of the therapy that the manipulation will not improve the health of the patient, even if no harm is to be expected (Hartman, 1996). Because thrust techniques are considered potentially more dangerous than other treatments, risks and benefits always have to be assessed scrupulously (Gibbons and Tehan, 2004). It has to be mentioned here that the patient's permission is a prerequisite for any manipulation - if not, a contraindication exists (Liem and Dobler, 2002).

The skills and the experience of the therapist and the selection of the appropriate manipulation technique are also important factors (Liem and Doler, 2002). A therapist who is highly skilled can direct the impulse with a low amplitude and without using too much force. The use of a high amplitude, too much force or a bad positioning of the levers heightens the risk for the patient and is therefore a contraindication. The therapist must also be able to tailor treatment to the patient's individual situation. He must adapt the technique, and the positioning of the patient as well as himself, to each situation and he must listen carefully to the patient's feedback during therapy. A wrongly chosen technique, a wrong positioning of the patient, any technique that works against the muscular defence of the patient as well as missing feedback must therefore be considered contraindications (Liem and Dobler, 2002; Gibbons and Tehan, 2004; Giles and Singer, 1997; Lewit, 1992). Finally we have to take a look at the experience of different therapists. With a less experienced therapist, a technique can constitute a risk, if a relative clinical contraindication exists or if he is not skilled enough to use that technique. Such a situation would have to be seen as an absolute contraindication. An experienced therapist however, who is highly skilled in that particular technique, could probably administer the therapy without a risk to the patient (Croibier, 2006). Hartman (1996) mentions another important aspect, the "sixth sense" of an experienced therapist, which might develop with time. When an expert lays their hands on a patient's body, they often experience a sudden knowledge of an irritation of the tissue, which makes them proceed with special care. This "sixth sense" develops as a combination of knowledge acquired from books and long experience. It can be an ideal addition to a diagnosis, but should never replace it.

In conclusion, it can be stated that in the field of technical contraindications no contradictions exist, but that several authors have added complementary opinions to those of their colleagues. The main sources for this chapter are reference books on osteopathy. Most of the authors of those books have mainly used articles from professional journals as their sources (Gibbons and Tehan, 2004; Giles and Singer, 1997; Liem and Dobler, 2002; Hartman, 1996; Raoux, 1995-1996; Lewit, 1992). Croibier (2006) relied mainly on books on osteopathy and anatomy.

4.1.1.3 Side effects of manipulation techniques

There are many reports on side effects that have occurred following chiropractic manipulation of the spine. It has to be made clear that most of these articles are based on retrospective and prospective accounts and therefore can only present estimations. This method is, of course, prone to errors due to many factors, one of which is the unwillingness of therapists to report or publish severe complications, or to correctly assess the question of what has to be considered a "side effect" (Kerry et al., 2008). Furthermore, the actual number of manipulations and of persons who have undergone an HVLA treatment is not known (Gibbons and Tehan, 2004). Based on existing methodological studies, it is currently not possible to accurately calculate the risk for the patient (Kerry et al., 2008). First of all it is important to differentiate between minor, temporary and severe side effects. The numbers given on the occurrence of severe complications vary greatly. While some studies talk of one complication per 400 000 treatments, others mention only one case per 2 million manipulations. In most cases, these studies refer to side effects that occur after a patient has undergone chiropractic treatment on the cervical spine. The big variation in numbers is due to different methodologies used by the authors of the studies. Articles based only on case reports talk of 1 complication in one to two million treatments (Powell et al., 1993; Hosek et al., 1981). Retrospective studies see a frequency of 1 complication per 400 000 (Dvorak and Orelli, 1985) to 1.3 million manipulations (Klougart et al., 1996). In 30 to 61 % of all patients who undergo manipulation minor side effects occur. These are mostly temporary and disappear after 24 hours at the latest (Ernst, 2007).

Temporary side effects are for example localised pain or discomfort, headache, tiredness, radiating pain, dizziness, nausea or hyperthermia of the skin. Severe complications can be divided into reversible and irreversible impairment. **Disk prolapse** and **disk protrusion**, nerve root compression, fracture and dislocation are counted among the reversible effects. Among the irreversible effects are **Cauda equina syndrome**, spinal cord compression, **cerebrovascular** accidents

and the death of the patient (Gibbons and Tehan, 2004; Stevinson and Ernst, 2002) (see Table 6). The reason for complications after the use of HVLA techniques are often a disregard of clinical contraindications (see chapter 4.1.1.1) and an insufficient patient screening process with regard to technical contraindications (see chapter 4.1.1.2) and a wrong choice of technique (Liem and Dobler, 2002; Circolone and Eck, 2000).

Temporary effects	Severe, reversible impairment	Irreversible impairment
Localised pain or discomfort	Disk prolapse	Death
Headache	Disk protrusion	Cerebrovascular accidents
Tiredness	Nerve root compression	Spinal cord compression
Radiating pain	Fracture	Cauda equina syndrome
Dizziness	Dislocation	
Nausea		
Hyperthermia of the skin		
Paraesthesia		
Unconsciousness		

Table 6: Side effects of manipulation techniques

If we take a look at the occurrence of severe complications after the use of manipulation techniques, we can conclude that this technique is relatively safe. Most problems occur in the area of vessels and nerves (Greenman, 2005). The following numbers show approximately, where severe side effects have been reported: 66 % of patients with reported side effects suffered from **cerebrovascular** incidents, 12 % from a slipped disk, 8 % from pathologic fractures or dislocations and 3 % from a general increase of pain (Lesho, 1999; Wainapel and Fast, 2003).

There is one point on which most authors agree (Lesho, 1999; Stevinson and Ernst, 2002; Ernst, 2007; Kerry et al., 2008, Schomacher, 2007; Assendelft et al., 1996; Giles and Singer, 1998; Greenman, 2005, Gibbons and Tehan, 2004): cerebrovascular complications are regarded as the most common severe side effect after a manipulation of the cervical spine. For this reason, we will have a closer look at this kind of complication. It is the use of rotatory thrust technique for the upper cervical spine that entails the greatest risk of side effects to the vertebral arteries. This insufficient supply of blood to the brain through the vertebrobasilar arteries can be caused by a **thrombosis**, an **embolism** or a **spasm** of the artery. Some authors (Giles and Singer, 1998; Kerry et al., 2008) think that elderly persons are at a higher risk of suffering cerebrovascular complications, because they often suffer from degenerative change in vessels (arteriosclerosis) and/or in the bones of the cervical spine. Kerry et al (2008) also mentions the internal and external carotid arteries. As atherosclerotic lesions are often located at the bifurcation between the internal and the external carotid artery, manipulation of the middle and lower part of the cervical spine can also lead to cerebrovascular complications. Other authors however (Terrett and Kleynhans, 1992; Terrett, 1996; Stevinson and Ernst, 2002) do not mention any correlation between age, risk factors and vertebrobasilar accidents. Stevinson and Ernst (2002) for example claim that this complication is difficult to avoid, as it occurs more often in relatively young adults without any known **anomalies**. There are several different tests to be conducted on the cervical spine which aim to detect persons at risk. The validity of these tests as a method of finding such patients is controversial, however, as they show low sensitivity and specificity (Gibbons and Tehan, 2004). It must also be mentioned that vascular dysfunctions normally occur spontaneously and have other causes than a manipulation of the cervical spine (Ernst, 2007).

The most frequent severe side effect of a manipulation of the lumbar spine is the **cauda equina syndrome**. On this topic, too, there is a consensus to be found among authors of academic literature (Cherkin et al., 2003; Stevinson and Ernst, 2002; Lesho, 1999; Giles and Singer 1997; Ingram, 1995–1996). According to Shekelle (1992), one patient in 10 to 100 millions suffer from damage to the **cauda**

equina after having undergone an HVLA treatment on the lumbar spine; according to Assendelft (1996) this figure is 1 patient in a million. Shekelle's research is based on 58 articles from academic literature, which discuss effectiveness and complications of manipulations on the lumbar spine. Assendelft (1996) on the other hand refers to 295 complications which have been reported following chiropractic treatment of the spine. He quotes cases and other studies as well as academic literature. A cauda equina syndrome can for example be caused if a rotatory thrust technique is used with too much force (Giles and Singer, 1997). In addition to the choice of an inadequate technique and incorrect use, an insufficient patient screening process (see chapter 4.1.1.2) also increases the danger of such a complication. For patients with a slipped disk and a positive straight leg raising test of 20 degrees, an HVLA technique is contraindicated (Ingram, 1995-1996). According to Giles and Singer (1997), an acute disk prolapse, especially with neurological symptoms indicating a nerve root compression, means a higher risk of suffering a cauda equina syndrome following a manipulation. Haldeman and Rubinstein (1993), on the other hand, consider the use of thrust techniques on patients with an uncomplicated slipped disk as an effective, conservative treatment, even if there still is a risk of causing a lesion of the **cauda equina**.

Side effects of manipulations of the thoracic spine have not been described in as much detail as it is the case for the cervical spine and the lumbar spine. Oppenheim (2005) conducted a retrospective study on 18 patients and named non-vascular complications as follows: 44 % suffered from complication of the lumbar spine, 33 % of the cervical spine and 22 % of the thoracic spine. Furthermore, Giles and Singer (2000) describe the number of severe side effects affecting the thoracic spine as very low. The most common complication is a rib or vertebral fracture.

4.1.2 Non-manipulative structural techniques

There are many structural manual techniques in osteopathy apart from the HVLA technique. These techniques will be presented in this chapter under the title "non-manipulative structural techniques". These techniques aim to alleviate the dysfunction of the tissue, for example of muscles, ligaments, joints and **fasciae**, while taking into account the individual needs of each patient (Liem and Dobler, 2002). In this area, too, the establishment of an accurate osteopathic diagnosis is a vital prerequisite for deciding on the adequate technique for each person. When choosing the right technique, various factors have to be taken into account. These are the age of the patient, acute or chronic diseases, the general health of the patient, body height and skill of the therapist and whether or not other therapies have been successful in the past or are being used successfully in the present (Greenman, 2005).

There are not a great number of contraindications for non-manipulative structural techniques. Treatment should never be started without a diagnosis or the agreement of the patient, nor if the patient is not able to assume a relaxed position due to pain or if the use of the technique might result in a damage to the tissue (Liem and Dobler, 2002; Hartman, 1996). Certain clinical circumstances also represent a relative contraindication for this technique. These are acute inflammations of tissue and joints, arteriosclerotic change for example in the area of the abdominal aorta or the vertebral artery and ligamentous laxity due to rheumatic diseases, prolonged intake of **corticosteroids** (cortisone) or hemodilution. If patients are taking certain medication, for example **analgetics** and antidepressants, their feedback during therapy can be influenced. Another factor that has to be considered is the effects of the long standing abuse of drugs, alcohol or tobacco. In the case of malignancies, the therapist has to find out if the symptoms are connected to the disease or have a different, mechanical cause (Hartman, 1996).

In the following, we will take a closer look at certain non-manipulative structural techniques. These techniques vary considerably, from gentle to very intensive techniques. They can be roughly divided into direct and indirect techniques. When direct techniques are used, the restricted joint or the afflicted tissue is moved with a certain force in the direction of the restriction. This aims to re-establish the function of the tissue or the joint's arc of movement. Among those techniques are for example soft tissue techniques, muscle energy techniques (MET) and myofascial release techniques (for more details see chapter 4.1.2.1). When using an indirect method, the joint or the tissue is moved in the direction of least resistance. The position that involves the lowest tissue tension is held as long as necessary to balance tension on one or on all levels. Indirect methods include the counterstrain method, balanced ligamentous tension (BLT) treatment or indirect myofascial techniques (for more details see chapter 4.1.2.2). The general osteopathic treatment (GOT) does not belong to any of these two fields, but constitutes an independent concept for osteopathic diagnosis and treatment (see chapter 4.1.2.3) (Liem and Dobler, 2002; DiGiovanna et al, 2005; Greenman, 2005).

4.1.2.1 Direct techniques

In this chapter we will briefly explain the direct techniques mentioned above and discuss the specific contraindications for each of these techniques. Soft tissue techniques are used to treat the muscular and **fascial** structures of a restricted joint. The therapist tries to achieve a release of tension from the tissue and to improve mobility through massaging, rhythmical movement and stretching of a group of muscles (Tettambel, 2001; Ward et al., 2002). According to Tettambel (2001), the following contraindications exist for this technique: Fractures, excessive pain, undiagnosed local infections and inflammations. Nicholas and Nicholas (2007) also count acute strains, dislocations, locally affected areas of malignancy, osteoporosis, as well as neurological and vascular afflictions as contraindications for the use of soft tissue techniques.
The muscle energy technique (MET) uses active muscle contraction. The therapist positions the patient towards the restrictive barrier and the patient contracts their muscles for 3 to 10 seconds against that barrier. When the muscles are completely relaxed, the therapist moves the joint to the next barrier. The aim of this technique is to improve the mobility of the joint, to lengthen the shortened muscle and to re-establish a balance in the muscle tone (Lesho, 1999; Tettambel, 2001; Wallace, 2004). This technique relies on the active participation of the patient. A patient who is reluctant or incapable to follow instructions constitutes therefore an absolute contraindication (Tettambel, 2001; Marcer, 2003). For Liem and Dobler (2002), fractures and dislocations are also contraindications for the muscle energy technique. Tettembel (2001) adds as a contraindication muscle strain and muscles which already hurt excessively during examination and stretching. Further details can be found in Wallace (2004) and Marcer (2003). They see the instability of a joint in the area to be treated, a primary affliction of the muscles, muscle abscesses, bleeding, malignant processes and patients who cannot actively contract their muscles or control the contraction of their muscles as contraindications for this direct technique.

Myofascial release techniques can be used through a direct or an indirect method (see chapter 4.1.2.2). When using this treatment, the therapist manually stretches the **fasciae** and loosens as well as relaxes the **adhesive tissue** between fascia, muscles, skin and bones. The goal of the treatment is to reduce pain, to improve mobility and to re-establish a balance in the body. The direct technique uses slow stretching and topical pressure on the restricted **fascia**. It is also referred to as deep tissue technique (Stanborough, 2004; Ward et al., 2002; Lesho, 1999). Another direct method used in osteopathy on the **fasciae** is the fascial distortion model (FDM) according to Typaldos. This independent concept constitutes an anatomic model which attributes injuries and clinical pictures to one or more of six specific distortions/dysfunctions of the fasciae (Harrer, 2007). Typaldos (1999) lists the following clinical contraindications for the above mentioned **fascial** distortion model: vascular diseases, blood coagulation disorders, skin injuries, bone fractures, infections, cancer, **oedema**, open wounds, phlebitis, cellulitis, a history

of strokes and treatment of abdomen and pelvis during pregnancy. A non clinical contraindication according to Typaldos (1999) a well as Tettambel (2001) is a lack of cooperation by the patient or a bad doctor-patient-relationship. Nicholas and Nicholas (2007) list even more contraindications for the use of the **fascial** distortion model. These are, among others, acute strains, torsions, dislocations, affected areas of malignancy, osteoporosis as well as neurological and vascular afflictions. For deep tissue techniques, Mayer-Fally (2007) mentions the following contraindications: **bradycardia**, acute skin diseases, implants like a cardiac pacemaker, expansive tissue tumours, acute infections and inflammations of the tissue and vascular diseases.

In summary it can be said that the different direct, non manipulative structural techniques have similar contraindications, because all are used on muscles and fasciae. The following are therefore contraindications for all techniques: acute inflammations and infections, acute strains and torsions as well as fractures and dislocations. For deep techniques used on **fasciae** and tissues, contraindications are also vascular diseases and blood coagulation disorders as well as diseases and pathological changes of the skin. The main sources for this chapter are reference books for osteopathy and professional articles (Lesh, 1999; Tettambel, 2001) or lecture material (Wallace, 2004; Marcer, 2003; Harrer, 2007; Mayer-Fally, 2007). Only a few of the authors mainly used articles from professional journals as their sources (Ward et al., 2002). The other reference books (Nicholas and Nicholas, 2007; Typaldos, 1999; Stanborough, 2004) mainly refer to textbooks on osteopathy.

4.1.2.2 Indirect techniques

There are no absolute contraindications for indirect techniques in osteopathy, only relative ones (Liem and Dobler, 2002). When using the counterstrain method, also known as the Jones technique, the therapist searches for so called "tender points" in the muscles. He checks these points and moves the joint into the position that

causes the least possible pain. This position is held for 90 seconds, after which the therapist moves the joint back into its neutral position. This technique aims to alleviate the pain in the tender points and to re-establish the mobility of the joint (Ward et al., 2002; Liem and Dobler, 2002; Lesho, 1999). The contraindications for this form of therapy can be divided into technical and clinical contraindications. Technical contraindications include reluctance or lack of cooperation from the patient and a situation in which the patient is not able to stay in the relaxed position due to pain and to register the changing in the perception of pain during the joint repositioning (Lesho, 1999; Tettambel, 2001). The following are clinical contraindications: tissue traumata (acute strain and/or torsions), which could be influenced in a negative way by the positioning, severe diseases with strict rules regarding positioning that make the treatment impossible, and the possibility or diagnosis of **vertebrobasilar arterial insufficiency**, in which case excessive rotation, movement to the side and extension of the cervical spine should be avoided (Liem and Dobler, 2002; Nicholas and Nicholas, 2007).

Indirect **myofascial** techniques and balanced ligamentous tension (BLT) techniques are considered to be very gentle forms of osteopathic treatment and therefore have no contraindications. Of course, the usual security measures explained in chapter 4.2.1 still have to be taken. When using the indirect **myofascial** method, the therapist slightly stretches the restricted fascia. He keeps this position until the self healing mechanisms of the body correct and relax the fascia. The aim is a reduction of the pain and the re-establishment of the body's balance (Ward et al., 2002; Barnes, 1990). The balanced ligamentous tension (BLT) technique is another very gentle indirect technique. The therapist examines the patient with his hands and checks the tissue for pathologic tension. As soon as the dysfunction is found, he moves the tissue in the direction opposite to the barrier and waits for the area to assume a relaxed condition. This position is held until relaxation is achieved (DiGiovanna et al., 2004).

In conclusion it can be said that there are barely any contraindications for indirect osteopathic treatment, the only ones that exist are relative contraindications. This chapter is mainly based on textbooks on osteopathy and, to a small part, on articles from professional journals (Lesh, 1999; Tettambel, 2001). Some authors used professional journals as their main source (Ward et al., 2002; Liem and Dobler, 2002), while the other reference books (DiGiovanna et al., 2004; Nicholas and Nicholas, 2007; Barnes, 1990) mainly refer to textbooks on osteopathy.

4.1.2.3 General osteopathic treatment

The general osteopathic treatment (GOT) cannot be classified as either direct or indirect treatment. In this chapter, we will therefore have a separate look at the treatment and its contraindications. As mentioned above, this form of treatment constitutes an independent concept for osteopathic diagnosis and treatment. It is based on the principle of rhythm - the rhythmical movement of fluids and structures in the body. In this context, dysfunctions arise whenever this rhythmical balance of the body is unsettled. Throughout the examination and the treatment of the patient, the joints of arms, legs and the trunk are rotated in a rhythm adapted to the patient's body (Liem and Dobler, 2002). As these movements are based on a long lever, Croibier (2006) mentions the following contraindications: fractures of the extremities and the axial skeleton, **endoprosthesis** of the hip, knee or shoulder, **osteosynthesis** on the extremity before full induration, **osteosynthesis** on the spine and arterial **aneurysm**.

4.2 Visceral techniques

As the understanding of the manual treatment of organs in osteopathy is vital for the comprehension of this thesis, it will be briefly explained in the following. **Visceral** treatment is based on the following idea: Optimal functioning of the organs depends, as in all tissues of our body, on a functioning blood circulation and nerve supply. Therefore, a good mobility of the organ and its surrounding structures, especially of the ligaments and **fasciae** which keep it in place and protect it, is necessary. Restricted mobility of the organs and their **fasciae** can be detected and treated with special manual techniques (Liem and Dobler, 2002).

In the last chapter (see chapter 2), we talked about the classification of contraindications into absolute and relative contraindications. This also applies to **visceral** treatment. The following chapter uses osteopathic textbooks and lecture material as its source. Some of those books (Barral, 2002; Croibier, 2006; DeCoster, 2001) used mainly textbooks on anatomy and osteopathy as their sources. Other authors (Liem et al, 2005; Barral, 2004) also use some articles from professional journals on osteopathy. It was rather hard to find articles and studies about contraindications for visceral techniques. (search: Medline (PubMed), Osteopathic Literature Database, OSTMED; search terms: osteopathy, organ treatment, visceral osteopathic treatment, visceral manipulation, complications, safety, contraindications).

4.2.1 Absolute contraindications

Absolute contraindications in this area are damage to organs and the danger of causing damage to vessels or invasive processes, for example to favour the metastasis of a tumour, through the use of **visceral** techniques (Barral, 2005). DeCoster and Pollaris (2001) mention inflammations, feverish illnesses, acute infectious diseases, acute/inflammable diseases of the organs (for example: gastritis), **hepatitis**, tumours, **thromboses**, spontaneous occurrence of

haematoma, kidney and gall stones, implanted foreign bodies (for example: intrauterine device, pacemaker) and tuberculosis as absolute contraindications. Liem et al. (2005) add renal colic, abdominal bleeding and ileus to the absolute contraindications for visceral techniques. The most extensive list of absolute contraindications is found in Croibier (2006): acute thoracoabdominal trauma, aortic aneurysm, right ventricular insufficiency, subacute pulmonary oedema/left ventricular insufficiency, tumour of the digestive organs, acute pancreatitis, acute renal and bilious colic, organ cyst and intrahepatic haemangioma. In her lecture script "Clinical Osteopathy", Mayer-Fally (2007) mentions the following contraindications for (deep) visceral techniques: chronic and acute pancreatitis, techniques used on the uterus in the first 12 weeks of pregnancy or if an intrauterine device is in place, possibility of an aortic aneurysm, if there is a heightened danger of perforation, danger of a bowel entrapment and acute renal and bilious colic. In summary it can be said that almost all authors (Liem et al., 2005; Barral, 2005; DeCoster and Pollaris, 2001; Mayer-Fally, 2007) mention acute and inflammatory abdominal afflictions as absolute contraindications. Croibier (2006), on the other hand, adds organ cysts, intrahepatic haemangioma, and diseases of the lungs and the heart to the list of absolute contraindications.

As for the thorax, there are several contraindications for specific **visceral** techniques for the treatment of the lungs. Croibier (2006) regards certain diseases, such as **emphysema**, a recurrent **pneumothorax** and severe **osteoporosis** as absolute contraindications. According to Ligner (2005), osteoporosis as well as heart surgery in the last 9 months are absolute contraindications for dynamic techniques on the breastbone.

Treatment of the uterus is a rather controversial topic. Barral (2004) sees pregnancy, virginity and a past radiotherapy as absolute contraindications for intravaginal techniques. After the radiotherapy there is the possibility of blood coagulation disorders, which could cause vaginal bleeding during the intravaginal treatment. With regard to external techniques used on the uterus, he mentions minors who are not accompanied by parents, tumours (for example cervical cancer), tubal pregnancy, unexplained bleeding outside of menstruation, swelling of the lower abdomen and unexplained acute pain in the lower abdomen. Ligner (2007) on the other hand, views an intrauterine device as an absolute contraindication for intravaginal and deep **visceral** techniques. For him, the first 12 weeks of a pregnancy constitute an absolute contraindication even for external techniques. The following table shows all the absolute clinical contraindications mentioned above. Contraindications which in academic literature are considered to be absolute as well as relative contraindications are written in *italics* (Table 7).

Mentioned by several authors	Absolute contraindications - visceral			
Barral, 2002	Inflammatory diseases:			
DeCoster and Pollaris, 2001	Acute inflammations (hepatitis, gastritis)			
Croibier, 2006	Acute and chronic pancreatitis			
Mayer-Fally, 2007	Vascular disorders:			
	Thrombosis			
	Spontaneous occurrence of haematoma			
	Abdominal bleeding			
	Aortic aneurysm			
	Further contraindications:			
	Implanted foreign bodies: Pacemaker, intrauterine device			
Mentioned by some few authors	Absolute contraindications - visceral			
Croibier, 2006	Acute thoracoabdominal trauma			
	Right ventricular insufficiency			
	Left ventricular insufficiency			
	Subacute pulmonary oedema			
	Organ cyst			
	Intrahepatic haemangioma			
	Tumours			

Table 7: Absolute	contraindications	for visceral	techniques

Mayer-Fally, 2007 Ligner, 2007	 Techniques on the uterus in the <i>first 12 weeks of pregnancy</i> <i>Intrauterine device:</i> Intravaginal and deep visceral techniques 4-6 weeks after abdominal surgery danger of a bowel entrapment <i>Acute renal and bilious colic</i>
Croibier, 2006	<u>Techniques on the thorax/lungs:</u> Emphysema Recurrent pneumothorax Severe osteoporosis
Ligner, 2005	Dynamic techniques on the breast bone: Osteoporosis 9 months after heart surgery
Barral, 2003	Intravaginal techniques: Pregnancy Virginity After radiotherapy
Barral, 2003	External techniques on the uterus: Minors not accompanied by parents Unexplained bleedings Unexplained palpable hardening in the abdomen Unexplained acute pain in the abdomen

4.2.2 Relative contraindications

In the following we will have a closer look at the literature about relative contraindications for **visceral** techniques. As mentioned above, relative contraindications allow a treatment only if the risks and the benefits for the patient have been assessed thoroughly. DeCoster and Pollaris (2001) mention cardiovascular diseases (for example **tachycardia** and **hypertension**), **asthenia**, obstructions, menstruation and **hernia** as relative contraindications. Liem et al.

(2005) also see kidney and gall stones as well as carcinoma without acute symptoms as a relative contraindication for **visceral** techniques. Croibier (2006) on the other hand, sees severe diabetes, the intake of anticoagulants, dilatation of the upper abdominal veins, post-surgical radiotherapy, pregnancy and long lasting treatment with cortisone as relative contraindications. Ligner (2006, 2007) adds diverticula/diverticulitis, stomach and duodenal ulcer, Crohn's disease, a missing kidney, cysts and myoma in the abdomen to the list of relative contraindications. He mentions the use of an intrauterine device for women as a relative contraindication for the use of superficial visceral techniques (for example listening or "ecoute" technique) on the abdomen. Barral (2004), however, sees the existence of an intrauterine device only for intravaginal and rectal techniques as a relative contraindication. He mentions the following relative contraindications for the gynaecological field: explicable minor bleeding (for example endometriosis), infections which are being treated by a doctor as well as sensitivity or minor pain on palpation. For a better overview, all relative clinical contraindications mentioned above will be shown in the following table. Contraindications which in academic literature are considered to be absolute as well as relative contraindications are written in *italics* (see Table 8).

Mentioned by several authors	Relative contraindications - visceral
DeCoster and Pollaris, 2001	Cardiovascular diseases (hypertension, caput medusa)
Liem and Dobler, 2005	Carcinoma without acute symptoms
Croibier, 2006	Kidney and gall stones without acute symptoms
Ligner 2006 and 2007	
Mentioned by some few authors	Relative contraindications - visceral
Croibier, 2006	Severe diabetes
	Anticoagulants
	Anticoagulants Post-surgical radiotherapy
	Anticoagulants Post-surgical radiotherapy <i>Pregnancy</i>

Table 8: Relative contraindications for visceral techniques

Ligner, 2006	Diverticula/diverticulitis
Ligner, 2007	Stomach and duodenal ulcer
	Crohn's disease
	Missing kidney
	Cysts and myoma in the abdomen
	Intrauterine device: superficial visceral techniques
DeCoster and Pollaris, 2001	Asthenia
	Obstructions
	Hernia
	Menstruation
Barral, 2003	External techniques on the uterus:
	Explainable, minor bleeding (endometriosis)
	Infection
	Intrauterine device
	Sensitivity or minor pain on palpation

Finally I would like to list all those areas of the topic on which most dissent exists in literature. Among them are for example kidney and gall stones: DeCoster and Pollaris (2001) categorise them as an absolute contraindication. They are mentioned most often as a relative contraindication for **visceral** techniques (Croibier, 2006; Liem et al., 2005). Barral (2005) on the other hand sees kidney and gall stones without acute symptoms even as an indication for a specific **visceral** treatment. In his opinion, big stones do not move and smaller stones can be transported through the ureter. A well-directed osteopathic treatment can loosen the smaller stones and alleviate the patient's pain.

More contradictions exist on the topic of tumours. Tumours on digestive organs are normally seen as an absolute contraindication (DeCoster and Pollaris, 2001; Croibier, 2006). Liem et al. (2005) however, name tumours and carcinoma without acute symptoms as relative contraindications.

The **visceral** treatment of pregnant women is another controversial topic in academic literature. Barral (2004) names intravaginal techniques during the whole pregnancy as absolute contraindication. Even if no proof exists for the harmfulness of this technique, there is no proof for its beneficial effect either. Mayer-Fally (2007) and Ligner (2007) consider thus all techniques on the uterus in the first 12 weeks of pregnancy as absolute contraindications. Hartman (1996) too comments on osteopathic treatment in the first 12 weeks of pregnancy. She points out that even though the probability of causing miscarriage through osteopathic treatment is very low, statistically the likelihood of spontaneous foetal loss is highest in the first 12 to 16 weeks of the pregnancy. To avoid the risk of being made responsible for such a loss, it is sensible not to administer osteopathic treatment in the first weeks of pregnancy. Croibier (2006), however, considers the whole pregnancy a relative contraindication for **visceral** techniques.

Not much literature can be found about the topic of **visceral** techniques on patients with an intrauterine device. Only two authors (Ligner, 2007; Barral, 2004) mention this topic, and they are of different opinions. According to Ligner (2007), intravaginal and deep **visceral** techniques are absolute contraindications, while he sees superficial **visceral** techniques (e.g. ecoute technique) as relative contraindications. Barral (2004), on the other hand, sees the existence of an intrauterine device only as a relative contraindication for vaginal and rectal techniques, because a therapist with little experience could unintentionally displace the device.

4.3 Craniosacral techniques

In this chapter, we will start with a brief introduction into the field of **craniosacral** osteopathy and go on to discuss scientific studies and academic literature on the contraindications for this form of therapy. Craniosacral techniques are based on the concept of a palpable rhythmical movement of cerebrospinal fluid (liquor cerebrospinalis), which can be transmitted manually to the tissues of the body (**craniosacral** rhythm). Another concept of **craniosacral** therapy is that the cranial bones have a certain amount of flexibility and that the meninges can be moved. The therapist gently palpates the patient's body to find congestions and irritations of the rhythm and then tries to unblock them using gentle and mostly indirect techniques. The aim is to restore the functions of the body and to activate its power of self healing (Liem and Dobler, 2002; Ernst, 2001; Liem, 2005; Upledger, 1991).

It has been scientifically proven that the cerebrospinal fluid reacts to changing pressure on the body and that it changes according to the rhythm of pulse and breathing (Maier et al., 1994). However, it cannot be deducted from this that a craniosacral rhythm spreads in a wavelike way through the whole body (Nelson et al., 2006). From a scientific standpoint, existing studies on the effect and working of cranial osteopathy do not present sufficient evidence, due to faults in methodology (Green et al., 1999; Hartman, 2006). Halma et al. (2008) were able to prove the repeatability and consistency (reliability) of one therapist's examination results (intraobserver reliability) in a pilot study. There is, however, no significant consensus between the rhythm observed by two therapists examining one patient (interobserver reliability) (Sommerfeld, 2004; Wirth-Pattulo, 1994). In summary it can be said that from a scientific point of view, professional articles on the field of **craniosacral** therapy have not collected sufficient evidence for a scientific recognition of this therapy (Green et al., 1999). Nevertheless, the craniosacral concept is still an important part of the osteopathic philosophy and its holistic approach to the patient.

4.3.1 Contraindications

At the start of this chapter it needs to be mentioned once again that the resources used were mainly textbooks on osteopathy and complementary medicine, as well as lecture materials. Some of those books (Hurby, 1996; Croibier, 2006) used mainly textbooks on anatomy and osteopathy as their sources. Other authors (Liem and Dobler, 2002; Ernst, 2001; Greenman, 2005; Liem, 2005) also use articles from professional journals. It was rather difficult to find articles and studies about contraindications for **craniosacral** techniques (search: Google, Medline (PubMed), Osteopathic Literature Database, OSTMED; search terms: osteopathy, cranial osteopathy, craniosacral therapy, cranial therapy, osteopathy in the cranial field, cranial manipulation, complications, contraindications).

In the field of **craniosacral** techniques, almost no differentiation is made between absolute and relative contraindications. The number of clinical contraindications is fairly low, as compared with structural (see chapter 4.1) and visceral techniques (see chapter 4.2.). Most authors (Croibier, 2006; Greenman, 2005; Liem, 2005; Ernst, 2001; Upledger et al., 1983) agree that injuries and diseases that lead to an alteration in intracranial pressure constitute a contraindication for treatment. These are, according to Croibier (2006) recent fracture of the scull or of cervical vertebrae (for example basilar skull fracture or fracture of the second cervical vertebra), intracranial bleeding, intracranial aneurysm, acute cerebral stroke, acute craniocerebral trauma, intracranial tumours, increase of intracranial pressure, acute meningitis and acute shaken baby syndrome. Ernst (2001) and Upledger et al. (1983) name recent skull fractures, intracranial bleeding and **aneurysms** as contraindications for a cranial therapy. Other contraindications can be found in Mayer-Fally (2007): untreated **psychoses**, skull operation in the past six weeks, acute craniocerebral trauma and increased danger of spasms (for example in patients with untreated epilepsy or epilepsy from non-surgical tumours). Greenman (2005) on the other hand doesn't count epilepsy as an absolute contraindication, although the type of epilepsy and the medicamentous

therapy should be established beforehand. For a better overview, all contraindications will be presented in the following table. Contraindications which in academic literature are considered to be absolute as well as relative contraindications are written in *italics* (see Table 9).

Mentioned by several authors	Contraindications - craniosacral			
Croibier, 2006	Bone diseases:			
Greenman, 2005	Fractures of the skull and of cervical vertebrae			
Liem, 2005				
Ernst, 2001	Neurological disorders:			
Upledger et al., 1983	Acute craniocerebral trauma			
Mayer-Fally, 2007	Intracranial tumours			
	Increase of intracranial pressure			
	Acute meningitis			
	Vascular disorders:			
	Intracranial bleeding			
	Aneurysm			
	Acute cerebral stroke			
Mentioned by some few authors	Contraindications - craniosacral			
Croibier, 2006	Acute shaken baby syndrome			
Greenman, 2005	Epilepsy (Type of epilepsy and medicamentous therapy have to be established) - relative contraindication			
Mayer-Fally, 2007	Untreated psychoses			
	Skull operation in the past 6 weeks			
	Increased danger of spasms (for example in patients with untreated epilepsy or epilepsy from non surgical tumours) - absolute contraindication			

 Table 9: Contraindications for craniosacral techniques

There is only one single technique, the compression of the fourth ventricle (CV-4 technique), for which a list of contraindications can be found. The goal of this technique is to reset the balance of the **craniosacral** rhythm (Liem, 2005). Hurby (1996) names acute injuries or diseases of the skull (for example **cerebral** bleeding and skull fractures) and circumstances in which the pressure of the cerebrospinal fluid should not be changed as contraindications for this method. Another contraindication for this technique according to some authors (Mayer-Fally, 2007; Liem, 2005; Fotopoulos, 2003) is pregnancy. Liem (2005) and Fotopoulos (2003) see pregnancy from the seventh month as a contraindication, because a compression of the fourth ventricle could induce labour pains. Another relative contraindication is a very low blood pressure. This form of treatment has a very relaxing effect on the whole body and therefore also lowers the blood pressure, which is not advisable in patients with **hypotension** (Fotopoulos, 2003). In the following table we will summarise all contraindications for the CV-4 technique (see Table 10).

Mentioned by several authors	Contraindications - CV-4 technique
Hurby, 1996 Fotopoulos, 2003 Liem, 2005 Mayer-Fally, 2007	Acute injuries and diseases of the skull: Intracranial bleeding Aneurysm Acute cerebral stroke Basilar skull fracture Increase of intracranial pressure
Mentioned by some few authors	Contraindications - CV-4 technique
Liem, 2005 Mayer-Fally, 2007 Fotopoulus, 2003	Pregnancy
Fotopoulus, 2003	Hypotension

Table 10: Contraindications for the CV-4 techn	que
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4.3.2 Side effects

Complications and side effects are very rare in craniosacral techniques (Greenman, 2005). Nevertheless it would still be wrong to present cranial osteopathy as a therapy whithout dangers which can be used without any precautions (Croibier 2006). Presently it is not possible to establish a scientifically proven number of complications after cranial osteopathy. A study about 55 patients which were treated with cranial therapy after traumatic skull injuries talks about a probability of 5 percent (Greenman and McPartland, 1995). The bandwidth between minor temporary side effects and severe side effects is, like in other fields, very high in the craniosacral field. Minor side effects are: Headache, nausea, vomiting, diarrhoea, fatigue, vertigo, double vision, change of heart rate/ blood pressure/breathing, loss of appetite, sleeping disorders, emotional reactions, depressions, psychic disorders and temporary worsening of the symptoms (McPartland, 1996; Greenman, 2005; Liem, 2005). Severe side effects which have been reported for individual cases are loss of consciousness, trigeminal nerve damage, brainstem dysfunction, tonic-clonic seizures, opisthotonus and possible miscarriage in the 12th week of the pregnancy (McPartland, 1996; Greenman and McPartland, 1995; Liem, 2005). An increased danger of severe complications exists for example for patients who have suffered a whiplash or severe traumatic injuries in the past. A craniosacral treatment should only be administered with great caution (Greenman and McPartland, 1995). Another technique for which an unusually high number of serious side effects has been reported can be found in McPartland (1996) in his nine case studies of treatment with intraoral cranial techniques. It has to be underlined that this list of severe complications refers to a small number of individual cases and should not be overrated. But it is important to mention that even craniosacral therapy has its risks.

5 EXPERT INTERVIEWS

5.1 Choice of method

This chapter will start with a short justification of the research method and a short description of the qualitative method. After it was decided that this thesis would discuss the questions "Which contraindications exist in osteopathy?" and "To what extent does a general consensus exist on these contraindications?", two methods of research were then possible: a meta-analysis and a qualitative study.

The quantitative approach aims at creating an overview of the presently available academic publications. The advantage of this method is that the present level of knowledge on a certain topic is established, methodological quality is assessed and contradictions between different studies are pointed out (Sommerfeld, 2005). A difficulty that often occurs is, however, to find sufficient articles of high quality. In this case it was especially hard to find articles on contraindications in the fields of visceral (search: Medline (PubMed), Osteopathic Literature Database, OSTMED; search terms: osteopathy, organ treatment, visceral osteopathic treatment, visceral manipulation, complications, safety, contraindications), craniosacral (Search: Google, Medline (PubMed), Osteopathic Literature Database, OSTMED; search terms: osteopathy, cranial osteopathy, craniosacral therapy, cranial therapy, osteopathy in the cranial field, cranial manipulation, complications, contraindications) and non-manipulative structural (search: Google, Medline (PubMed), Osteopathic Literature Database, OSTMED; search terms: osteopathic techniques, osteopathic medicine, soft tissue technique, counterstrain, muscle energy techniques, myofacial release, balanced ligamentous tension, contraindications, complications) treatment (see chapters 4.2, 4.3 and 4.1.2). For this reason, a qualitative approach to answering the research question has been chosen. The advantages of empirical research are the practical relevance of research question and results, the open method which allows for unexpected

findings and the equal footing between researcher and the researched person (Flick et al., 2000).

The aim of the qualitative research is among others to learn the subjective opinion of the interviewees, find patterns and structure in the interviews and to interpret them in an appropriate way. As a means of data collection, the qualitative interview (expert interview) has been chosen. This type of interview is an open, partly structured interview with an expert on a chosen topic (Flick et al., 2000). For a guided interview, a familiarisation with the topic (literature research) prior to the interview is necessary, to create a structure for the data collection. This structure, the interview outline, enables the comparison of several interviews (Mayring, 2000). In the following, the choice of the qualitative method will be justified. The expert interviews conducted in the course of this thesis are meant to cover the topics on which few or no scientific contributions can be found in academic literature. The research question of this thesis can thus be amended as follows: "To what extent does a general consensus exist on these contraindications and do the interviewed experts agree?". Already the first review of literature on the topic of contraindications for osteopathy brought forward some contradictory statements on contraindications for osteopathic treatment and techniques. The opinion of the experts was therefore of special interest.

5.2 Choice of experts

Unfortunately, no real criteria exist on the choice of participants for expert interviews and the term "expert" has only been discussed in a cursory way. An expert is, among other criteria, a person who has knowledge in a certain field of expertise which is not commonly accessible. (Bogner et al., 2005). To find interviewees with such knowledge, one criterion for the choice of experts is to be a minimum of 10 years of professional experience in the field of osteopathy. In spite of the small number of experts, the insights gathered in this thesis should be as diverse as possible. This is why experts with very different specialisations and backgrounds are chosen. As literature especially for the fields of **visceral** and **craniosacral** osteopathy was scarce, four osteopaths who are experts in these fields are chosen. Another criterion is the different professional background of the interviewees. In the area of contraindications, medical knowledge is very important. For this reason two of the chosen osteopaths are also physicians. Some years ago, a research group consisting of teaching osteopaths was established at the Vienna School of Osteopathy (WSO) with the goal of creating a list of contraindications for osteopathic treatment. Three of the interviewed experts had been part of that group. Another criterion is to not only interview therapists from Austria, but also from the UK and France, countries which have a longer history of osteopathic practice and in which osteopathy is much better established. The sex of the interviewees is not been considered in their selection. All in all, six osteopaths are interviewed.

Interviewee	Profession	Professional experience	Expert for	Participated in work- group at WSO	Country
A	Physio- therapist	13 years		Yes	Austria
В	Osteopath	25 years	Cranio- sacral	No	UK
С	Physician	12 years		Yes	Austria
D	Osteopath	18 years	Cranio- sacral	Yes	UK
E	Physician	11 years	Visceral	No	Austria
F	Osteopath	38 years	Visceral	No	France

Table 11: Selection	criteria	for the	interviewees

5.3 Interviews

5.3.1 Establishing the interview outline and conducting the interviews

As mentioned above (see chapter 5.1.), an interview outline has to be prepared before the actual interviews can be carried out. This outline is based on an initial literature research, which gave a broad overview over the topic. Based on this research, the outline was made up of 5 parts:

- 1) General part (see chapter 2 and 4.1.1.2)
- 2) Contraindications for osteopathic treatment (see chapter 3)
- 3) Contraindications for structural techniques (see chapter 4.1)
- 4) Contraindications for **visceral** techniques (see chapter 4.2)
- 5) Contraindications for **craniosacral** techniques (see chapter 4.3)

As a next step, specific questions are established for all five parts. These questions are partly based on contradictions found in literature (see among others chapter 4.1.1, 4.2 and 4.3) and partly on missing or unsatisfying information (see chapters 3, 4.2 and 4.3). To give an overview and for better understanding we will in the following present the most important of these questions. The complete questionnaire can be found in the appendix (see interview-outline).

5.3.1.1 General part

What is your idea of contraindications in Osteopathy? How flexible are the limits/borders of a contraindication for you? What is your idea of absolute and relative contraindication? How do you determine whether or not to treat a patient with a special technique? Where did you get the information about contraindications for osteopathic treatment?

5.3.1.2 Contraindications for osteopathic treatment

When is osteopathic treatment contraindicated for you apart from being a threat to the patient's life?

How often and why did it happen in your practice that you did not treat your patient in the first session?

In which situation would it make no sense for you to continue osteopathic treatment?

Do you have a specialisation? Do you prefer the structural, cranial or the visceral field?

5.3.1.3 Contraindications for structural techniques

What are your thoughts on thrust techniques in the case of **anticoagulants** and **aneurysm**?

What do you think about a thrust in the case of a slipped intervertebral disk (on the level of the slipped disk)?

Do you treat patients with **osteoporosis** or **spondylolisthesis** with thrust techniques?

In the literature **vertebrobasilar** accidents are the most common side event after the manipulation of the cervical spine. In what situation will you not use HVLA technique on the cervical spine?

In your opinion, what are the contraindications for non-manipulative structural techniques?

5.3.1.4 Contraindications for visceral techniques

In which situation would you not use (deep) visceral techniques?

What do you think about the local visceral treatment of gall and kidney stones?

What are your thoughts on visceral work with a patient who has an abdominal tumour?

Concerning pregnancy: when and how long do you think visceral techniques for the uterus are contraindicated?

There are opposing statements in literature as far as visceral techniques on the uterus with an intraunterine device are concerned – what is your opinion?

5.3.1.5 Contraindications for craniosacral techniques

In your opinion, when is cranial osteopathy contraindicated and why?

When is a CV-4 technique contraindicated for you?

In the literature there is no division into absolute and relative contraidications for cranial techniques. Do you think a division would be of any use at all?

Are there side events after a cranial treatment? Have you witnessed side events or heard of them?

The six expert interviews are conducted between the 25th of April 2008 and the 21st of June 2008. Most of the recordings take place in Vienna. Three of these interviews are conducted in the private surgery of the osteopaths. Two interviews are conducted while having lunch in a restaurant and one in the Vienna School of Osteopathy. It has to be mentioned that three experts are interviewed in German and two in English. The interview with the French osteopath is conducted with the help of an interpreter. All interviews are recorded on a digital recorder.

5.3.2 Analysis of the interviews

After the interviews are carried out, they are transliterated. In the following, the transliteration of the interviews will briefly be explained. The interviewer is referred to with an "I", the interviewee with an "IP" (interview partner). All pages (abb. p.) and lines (abb. l.) of the transcript are numbered, to make it easier to find the quotes in the presentation of the results (see chapter 5.4). To ensure the anonymity of the experts but still make it possible to distinguish between the different interviews, all interviewees are assigned a letter (A to F) (see Table 11).

The analysis of the interviews is based on qualitative content analysis according to Mayering (2000). Qualitative content analysis means that texts are analysed systematically by comparing the material step by step with categories developed from the text. There are three steps to this analysis: the structural, the summarising and the explanatory content analysis. In a first step, certain aspects have to be filtered from the material (creation of categories). The text is analysed with the help of certain criteria and the material is assessed. The summarising content analysis tries to reduce the text to its defining core. Another analysis (explanatory) is conducted through the collecting of additional material for specific unclear elements of the text (Mayring, 2000). For this thesis, six categories are established and analysed according to the criteria explained above:

- 1) Term and flexibility of contraindications in osteopathy
- 2) Contraindications for osteopathic treatment
- 3) Assessment of certain contraindications for structural techniques
- 4) Contraindictions for visceral techniques
- 5) Contraindications for craniosacral techniques
- 6) Side effects in osteopathy

5.4 Results and comparison of academic literature

In the following chapters, the results of the six interviews will be presented and analysed using the categories introduced above. Quotations of the interview partners will be used to underline certain statements and results. After each quotation you will find detailed information about who is being quoted and the location of the quote in the transcript. If you find for example: (IA, p.3, I.20-25), you will know that IA means interviewee A (see Table 11), p. stands for the page in the transcript and I. for the line. Furthermore, each category will also be compared to findings from academic literature.

5.4.1 Term definition and flexibility of contraindications in osteopathy

All interviewees define contraindications in osteopathy in a similar way. There is a basic consensus on the fact that a contraindication is a treatment which harms the patient, is a danger to the patient or does not contribute to the wellbeing of the patient.

"A contraindication is something in osteopathy that is not contributing to the health of the patient." (ID, p. 1, I.7)

"Yes, a contraindication is always a contraindication for a certain treatment. And that means that I would harm the patient by using that kind of treatment." (Translated from German, IE, p.1, I.12-14)

Less agreement exists between experts on the question of flexibility in the field of contraindications. A and C think that clear guidelines should be established for all osteopaths, because osteopathy is in need of a general consensus.

"Yes, perhaps it would be good to have clear guidelines, so that you can say ok, that's a contraindication. Then we would start improving the whole thing. Everybody just doing what they want, I don't know if that's good." (Translated from German, IC, p.2, I.20-22)

"...well, it would be bad to say that there are more contraindications for some and less for others..." (Translated from German, IA, p.2, I.18-21)

The other interviewees think that contraindications have to be seen in a flexible way. In their opinion, contraindications depend on the skills and on the experience of the therapist.

"...I think the list for contraindications has to be a lot longer for newly qualified practitioners then for more experienced practitioners..." (IB, p.7, I.17-21)

"It is without question that the experience of the therapist enables them to use a wider range of techniques. ... and it is also clear that there is a difference between a therapist with 20 or 30 years of experience and a newcomer to osteopathy." (Translated from German, IF, p.1, I.33-36)

For B and D, contraindications have to be decided on for each individual case, because they follow their instincts and feel for each patient if a treatment is possible or not.

"Personally I am not aware of strict guidelines and therefore I follow my own personal feelings in terms of common sense of what I think is right to treat and not right to treat." (IB, p.1, I.7-8)

"...A contraindication for me is when you put your hands on and the body is actually pushing you out. You say okay with all my loving attention it will not help him at all, so that is for me an absolute contraindication." (ID, p.1, I.9-11)

Another factor which influences the question of contraindications is the choice of technique and the different forms in which a technique can be used. Interviewees B and D think that there are more contraindications in the structural field than for example in the field of **craniosacral** techniques.

"If you see a DOG-technique as a contraindication for osteoporosis, then there is always the question of how you administer the DOG-technique. Of course I can use my whole weight for it ... or I just put two, three kilos of pressure on the body ... This is the sort of flexibility you have here." (Translated from German, IC, p.1, I.15-19)

"...if I work structurally, my contraindications will be much stricter then enforcing a force upon a patient. Well, as I work cranially my list of contraindications will shrink considerably because I do not subject my patient to any force treatment or strong leverages." (IB, p.1, 13-15)

Some experts (E and F) also see flexibility concerning the state of health of the patient and the severity of the disease. Interviewee C also mentions the working environment of the therapist as a decisive factor (if help is near in the case of an emergency, e.g. working in/near a hospital).

"A technique is chosen in consideration of the patient's state of health, their pain and their diseases. Other vital factors are the psychological state of the patient and their trust in the therapist." (Translated from German, IF, p.1, I.28-30)

In the definition of absolute and relative contraindications, the experts mostly agree. The practical implications of relative contraindications, however, are seen in a very different light by some therapists.

"...An absolute contraindication for osteopathic treatment as a whole ... that would be for example mortal danger... A relative contraindication for osteopathic treatment would mean that I have to work carefully and cannot use certain techniques." (Translated from German, IC, p.2, I.11-14)

"With the acute cases you can actually also do quite a lot to prevent it from becoming chronic... So for me this is a relative contraindication, for me it is not a contraindication, even a broken bone..." (ID, p.2, I.18-20)

"...A point of criticism that doctors often use with regard to osteopaths is that there are things we don't know and that this can cause us to harm the patient." (Translated from German, IA, p.3, I.10-12)

Finally, the following quote will emphasise the problem of "flexible" and "individually different" contraindications in osteopathic treatment.

"...but I know of course that all experience can fail, and things can happen to the best osteopaths and have happened to them, ... and the problem is, it won't help you from a legal point of view. The judge will smile and say 'You just feel it?', because in that case, you hadn't felt it." (Translated from German, IC, p.3, I.1-3, I.9-10)

Comparing the statements of the interviewees with academic literature it can be observed that the definition of contraindications is the same. Some points about the flexibility of contraindications can be found in the chapter about technical contraindications for manipulation techniques (see chapter 4.1.1.2). Most interviewees as well as most authors (Liem and Dobler, 2002; Gibbons and Tehan, 2004; Giles and Singer, 1997; Lewit, 1992) agree on the fact that contraindications depend on the right pre-selection of patients and the right choice of technique. Some experts partly agree that contraindications depend on the skills and the experience of the therapist (A, C), most (B, D, E, F) think that this is absolutely true. In academic literature, only Croibier (2006) mentions that an experienced therapist might use certain techniques without risk to the patient, while they might be a contraindication for a beginner with lesser skills and experience. The question of experienced therapists, who "feel" if a contraindication exists, is mentioned by Hartman (1996). She talks about a "sixth sense", which experienced therapists might develop, so that they can put their hands on the patient and suddenly know about irritated tissue. This "sixth sense" should not be used for the establishment of a diagnosis, however, but be seen as an additional asset. Opinions differ on this topic for the different interviewees. Experts A and C think it is impossible to feel a contraindication. For interviewees C and E, working against a resistance of the tissue constitutes a contraindication. Experts D and B state that it is possible to feel if the body of the patient wants the therapy or not. Interviewee D, finally, states that this is their sole method of establishing contraindications for osteopathic treatment.

5.4.2 Contraindications for osteopathic treatment

Two key points will be presented as an answer to the first question in this category, that of when osteopathic treatment is contraindicated aside from cases where a threat to the patient's life exists. A contraindication for the use of osteopathy highlighted by most of the experts (A, B, C, F) is a lack of consent from the patient.

"If the patient is particularly sensitive, this constitutes a contraindication... i.e. if the patient does not want to be treated using a specific technique, if they are worried by someone touching their cervical vertebrae, I have to respect that." (Translated from German, IF, p.2, *I*.23-27)

"...But what I always do, is I ask their permission. ... And I always wait for them to say yes and then I go and correct the joint." (IB, p.4, I.13-15)

"This means making the patient aware that he/she can stop the treatment at any time." (Translated from German, IA, p.3, I.18-19)

The second key point is about how to act when a patient has symptoms that are ambiguous, or when other circumstances surrounding the patient are unclear. In this case, most interview partners (A, B, C, E, F) state that in the case of ambiguities they do not treat the patient, and instead refer them to a doctor or to hospital, for clarification. In contrast to this, interview partner B treats the patient carefully and only refers him to another professional following treatment.

"I have to clarify beforehand whether or not the treatment should be carried out. And if I am unsure of this, then that decides it." (Translated from German, IE, p.7, I.36-37)

"There are times when I am worried about some cancer or blood disorder and in such a situation I will say to the patient that they need to go further before receiving the treatment." (IB, p.2, I.13-15)

"I: ...Do you stop the treatment and send them to a doctor, or do you listen and treat them first and then send the patient to the doctor?

IP: I do the latter ... " (ID, p.2, I.39-41)

A further question that will be answered in this category is that of when it ceases to be sensible to carry out osteopathic treatment. The experts interviewed are largely in agreement on this issue. One key aspect of their argument is that if treatment has not produced any change, then it no longer makes sense to continue with the treatment. Half of the interview partners (A, E, F) terminate therapy if there is no noticeable improvement following three to five sessions.

"...At least something has to have happened within three to four treatment sessions" (Translated from German, IA, p.4, I.29-30).

"If nothing has happened after 3 to 5 sessions, if I have made no progress with the treatment, and no cause has been found for the problem and there has been no improvement, then I stop." (Translated from German, IF, p.3, I.31-33).

Interview partner B states that a patient usually terminates the therapy himself if he has not noticed any benefit from it.

"...if the patient does not feel the benefit then they normally stop of their own accord or you come to an agreement, but what I try to do is to develop a joint understanding between me and my patient that progressions are being made." (IB, p.2, I.24-26)

For experts C and D, both the therapist and the patient have to believe that the treatment is worthwhile, and for expert C a further key factor is cost-benefit calculation.

"There are two factors that make treatment worthwhile; one aspect is from my side of things, that I say I think it is worthwhile, and the second factor is that the patient views it as worthwhile. In an ideal situation there is consensus on this..." (Translated from German, IF, p.3, I.31-33).

"If I feel there is no change, you need to discuss that with your patient and it is not easy to say, I cannot help you." (ID, p.3, I.7-8)

"I don't see it as worthwhile... if I have the feeling that there is another treatment which is more cost effective and works better." (Translated from German, IC, p.4, I.12-13).

It is important to note the point made by interview partner F here, for whom treatment has two different goals. One can either treat patients curatively or palliatively.

"When it comes to chronic patients my treatment is always either curative or palliative. There are some people with whom I will always remain in the palliative area, for whom I cannot provide curative care... When I give a prognosis for chronic diseases I have to provide the patient with a time frame." (Translated from German, IF, p.3, I.18-21, I.27-28)

The following comparative study of literature will present agreements and disagreements between experts and literature relating to contraindications for osteopathic treatment. There is clear agreement on cases where the patient has not given consent. This is a key factor, not just in literature on osteopathy but also

in medical law and medical ethics (Liem and Dobler, 2002; Mayer-Fally, 2007; Missliwitz and Ellinger, 1992; Sass, 1989) (see chapter 3.1.). This absolute contraindication for the use of osteopathic treatment goes further, in the opinion of most of the experts (A, B, C, F). If there is uncertainty surrounding the condition the patient is suffering from, nearly all the interviewees (A, B, C, E, F) are agreed that this should be clarified before treatment is started. There are no precise statements to this effect in the literature, but this idea is implied (see chapter 3.2). "It is far better to be too cautious and to be wrong, than to be not cautious enough, and be wrong" states Hartman (1996, p. 23). Three situations in which osteopathic treatment is no longer advisable are highlighted by Croiber (2006) and Hartman (1996): if the patient has lost time (if, for example, another form of therapy would be more suitable), the therapy is not beneficial and the therapist has not evaluated their own work correctly (see chapter 3.2). Half of the experts (A, E, F) view further treatment as inadvisable following three to five sessions, if no benefit is observed. Interview partner C sees loss of the patient's time as a factor, where another treatment would be more effective, with increased cost-benefit. In summary, in this category it is determined that no disagreement exists here; there is only agreement and extensions to the generally held view.

5.4.3 Assessment of contraindications for structural techniques

This category mainly focuses on contradictory opinions about contraindications for manipulation techniques found in academic literature. Furthermore the attempt is made to find more information and better explanations on the contraindications for non-manipulative structural techniques. Nearly all the experts are in agreement on three clinical contraindications for a manipulation technique. Five of the interview partners (A, B, C, E, F) see **aneurysm** and slipped disk with neurological symptoms as absolute contraindications for HVLA treatment. For interview partner D, the incidence of these symptoms is only an absolute contraindication when students are providing the treatment; for experienced therapists they are only a relative contraindication. However, **spondylolisthesis** is regarded as an absolute

contraindication by all the experts, except for interview partner F who regards it as only a relative contraindication.

Aneurysm:

"I would say with aneurysms and anticoagulants as well, it is more a relative contraindication, because you have manipulators they encompass ... the whole body, so for them ... they are very experienced and they listen. For a student or a recent graduate who is quite heavy handed, it is an absolute contraindication." (ID, p.4, I.36-39)

Disk prolapse:

"...If there were neurological symptoms then I wouldn't do it ... Because no one can do it so perfectly that they can set the amplitude to the exact millimetre, there is a grey area there." (Translated from German, IC, p.5, I.33-38)

"To be very honest I have done it in the past. ... if you are a very good manipulator I think it is okay, but otherwise I will see this as an absolute contraindication." (ID, p.5, I.1-5)

Spondylolisthesis:

"In my view it is a relative contraindication... Where spondylolisthesis is present the ligaments are normally even stronger than they are in their normal state, and so there is good ligamentary support." (Translated from German, IF, p.4, I.41, p.5, I.1-2)

Three of the interview partners (C, D, F) see slipped disk without neurological symptoms as a relative contraindication. For experts B and D this is an absolute contraindication although in the opinion of interview partner D this only applies to beginners and students. Interview partners A and E do not see a conventional slipped disk as a contraindication.

"I do not thrust an intervertebral disk. Not in the segment or directly above or below it." (IB, p.3, I.21,26)

"...a standard intervertebral disk degeneration is not a contraindication as far as I see it, but a slipped disk that is pressing on a nerve is an absolute contraindication, in my view." (Translated from German, IE, p.2, I.9-11) The experts express differing views on the use of manipulation in cases where **anticoagulants** are already being used. For interview partners B and C this is an absolute contraindication. Expert A sees it as an absolute contraindication for treatment to the cervical spine, and otherwise sees it as a relative contraindication. Interview partner D differentiates between a beginner and an experienced therapist in such cases. For beginners this is seen as an absolute contraindication, whereas for those experienced in the profession this is relative. For interviewee E the extent to which the blood is thinned is a crucial factor. He sees a high level of **anticoagulants** as an absolute contraindication and a low level as a relative contraindication. Expert E sees manipulation where blood is already being thinned as a relative contraindication.

"In such cases I am cautious, that is a relative contraindication. And it is an absolute contraindication for forceful techniques." (Translated from German, IE, p.6, I.8-10)

"But it can also be a very relative contraindication, it depends which technique is selected. The big mistake here in such cases would be to employ a technique on a patient if I was unaware of whether or not they were taking anticoagulants." (Translated from German, IF, p.4, I.25-27)

The interviewees also have differing opinions when it comes to **osteoporosis**. For four of the experts (A, D, E, F) the question of whether a relative or absolute contraindication exists depends on the severity of the **osteoporosis** and whether the appropriate technique is selected. Interview partners C and D, however, see **osteoporosis** as an absolute contraindication for manipulation techniques.

"...But even here, if I have experience and select an appropriate technique, I can do a lot of good and improve things a lot. ... a lumbar roll is an option ... a lift ... a DOG is also possible, if very specifically adapted. ... But of course this depends on the condition the patient is in, their body weight and the severity of their osteoporosis. So I do not view it as an absolute contraindication." (Translated from German, IF, p.4, I.32-39)

"...I mean this brings us to the question of whether or not there are some people for whom this is a contraindication and others for whom it is not ... If I can manipulate this tool well, so to speak, so that it allows me to achieve certain results using a very small amount of force and speed, then I wouldn't have a problem with it." (Translated from German, IA, p.7, I.31-34)

"Yes that is exactly the point where one might say 'yes, I reckon I can deal with osteoporosis ... there hasn't been a fracture in that area so I can work with 5kg of pressure ... and then it may just go crack, and it's not just the joint being loosened; the bone has broken as well." (Translated from German, IC, p.2, I.27-31)

In the case of non-manipulative structural techniques, such as muscle energy, soft tissue and **myofascial** techniques (see chapter 4.1.2, all the experts state that there are very few contraindications. In the opinion of interviewee F there are no contraindications in this area. Three of the experts consulted (B, C, D) see very few contraindications in this area because the techniques can be adequately adapted to the individual patient. For deep tissue techniques, such as **myofascial** techniques, the experts (A, C and E) cite the following as contraindications: **anticoagulants**, venous problems, vulnerable tissue and the patient not being able to cope with the pain of the treatment. Interviewee C sees torn muscle fibre as a contraindication for muscle energy techniques (Mitchell technique).

"I don't see any contraindications there. I use these techniques very rarely anyway. I use a lot of soft tissue techniques and these are not contraindicated by anything as far as I see it." (Translated from German, IF, p.5, I.28-29)

"It is too individual. You know I think certain techniques do not suit certain conditions and applied in certain ways." (IB, p.4, I.19-20)

"I mean even I still work relatively often with these fascial techniques, I mean typaldos techniques, but of course there are contraindications such as venous problems, anticoagulation ... or of course if the patient can't stand the pain." (Translated from German, IA, p.9, I.22-25).

"Yes, well I wouldn't use a Mitchell technique where there was torn muscle fibre or similar." (Translated from German, IC, p.8, I.39)

The experts are also asked for their opinion on the absolute contraindications for long lever techniques, such as general osteopathic treatment (GOT) (see chapter 4.1.2.3). For these particular techniques, Croiber (2006) sees the following as

complete contraindications: fractures of the extremities and the axial skeleton, an artificial joint in the hip, knee or shoulder, **osteosynthesis** on the extremity before full induration, **osteosynthesis** on the vertebral column and arterial **aneurysm**. Interviewees B and F completely agree with this view. There are differences of opinion regarding artificial hips, knees and shoulders. Experts A and D do not regard an **endoprosthesis** as a contraindication for general osteopathic treatment. Interviewee C only views this as a contraindication in the first phase following the operation, when the wound is still fresh. Further relative contraindications for general osteopathic treatment are if the patient is over 80 years old, in the opinion of interviewee F, and if this technique has been used excessively on the cervical vertebrae, in the view of expert A.

"I agree with that... It depends on the amplitude of the general osteopathic treatment, but in the case of an endoprosthesis, this is an issue of whether it works mechanically. You have to not make any movements in that area, to insure that the prosthesis is not mobilized." (Translated from German, IF, p.51, I.45, I.38-40)

"...but I do not think GOT will be a contraindication when you have a new hip. No I do not think so." (ID, p.6. I.17-18)

"I have lots of patients with a prosthesis and I do GOT with them as well and I don't have any problems with this; nothing has ever happened. So that rather mystifies me, I couldn't give any biomechanical explanation for why one shouldn't do it." (Transated from German, IA, p.10, I.3-5).

"...GOT is for example also relatively contraindicated in older people over 80 years of age. It is not contraindicated but it is not the right technique." (Translated from German, IF, p.5, I.35-36)

If one compares the results of the interview with those of the literature research, it can be observed that in relation to thrust techniques there is only agreement when it comes to **aneurysm** and osteoporosis. An **aneurysm** is viewed as an absolute contraindication by all the experts, as well as most of the authors (Vickers and Zollmann, 1999; Wainapel and Fast, 2003; Koss, 1990; Croibier, 2006; Gibbons and Tehan, 2004; Liem and Dobler, 2002). **Anticoagulants** are stated to be a relative contraindication for HVLA treatment by most of the authors (Vickers and

Zollmann, 1999; Eck and Circolone, 2000; Gibbons and Tehan, 2004; Liem and Dobler, 2002; Giles and Singer, 1997 Giles and Singer, 2000). On the other hand, most of the experts (A, B, C, D, E) see thinned blood as an absolute contraindication, dependent on the degree, technique selected and the experience of the therapist. A slipped disk is also viewed as a relative contraindication by the majority of the authors (Gibbons and Tehan, 2004; Hartman, 1996; Liem and Dobler, 2002; Giles and Singer, 1997). For some authors (Wainapel and Fast, 2003; Koss 1990), thrust techniques to the area in question is contraindicated by the presence of an acute **disk prolapse** with neurological symptoms. Greenman (2005) and Giles and Singer (1997) see a slipped disk with no other complications as an indication. In contrast to the literature sources, all the interviewees see a disk prolapse with neurological symptoms as an absolute contraindication. The opinions of the experts differ on a slipped disk without radiations. Two of the interviewees (C, D) see this as an absolute contraindication and two (C, F) as a relative contraindication. The remaining experts (A, E) as well as the literature do not see a **disk prolapse** with no complications as a contraindication, rather as an indication. There is considerable consensus in relation to osteoporosis between the literature and the experts consulted. This is deemed to be a relative contraindication by most of the authors (Vickers and Zollmann, 1999; Eck and Circolone, 2000; Croibier, 2006; Liem and Dobler, 2002; Gibbons and Tehan, 2004) as well as four of the experts (A, D, E, F). When it comes to **spondylolisthesis**, the opinions of the authors and the interviewees diverge once more. In the literature (Croibier, 2006; Gibbons and Tehan, 2004; Liem and Dobler, 2002; Vickers and Zollmann, 1999; Eck and Circolone, 2000) this is most often seen as a relative contraindication. Conversely, nearly all the experts (A, B, C, D, E) believe that the presence of spondylolisthesis absolutely contraindicates manipulation in the affected area.

There is hardly any disagreement in the literature and among the experts consulted over contraindications for non-manipulative structural techniques. The differences of opinion as regards the use of GOT where there are **endoprosthesis** and additional views on the contraindications have already been presented in the interview results (see page 61/62).

5.4.4 Contraindications for visceral techniques

In this chapter, additional views given by the experts on the contraindications for deep **visceral** techniques, which have already been mentioned in the literature, will first be presented. Following this, the opinion of the experts on these contrasting views expressed in the literature will be discussed. As one of the interviewees does not use **visceral** techniques, only five experts have been questioned in this category. Interview partner F views the following as additional absolute clinical contraindications for the use of **visceral** techniques: **oesophageal varices**, **mitral valve prolapse** or **aortic valve insufficiency**, and **mesenteric vascular occlusion**. A patient's condition following splenic rupture is viewed by expert C as an absolute contraindication.

Kidney stones and gall stones are regarded as relative contraindications for deep **visceral** techniques by most of the interview participants (A, C, D, E, F). Three of the experts (A, D, E) see acute symptoms such as renal colic and bilious colic as absolute contraindications. Interviewee F believes that many small stones represent an absolute contraindication, whereas one large stone is a relative contraindication. Below are some quotes from expert A on this issue.

"...I would say now, if there is no colic ... this is a relative contraindication and if there is colic, then I view this as an absolute contraindication. I'm absolutely clear on that." (Translated from German, IA, p.10, I.37-9)

"The compliance of the patient is very important here. If the patient is aware ... that colic may be increased by osteopathic techniques, because something is being put into motion ... and the therapist is aware of this and both are of the opinion that they want to go ahead ... then this is only a relative contraindication." (Translated from German, IC, p.10, I.12-17)
"It is an absolute contraindication if a lot of small stones are present and it is relative where there are large stones. So one does not do any specific techniques when there are stones present." (Translated from German, IF, p.6, I.17-9)

"My opinion ... on this disagreement. This problems arises from the fact that those who would like to be our 'gurus' make out that they can treat everything, which is very bad." (Translated from German, IA, p.10, I.33-34)

The majority of the experts (A, D, E, F) view the presence of tumours in the stomach area as an absolute contraindication for deep **visceral** techniques. For interview partner C, and for interview partner D under certain conditions, tumours represent a relative contraindication for **visceral** techniques. Experts E and F can easily envisage offering osteopathic treatment not involving deep **visceral** techniques.

"I would not give any such treatment... because in the visceral area we have much, much less of an idea about what we are actually doing, what effect the treatment has." (Translated from German, IA, p.11, I.3-4)

"This as an absolute contraindication, unless treatment is monitored and this is for palliative care, where the general condition and blood circulation of the patient is improved." (Translated from German IF, p.6, I.21-22)

"...is this tumour a metastasis or is it primary, is the tumour growing, and how is the general health of the patient: these factors dictate whether this is an absolute or a relative contraindication ... you get the same feelings get off here because you cannot help... then it is absolute." (ID, p.7, I.10-14)

"When using such techniques when there is a tumour in the stomach area, one has to be conscious of the fact that it may rupture or be perforated more easily, and therefore one needs to be extra careful ... so it is relative..." (Translated from German, IC, p.10, I.38-41)

All experts view the first 12 weeks of pregnancy to be an absolute contraindication for deep **visceral** techniques on the uterus. For interview partners A and F, highrisk pregnancy and tubal pregnancy are also absolute contraindications. Expert F is of the opinion that following the first three months, **visceral** techniques are no longer contraindicated, and interview partner E views pregnancy as only a relative contraindication.

"It's really because the miscarriage rate is so high in the first 12 weeks. I feel like I need to protect myself, for this reason you have to be very cautious, and so for me, I see this as an absolute contraindication for deep techniques." (Translated from German, IC, p.11, I.3-7)

"Well I do not think that it is a contraindication... But I think you have to be careful, there is a living body there that is starting to grow and if you are very focused on the uterus ... I think this then becomes more of an absolute contraindication." (Translated from German, IA, p.7, I.17-22)

"This is a totally relative contraindication ... I do not work in the area around the uterus, nor with pregnant women in the first 3 months, just because the risk of miscarriage is so high." (IE, p.10, I.10-12)

"Yes, I only avoid working on the visceral area in the first three months." (Translated from German, IF, p., I.25)

Three of the experts (C, D, F) regard the presence of an intrauterine device in the uterus as an absolute contraindication for deep **visceral** treatments. Interview partner A does not know because he is not a "visceral specialist" and expert E views an intrauterine device as only a relative contraindication.

"I would see that as an absolute contraindication, in every case..." (Translated from German, IC, p.11, I.27-28)

"I treat women with an intrauterine device but I do not do the structural visceral techniques." (ID, p.7, I.31-32)

"I don't carry out any direct techniques in that area. It's unlikely that anything will happen, but if something does happen then people will say that it was the osteopathic treatment that caused it." (Translated from German, IF, p.6, I.27-28)

"The way I see it, it depends whether the coil is made from copper or it is a hormonal device ... I see both of these as only relative contraindications. I am however more careful when it comes to the copper-based coil ... In any case, when working on the uterus, only

the very top of the uterus is reached ... It is relatively rare that forceful techniques that go that deep are used in that area. (Translated from German, IA, p.3, I.18-19)

Another issue discusses in the interviews will now be presented: approaches to intravaginal **visceral** techniques in osteopathy. The question stands as to whether this type of technique should be used by osteopaths at all, as it can lead to legal problems; in fact it already has.

"I would not do that during a pregnancy." (Translated from German, IC, p.11, I.19)

"...We really need to discuss this ... the question of whether or not we should be doing this at all ... we don't even have clear, self-evident indications that this type of treatment really achieves anything. (Translated from German, IA, p.5, I.39-41, p.6, I.1-2)

"In France, the law stipulates that internal, gynaecological techniques are not permitted." (Translated from German, IF, p.1, I.40-41)

In the following section of this chapter there will be a comparison of the results of the literature research with those of the interviews. There is some consensus regarding gall stones, kidney stones, tumours and the first 12 months of a pregnancy. Gall and kidney stones are viewed as relative contraindications for deep visceral techniques by the majority of the authors (Croiber, 2006; Liem et al., 2005) of the literature researched, as well as by most of the experts consulted. I would also like to highlight the contrasting explanations given for how visceral treatments affect gall stones. Barral (2005) is of the opinion that large stones cannot be moved from their position and small stones can be loosened and transported away. In contrast to this, interview partner F views small stones as an absolute contraindication, as small stones can get stuck on their way out of the body, potentially causing colic, and he views large stones as a relative contraindication. There is also consensus between some of the experts consulted (A, D, E, F) and a large proportion of the authors (DeCoster and Pollaris, 2001; Croiber, 2006) regarding the presence of tumours in the stomach area. Both of these groups view tumours as absolute contraindications for deep visceral treatments. Most of the authors (Mayer-Fally, 2007, Ligner 2007, Hartman, 1996)

as well as all of the interview partners view the first 12 weeks as an absolute contraindication, simply because the miscarriage rate is so high during this period. On the issue of contraindications for techniques used on the uterus, where the patient uses an intrauterine device, only two views are expressed in the literature, by two different authors. Barral (2004) views the intrauterine device as a relative factor, whereas Ligner (2007) views this as an absolute contraindication for **visceral** techniques. In contrast, the majority of the experts questioned (C, D, F) describe the intrauterine device as an absolute contraindication and only interview partner E views this as a relative contraindication.

5.4.5 Contraindications for craniosacral techniques

As in the previous chapter, I will begin this chapter by presenting some additional statements given by the experts in relation to the contraindications for **craniosacral** techniques previously mentioned in the literature. This will involve an explanation of the opinions of the experts regarding specific statements given in the literature. According to interview partner B, further contraindications in cranial osteopathy include unstable and progressive neurological diseases, undiagnosed traumatic injuries in the head region, as well as undiagnosed cranial pathologies. Expert D views otitis and tonsillitis as contraindications for beginners. In France, according to interview partner F, cranial techniques are not permitted on children younger than six months. However, expert C pointed out that in Austria the legal situation as regards **craniosacral** therapy is such that as far as the law is concerned there are no contraindications, because this type of treatment is not recognised. Despite this, all the experts refuted the statement that cranial osteopathy is completely safe and can be used without any kind of limitations.

"...Craniosacral therapy is rather a difficult area ... if one just sees it from a legal point of view, cranial osteopathy does not have any contraindications, because from a purely legal perspective there is no such thing as cranial therapy, i.e. it is not recognised because it does not help." (Translated from German, IC, p.5, I.15-8)

"Because that means ... you can do whatever you want with cranial techniques; it will be always harmless. That is not true..." (ID, p.8, I.4-6)

"...We need contraindications for this, because otherwise it just looks as if, hey, okay, if you come to us, what shall we do? ... Well let's just do cranial, because we can always treat with that." (Translated from German, IA, p.6, I.17-19)

All the experts confirm that acute neurological and vascular diseases and injuries accompanied by increased **intracranial** pressure, fresh neck or skull fractures and acute meningitis all count as contraindications for cranial osteopathy. There is a difference of opinion between experts on the topic of epilepsy and the use of cranial techniques. Half of the interview partners (B, D, E) do not believe that craniosacral therapy is contraindicated by epilepsy. For experts A and C this is a relative contraindication and interview partner F comment that this is a contraindication but does not give any more details.

"Epilepsy is for me not a contraindication but you can actually get an epileptic attack on your hands when treating that." (ID; p.8, I.20-22)

"I have treated undiagnosed epilepsy and lots of patients are undiagnosed and they do not know. So you do treat epilepsy because no one knows why it happens and where it comes from." (IB, p.5, I.22-23)

"I would see it as a contraindicated, particularly in the head area ... on people with severe epilepsy, simply because we don't know to what degree, so to speak, we are having a negative effect." (Translated from German, IA, p.13, I.1-4)

"That is also often the case. One does not know how the patient will react to such treatment, so one can see this as a contraindication." (Translated from German, IF, p.3, *I*.18-19)

The views in relation to epilepsy are similar to those given by the interviewees regarding psychotic patients (e.g. schizophrenia, **borderline personality syndrome**). Most of the experts (A, C, D, F) view psychosis as a contraindication. Interview partners C and E describe this, more specifically, as a relative

contraindication. In the opinion of interviewee D, psychosis is not a contraindication for craniosacral therapy.

"...I work very cautious with patients with schizophrenia and so on, and epilepsy ... It is possible that a person suffering from epilepsy could react in an uncontrollable way to a minor stimulus, ... and I can't say for sure, 100%, whether or not I already overstep this mark." (Translated from German, IC, p.12, I.26-29)

"As I said before, contraindications in the psychiatric area or in the borderline areas and so on ... because you are really in this suggestive area. ... I find this problematic ..." (Translated from German, IA, p.12, I.38-40)

"...Somebody having very bad psychosis or schizophrenia, in my view this is not a contraindication, you can help them very well." (ID, p.9, I.27-28)

Expert D also mentions that if children are under 6 years of age, a CV-4 technique is contraindicated, because in their case the occipital bone is still made up of four parts, it is not yet fully ossified.

"...children under the age of six ... because the occiput is still in four parts." (ID, p.8, I.38-40)

The interview partners give very different opinions on whether pregnancy and **hypotension** are contraindications for a CV-4 technique. For three experts (A, B, E) these do not represent contraindications. Interview partner D sees a pregnancy as only a relative contraindication for the CV-4 technique and does not view **hypotension** as a contraindication at all. For experts C and F these always contraindicate such treatment, but for expert E this is only the case under certain conditions.

"No, in my opinion this is really overplayed." (Translated from German, IA, p.14, I.9).

"...We have discussed this a few times ... but no one could really provide a foundation for this view. ... If you aid the furtherance of the idea that there is a definite causal relationship between what one does there and what osteopaths imagine in theory, that's a real step backwards in my view." (Translated from German, IA, p.14, I.11-15)

"Pregnancy ... you do not do anything to anyone in the first 3-6 weeks ... But I do not think there is any indication but I cannot imagine any implication a CV-4 would cause any problems in pregnancy. I am not sure about low blood pressure." (IB, p.6, I.4-6)

"...but when you are 40 weeks or 38 you can do a CV-4 to stimulate actually the birth ... So the CV-4 for pregnancy can be seen a little bit of a relative contraindication." (ID, p.9, I.2-4)

"That's true ... Because in the first 3 months of pregnancy, when I work in the area of the parasympaticus and sympaticus, it is possible that I could destabilise the hormonal axis ... Where the patient has low blood pressure: the fourth ventricle has the tendency to make the blood pressure drop, so if you then make it drop further that could be really bad." (Translated from German, IF, p.7, I.11-17)

"Well ... there is this general consensus, like we have said, that in the case of pregnancy or hypotension one shouldn't do it, and I stick strongly to that..." (IC, p.13, I.15-16)

"Yes, for the CV-4 technique, in osteopathy, we say that this is contraindicated in pregnancy. ... In principle to induce a CV-4 technique is definitely a contraindication, so I wouldn't do that either. However if the treatment is attendant and I notice the mechanism operates independently, it sometimes happens that he does a CV-4 ... and then I do assist in this..." (Translated from German, IE, p.12, I.31-35)

The following question, that of whether or not the cranial contraindications can be subdivided into those that are relative and those that are absolute, was answered by most of the expert with a 'yes' (A, B, C, F). For interview partner E, when an osteopath has reached a certain level there are only relative contraindications for cranial techniques, but for students he thinks some conditions should be viewed as absolute contraindications. Expert C regards such a subdivision in cranial osteopathy as meaningless.

"... Yes, it does make sense... It really is a difficult problem, but what I think is that this problem can't necessarily be solved by looking at it in terms of physiological causal factors; it should instead be looked at from the perspective of general ethical-moral arguments." (Translated from German, IA, p.13, I.37-39)

"I think it would be an idea, yeah. But this is one of the things which would have to be decided through discussion." (IB, p.5, I.36-37)

"...really, in my view there are only relative contraindications when it comes to craniosacral techniques, there are no absolute contraindications as I see it. It all depends on one's own ability and the experience." (Translated from German, IE, p.5, I.22-24)

"I think that it doesn't make that much sense in that it's just not practical to say 'do that with less intensity/more intensity'." (Translated from German, IC, p.13, I.11-12)

The following comparative study of literature will present agreements and disagreements between experts and literature relating to contraindications for craniosacral techniques. Most of the authors give the same opinion (Croibier, 2006; Greenman, 2005; Liem, 2005; Ernst, 2001; Upledger et al., 1983; Mayer-Fally, 2007), as well as all the experts; this view is that injuries and illnesses that are associated with an increase in the intracranial pressure, as well as recent neck and skull fractures, and acute meningitis all represent contraindications for **craniosacral** therapy. There is also some partial agreement between the views of authors in the literature researched (Mayer-Fally, 2007; Greenman, 2005) and the experts questioned when it comes to epilepsy. In the literature, craniosacral techniques are sometimes viewed as relatively contraindicated in epilepsy and sometimes viewed as absolutely contraindicated. Three of the interview partners (B, D, E) do not view epilepsy as a contraindication, two (A, C) view it as relative and expert F views it as a contraindication. Psychosis is stated to be a contraindication in the literature by one author only (Mayer-Fally, 2007). In the interviews this point of view was also expressed by two of the interviewees (A, F). Two experts (C, E) view psychosis as a relative contraindication and interview partner D does not view it as a contraindication for cranial techniques. On the other hand, there are various views on whether CV-4 techniques are contraindicated in pregnancy and hypotension. In the literature, three of the authors (Liem, 2005, Mayer-Fally, 2007, Fotopoulus, 2003) state that this technique is contraindicated in pregnancy. In contrast, three of the experts (A, B, E) do not view a CV-4 technique as contraindicated if a woman is pregnant, whereas interview partner D states that this is a relative contraindication and interview partner C and F see this as a contraindication. Hypotension is viewed as a contraindication by one author in the literature (Fotopoulus, 2003). Only 2

experts (C, F) second this view; the rest of the interview partners (A, B, D, E) do not view a CV-4 technique as contraindicated for those with **hypotension**.

5.4.6 Side effects in osteopathy

This category is not mentioned in the outline; it will be presented here in a separate chapter, to provide an overview of the results of the interviews. The focus here will be on two main topics: **vertebrobasilar** complications as the most common side effect of manipulation techniques on the cervical spine, and side effects following **craniosacral** therapy. One of the questions that is put to the experts is, in what situation would they not manipulate the cervical spine. Interview partner D does not use chiropractic techniques on the cervical spine at all. Interview partner B only uses such techniques very rarely (once a year). Three of the experts (A, C, E) use manipulation techniques regularly, but they are more cautious when working on the cervical spine and they do not use any amplitudes. Only interview partner F states that he uses adapted manipulations where there is **vertebrobasilar insufficiency**.

"With whiplash for example... the vertebral artery when there are dissections or whatever ... because then manipulating the neck is a real contraindication." (ID, p.3, I.34-36)

"...I am definitely much more cautious, when working on the cervical spine at least, than when I am working on the lumbar spine." (Translated from German, IA, p.8, I.36-37)

"Well I wouldn't manipulate if the patient didn't want me too... It also may be that the tissue does not want to be treated so to speak ... We have just been speaking about vertebrobasilar insufficiency, if the patient suffers from dizziness this is increased by my intervening for example." (Translated from German, IC, p.7, I.28-36)

"If there is vertebral insufficiency, the manipulation of occiput, C1 and C2 is contraindicated... Some say this is an absolute contraindication, but for me this is not a contraindication at all. There's a lot you can do there, of course this does not include forced manipulation, manipulation without a large amount of rotation or extension." (Translated from German, IF, p.5, I.6-11)

Two of the experts (A, E) are critical of the idea that there is even a clear relationship between **vertebrobasilar** complications and manipulation of the cervical spine.

"There is a significant number of studies that do not state that there is a connection between manipulative techniques or soft tissue techniques on the cervical spine and strokes, of whatever kind ... They all say that this is a coincidence and there is no causality at work. So even today this idea is not that well established." (Translated from German, IE, p.7, I.16-20)

"...well there are heaps of studies that give the opposite view of chiropractors, for example those that show the side effects of pain relief medicine when these are taken over a considerable length of time." (Translated from German, IA, p.8, I.39-40)

In the following section of this thesis, the differing opinions of the experts on the side effects of osteopathic techniques in general will be presented. Some of the interview partners (F) see a side effect as an undesired occurrence which accompanies treatment. For others (B, C) 'side effects' are not always adverse effects.

"A side effect is an effect that is not wished for. And in my opinion, where there are side effects then the treatment given was poor." (Translated from German, IE p. 13, I.7-8)

"I believe that this generally occurs following osteopathic treatment ... because side effects are only there if the treatment is having some kind of effect." (Translated from German, IC, p.13, I.26-28)

"People have terrible reactions to the treatment, but the nature of the treatment is that you quite often bring a chronic state to an acute state in order to initiate a therapeutic response within your patient. So I think the adverse effect of a treatment is not necessary a negative one." (IB, p.6, I.14-16)

Side effects following **craniosacral** therapy are evaluated very differently by the different experts. All the experts confirm that side effects do follow **craniosacral** techniques. However, there is controversy over the degree of intensity of these side effects, how often they occur and why they occur. Interview partner C

believes that there is more of a tendency towards side effects in the **craniosacral** area, because assessing the appropriate dosage is difficult in this area. Expert E is of the opinion that side effects are caused by sub quality treatment. Interview partner B believes that side effects are sometimes unavoidable if you want to help a patient who has a chronic condition. For expert A there is a certain contradiction in that, on the one hand one does not really know what kind of effect cranial techniques have in a scientific sense, but then it is claimed that they cause severe side effects.

"...I am thoroughly convinced that there are side effects, in the cranial area. Definitely,...it enables a patient to enter a very relaxed state and perhaps even to enter a hypnotic state." (Translated from German, IA, p.15, I.10-12)

"On the other hand the craniosacral area is something where I am less able to say with what intensity an osteopath should work, or how they should go about their treatment." (Translated from German, IC, p.5, I.30-32)

"...sometimes there is a chronic state that has to be made acute to get healed. So the reaction heals them." (IB, p.6, I.20-21)

"...It's a contradiction to say, okay on the one hand it is very difficult to prove, from a purely physical or physiological point of view, what this kind of treatment actually does, apart from being a kind of relaxation and perhaps autosuggestion, and then to say at the same time that there are very severe side effects; that is a paradox". (Translated from German, IA, p.6, I.31-34)

The experts are also asked whether they see a link in the fact that severely traumatised patients or those who have undergone **intraoral** techniques experience side effects from cranial techniques more often than other patients. Three of the interview partners (A, C, F) are of the opinion that it could be proved that severely traumatised patients are more susceptible to side effects and experience them more easily. Experts B and E could not confirm this. Interview partner D believes that inappropriate treatment is the cause of side effects. Expert B also views poor implementation of **intraoral** techniques as the cause of adverse effects following **intraoral** techniques. Interview partner F, however, does not give credence to this theory.

"Yes, if the patient has suffered trauma to the cranial area you have to be very cautious." (Translated from German, IF, p.7, I.31)

"...I would not work intraorally in the case of traumatised patients, because... manual therapies can set off old injuries, when working intraorally, intravaginally or just when you work on the pelvis or the heart or in the facial area. Some professionals have already overstepped the mark in such cases ... there is a lack of a protection mechanism in the patient and this can therefore lead to reactions that may not be controllable." (Translated from German, IA, p.14, I.13-18)

Side effects - intraoral techniques:

"I just think only if they are badly done." (IB, p.6, I.36) "I wouldn't think of that." (Translated from German, IF, p.7, I.34)

A comparison of the views discussed above with those expressed in the literature shows that not just most of the authors (Lesho, 1999; Stevinson and Ernst, 2002; Ernst, 2007; Kerry et al., 2008, Schomacher, 2007; Assendelft et al., 1996; Giles and Singer, 1998; Greenman, 2005; Gibbons and Tehan, 2004) but also a majority of the experts questioned view a vertebrobasilar complication as the most common side effect following manipulation of the cervical spine, as most of the interview partners (A, B, C, D, E) either do not carry out thrust techniques on the cervical spine at all, or they carry out such techniques with a great amount of caution. Most of the authors (McPartland, 1996; Greenman and McPartland, 1995; Liem, 2005, Greenman, 2005) as well as all of the experts state that there are side effects of craniosacral techniques. Some of the authors (Greenman and McPartland, 1995) in the literature and three of the interview partners (A, C, F) are in agreement that there is an increased incidence of side effects in severely traumatised patients. McPartland (1996) and expert B concede that there is a correlation between the increased incidence of adverse effects and the use of intraoral techniques, in so far as where this specialist cranial technique is not carried out correctly this may lead to side effects.

6 **DISCUSSION**

6.1 Interpretation

In this section, key results from the interviews and literature research, particularly those where there are differences in opinion, will be presented. I will now also bring the focus back to the question "What contraindications are there in Osteopathy? To what extent are these assessed in the same way by the experts questioned as by the literature?" The first question is very thoroughly answered in the theoretical section of this thesis (see chapters 3 and 4). The contraindications mentioned in the literature are largely the same. However, there are differences of opinion over whether certain clinical contraindications are 'absolute' or merely 'relative'. In some cases these conditions are sometimes even viewed as indications for osteopathic techniques, for example an uncomplicated slipped disk (compare chapter 4.1.1) and gall and kidney stones (see chapter 4.2). The experts largely confirm the views given in the literature, particularly regarding visceral techniques. There is less agreement when it comes to structural and **craniosacral** techniques. In relation to contraindications for osteopathic treatment, no views contradicting those given in the literature are expressed; these views are simply expanded on.

6.1.1 Flexibility of contraindications

Key questions have been raised in the course of evaluating the interviews; this is due to the differing views expressed by the experts (see chapter 5.4.1): To what degree can a contraindication be flexible? Is it even possible to find a consensus, or are the contraindications individual to each osteopath, because they are dependent on the skills and experience of the individual? All the experts are in agreement in as far as they all believe that over the course of many years of professional experience, one develops capabilities and skills that make it possible to adapt possible techniques more effectively to a patient and to use them with more precision. For this reason, four of the experts questioned are of the opinion that there is a long list of contraindications for beginners, which then becomes shorter and shorter over the years. One problem with this way of seeing things is that, from a professional-political perspective for example, the existence of clear guidelines on contraindications is deemed to be an integral element of professionalism in the medical field. An individual way of looking at contraindications obviously does not constitute a general consensus of osteopaths, which is of key importance for how the profession is viewed externally. Another problematic issue is the question of the extent to which someone can correctly assess his/her own capabilities and limitations and reflect sufficiently on their work. The following quote highlights this point:

"...for this reason it is sometimes difficult to evaluate one's own limitations, because once I am over this boundary, then I have already caused damage." (Translated from German, IC, p.2, I.1-2)

From a professional-political and legal perspective it is important that clear guidelines are provided on contraindications. But does this fit in with "individuality" and the philosophy of osteopathy? One expert is of the opinion that with each patient he can feel whether or not he can administer treatment, and that he is developing a sense for this. To what extent can, and should, intuition play a role in contraindications? In the area of clinical reasoning, Jones (2005) is very happy to place significance on the intuitive "gut feeling" of the therapist. For Jones, intuitive treatment is a subtle form of professional judgement. This intuitive way of reaching a diagnosis is closely related to experience. The more experience experts have, the more intuitively they work. How great the flexibility of a contraindication is, is not easy to discern, as can be seen here. Clear guidelines are surely desirable for the reasons stated above. In the end, we must all decide for ourselves the extent to which, for ourselves, intuition and experience play a role. Despite the fact that we are conceding a certain amount of ground to "individuality", we must never forget that the goal of our treatment is the wellbeing of the patient, and therefore it can be dangerous if one goes beyond ones limitations.

"...and that is the risk that we create when we work in borderline areas, where things can happen that we didn't bargain for. And in medicine there is nothing that could exist that doesn't exist." (Translated from German, IC, p.8, I.1-3)

6.1.2 Lack of evidence for craniosacral and visceral techniques

A further topic will now be introduced to the discussion. It is clear to see that in relation to **visceral** and cranial techniques, highly divergent explanations are given for the different perspectives on contraindications, in the literature as well as by the experts. For example, gall stones and kidney stones (see chapter 4.2 and 5.4.4) and the use of a CV-4 technique during pregnancy (see chapter 4.3.1 and 5.3.1.5). A reason for this could be that in these two areas there is very little scientific evidence to show how these techniques work, or indeed to show that they work at all.

"...in the visceral area we know a lot, lot less in general about what effect we are having, about what we are actually doing." (Translated from German. IA, p.11, I.3-4)

"...at present, when it comes to craniosacral treatment, this general consensus verges too much, in my opinion, on some or other statements made by experts that are accepted very unquestioningly." (Translated from German, IC, p.5, I.21-3)

In the area of research, **visceral** osteopathy can at least prove that breathing precipitates movement of the abdominal viscera. Furthermore, Finet and Williame (2000) also managed to prove that a pathology in this area is accompanied by a change in physiological movement and also therefore a reduction in vascular supply. These results also support the osteopathic, **visceral** concept (Barral, 2005; Liem and Dobler 2002) (see chapter 4.2). From a scientific point of view, the theory that functional disorders of the organs can be influenced and effectively treated by manual techniques still remains to be established. In the **craniosacral** area, the existence of the **craniosacral** rhythm (Nelson et al., 2006) and the effectiveness and mode of action of cranial osteopathy have still not been proven, from a scientific perspective (see chapter 4.3). The lack of evidence also makes it

difficult to determine contraindications for this technique. One can observe a variety of approaches among the experts. Some of them are cautious and do not use these techniques with certain pathologies. Others rely on their intuition and gut feeling in such cases. One interview partner admitted that in such situations he sticks to the general consensus in osteopathy, because he himself does not have an explanation for it. It certainly is not easy to answer the question of how one should deal with these "predetermined" contraindications. The **craniosacral** area is even more problematic, because, in Austria, from a legal perspective there are no contraindications, because **craniosacral** techniques are not recognised as a form of therapy by the law (Bauer et al., 2004). One of the experts was of the opinion that contraindications for **craniosacral techniques** need to be addressed from an ethical-moral perspective.

"I mean the cranial areas are certainly an area ... as regards the relationship to the patient ... which has a strongly manipulative character, very ritualistic ... and I also think that in osteopathy we are really lacking serious discussion on the issue of power in the therapeutic situation..." (Translated from German, IA, p.6, I.22-23, p.12, I.40-41)

Until there is more recognition of this area from a scientific point of view, it will continue to revert back to reflection, and to overanalyse and discuss predetermined contraindications.

6.1.3 Side effects in osteopathy

The definition of side effects in medicine comes from pharmacology. A side effect is an observed or unobserved effect of a medicine that is not one of the intended, desired (main) effects (Pschyrembel, 1994). In osteopathy this is understood to include undesired secondary symptoms resulting from therapy that lead to a worsening of symptoms or to complications (Liem and Dobler, 2002). In osteopathic treatment, side effects are seen as particularly prevalent in relation to HVLA techniques (see chapter 4.1.1.3). Only a small number of reports are available about side effects of osteopathic treatment not involving thrust techniques (see chapter 4.3.2). In a study of 60 patients, temporary side effects in

the form of slight to continuous local pain or stiffness are very frequently reported following osteopathic treatment (Froud et al., 2008). The following question arises from interviews with experts on the issue of side effects: Are side effects following osteopathic treatment an undesired reaction, or are they in fact a necessary, sometimes even a desired reaction? One expert shares the view of Liem and Dobler (2002), that side effects arise from inadequate, unclear diagnosis and are thus the result of "poor" treatment. In contrast to this, for some of the interview partners, secondary symptoms are not necessarily negative. They only appear when the treatment is having an effect and are often necessary to bring a chronic event to an acute point, in order to be able to induce healing. It is important to explain these reactions to patients and to remain in contact with them during this phase. Side effects of **craniosacral** treatment can also be emotional reactions or the reliving of a past traumatic experience. Now the question arises: Where do the boundaries of expertise lie for osteopaths?

"And here we come to an area, where it is questionable whether we are even able to monitor it." (Translated from German, IC, p.14, I.9-10)

The recording of side effects in osteopathy is especially important when this relates to contraindications, because this demonstrates that particular techniques lead to negative reactions or complications when used on patients with certain conditions. A problem that hampers such records being created is the inadequate, incomprehensive registration following osteopathic treatment, particularly of adverse effects (see chapter 4.1.1.3). A first step towards combating this problem would be the creation of a validated, standardised questionnaire for recording information on side effects. Endeavours in this direction and pilot studies are already being carried out at the European School of Osteopathy in England (Froud et al., 2008). For the future of osteopathy it is important that there is scientific evidence to support the use of this form of therapy and to demonstrate its effects and contraindications.

6.2 Critical reflection

This chapter will present critical reflections on this thesis. In the first, theoretical section of this diploma thesis (see chapter 2, 3 and 4) it can be argued that the literature referred to is largely made up of osteopathy books, with only a small proportion of the literature comprising scientific specialist publications, particularly in relation to **visceral** and **craniosacral** contraindications (see chapter 4.2 and 4.3). The reason for this is that there is still only a small amount of scientific evidence available for **visceral** and **craniosacral** techniques (see chapter 6.1.2). A further point that might evoke criticism is the fact that, because opportunities were limited by time and financial constraints, the entire spectrum of available literature could not be considered.

This thesis will conclude with a presentation of critical observations on the second, qualitative section of this paper, regarding the selection of the experts, the interview outline, and the implementation and interpretation of the interviews. In relation to the number of interviews carried out, it could be observed that due to the small number of experts questioned this work is not representative. The outline for the interview was very detailed, ensuring that every interview lasted between 40 and 60 minutes. The order of the topics was not selected in an optimal way; visceral and craniosacral techniques were handled last of all, when both participants in the interview were somewhat less alert and less concentrated on what they were saying than at the beginning of the interview. It would have been better to have the questions on the structural contraindications at the end and to make the outline slightly less detailed, to shorten the length of the interview. It should be pointed out that two of the interviews were held in a restaurant, over lunch, meaning that the discussion was interrupted on a few occasions. A problem arose during the interview with the French expert. When translated, the already very expansive discussion was made even longer. In order to shorten it, the interpreter attempted to reproduce the expert's answers in the form of keywords, which meant that a small proportion of the questions were not completely

answered. Even when the experts gave very lengthy answers, it was not always checked that they had actually supplied a comprehensive answer to the question. These weak points came into play when the interviews were transcribed however, and therefore they could not subsequently be rectified. As regards the interpretation of results, it must be pointed out that the qualitative research methods are subject to a large amount of subjectivity. Quotes can be interpreted in very diverse ways and this thesis shows only one of many different interpretations of the interview results. Although the qualitative method has its limitations in terms of standardisation and representativeness (Flick et al., 2000), the goal of this thesis is to act as a basis for further research projects in osteopathy.

6.3 Outlooks

Ideas and outlooks for the future can be gleaned from the interpretative approaches (see chapter 6.1) and critical reflections (see chapter 6.2). An interesting statement that is made regarding the flexibility of contraindications (6.1.1) is that the number of contraindications for osteopathic techniques goes down with the years of professional experience gained. Because there is a close connection between contraindications and side effects (see chapter 4.1.1.3, 4.3.2, 5.4.6 and 6.1.3), it would be interesting to determine, by means of a study, whether side effects occur more frequently with beginners and students than with experienced therapists. This would lend support to the assertion that beginners require a lengthy list of contraindications. A further important area of research would be studies on the mode of operation and the effectiveness of visceral and craniosacral techniques, which could then be used as a basis for the establishment of contraindications in these areas. The interpretation of the interviews could be used to create a questionnaire and to question a larger number of osteopaths on the topic of contraindications, as the six interviews that were carried out with experts demonstrate that there are very diverse opinions on these issues. A goal of osteopathy should be to find an even greater consensus on contraindications in the future.

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8 LIST OF ABBREVIATIONS

abb.	abbreviation		
CV-4 technique	cranial technique to compress the 4 th ventricle in the brain		
DOG-technique	manipulative treatment for the thoracic spine		
e.g.	"exempli gratia", for example		
et al.	"et alii", and others		
HVLA technique	"high velocity low amplitude thrust", manipulative treatment with a quick thrust over a short distance		
i.e.	"id est", that is		
Ι.	line		
p.	page		
s. a.	"sine anno", no date		
UK	United Kingdom		
WSO	"Wiener Schule für Osteopathie", Vienna School of Osteopahty		

9 GLOSSARY

adhesive tissue	attachment/adhesion of two structures together
analgetics	a drug that relieves pain
aneurysm	an aneurysm is a widening or ballooning of a portion of an artery, related to weakness in the wall of the blood vessel
angina pectoris	acute inadequate supply of oxygen to the heart muscle
Ankylosing spondylitits	chronic rheumatic inflammation of the vertebrae of the spine
anomaly	an unusual anatomic feature of organs or tissue e.g. hip dysplasia
anticaogulation/anticoagulants	any agent used to prevent the formation of blood clots
aortic aneurysm	an aneurysm is a widening or ballooning of a portion of an aortic artery, related to weakness in the wall of the blood vessel
aortic valve insufficiency	sloshing of blood back down from the aorta into the left ventricle of the heart due to incompetency of the aortic valve
arterial calcification/ arteriosclerosis	hardening and thickening of the walls of the arteries
arthritis	inflammation of a joint
asthenia	rapid fatigue and adynamie
borderline personality syndrome	a serious mental illness characterized by pervasive instability in moods, interpersonal relationships, self-image, and behavior
bradycardia	a slow heart rate, usually defined as less than 60 beats per minute
case history	medical history (form, start and progress of the current medical condition)
cauda equina	a bundle of spinal nerve roots that arise from the bottom end of the spinal cord
cauda equina syndrome	characterized by dull pain in the lower back and upper buttocks and lack of feeling in the buttocks, genitalia and thigh, together with disturbances of bowel and bladder function
cerebral	pertaining to the brain, the cerebrum or the intellect
cerebrovascular	pertaining the blood vessels in the brain
cervical myelopathia	affection of the spinal cord in the cervical spine
corticosteroids	any of the steroid hormones made by the cortex (outer layer) of the adrenal gland, for example cortisol, synthetic produced: cortisone
craniocervical	junction of the head and the cervical spine
craniosacral	system of bones and tissues of the head and the sacral bone
Crohn´s disease	chronic inflammatory disease, primarily involving the small and large intestine
dens axis	odontoid peg of the 2nd cervical vertebra (Axis)
disk herniation	herniated vertebral disk
disk prolapse	slipped disk
disk protrusion	a disk bulged out
diverticulitis	inflammation of the diverticula along the wall of the large intestine
diverticulum	a small bulging sac pushing outward from the colon wall, the large intestine
dysplasia	abnormal in form, for example, hip dysplasia is abnormal formation of the hip during embryonic development
embolism	the obstruction of a blood vessel by a foreign substance or a blood clot blocking the vessel
emphysema	an abnormal accumulation of air in the lung
endometriosis	cells that normally grow inside the uterus (womb), instead grow outside the uterus

endoprosthesis	artifical joint, a replacement (external material) for a human joint
fasciae	a flat band of tissue below the skin that covers underlying tissues and separates different layers of tissue
fascial	see fasciae
haematoma	effusion, an abnormal localized collection of blood
haemophilia	inherited bleeding disorders with lack of blood clotting
hepatitis	inflammation of the liver
hernia	protrusion of a tissue through the wall of the cavity
hypertension	elevated blood pressure
hypotension	blood pressure that is below the normal value
hysteria	personality disorder, need for recognition and appreciation take centre stage
iatrogenic	due to the action of a physician or a therapy the doctor prescribed
intracranial	within the cranium, the bony dome that houses the brain
intrahepatic hemangioma	localized tissue mass grows rich in small blood vessels in the liver
intraoral techniques	techniques inside the mouth
kyphosis	outward curvature of the spine, causing a humped back
left ventricular insufficiency	cardiac insufficiency of the left ventricle
ligament	a tough band of connective tissue that connects various structures such as two bones
lumbosacral	junction of the lumbar spine and the sacral bone
mesenteric vascular occlusion	acute occlusion of the superior colon artery by an embolus (A. mesenterica sup.)
mitral valva prolaps	drooping down or abnormal bulging of the mitral valve cusps during the contraction of the heart
myofascial	a flat band of tissue that covers muscles and muscle goups
neurosis	A chronic disorder featuring irritability of the nervous system and characterized by anxiety and/or extreme behavior dedicated to avoid anxiety situations
oedema	the swelling of soft tissues as a result of excess water accumulation
oesophageal varices	dilatation of the venous in the gullet
opisthotonus	tonic spasm of the head; mostly connected with tonic spasm of the trunk and extremities
osteomalacia	softening of bone, particularly in the sense of bone weakened by demineralization and by the depletion of calcium from bone
osteoporosis	thinning of the bones with reduction in bone mass due to depletion of calcium and bone protein, high susceptibility to fractures
osteosynthesis	operational method to reposition and stabilize a fracture with external material
pancreatitis	inflammation of the pancreas
perforation	appendix perforation
pneumothorax	free air in the chest outside the lung to effect a collapse of the lungs
psychosis	in the general sense, a mental illness that markedly interferes with a person's capacity to meet life's everyday demands
pulmonary oedema	abnormal accumulation of serous fluids in the tissue of the lungs
Reiter's disease	characterized by the triad arthritis, conjunctivitis and cystitis
right ventricular insufficiency	cardiac insufficiency of the right ventricle
scoliosis	sideways (lateral) curving of the spine (the backbone)
spasm	a brief, automatic jerking movement
spina bifida	a birth defect in which there is a bony defect in the vertebral column so that part of the spinal cord, which is normally protected within the vertebral column, is exposed

spondylosis	degeneration of the disc spaces between the vertebrae
spondyloslisthesis	forward movement of one of the building blocks (vertebrae) of the spine in relation to an adjacent vertebra
straight leg raising test	raising the straight leg you get pain through stretching the sciatic nerve
synovial cyst	a swelling in the space inside the joint capsule
tachycardia	a rapid heart rate, usually defined as greater than 100 beats per minute
thoracoabdominal	pertaining to brood body and abdomen
thrombosis	localized blood clot in a venous or arterial blood vessel
tonic-clonic seizures	most obvious type of seizure, the tonic phase the body becomes rigid, and in the clonic phase there is uncontrolled jerking
tonus	stress condition
tuberculosis	a highly contagious infection caused by the bacterium called Mycobacterium tuberculosis.
venous thrombosis	localized blood clot in a venous blood vessel
vertebrobasilar	pertaining the posterior cervical artery and the basilar artery
vertebrobasilar arterial insufficiency	circulatory disorder in the area of the posterior cervical artery
visceral	referring to the viscera, the internal organs of the body

10 ANNEX

10.1 Interviewing outline

Present the question of my master thesis: What contraindications exist for osteopathic treatment? Are they consistent within the literature and are they also confirmed by experts questioned?

Explanation the duration, progression and structure of the interview

1) GENERAL

What is your idea of contraindications (CI) in Osteopathy? How are you handling this subject personally?

 \Rightarrow Can you give me examples from your work: idea of clinical and technical CI experience/manual skills

How flexible are the limits/borders of a contraindication for you?

⇒ knowing your own limits; therapeutic skills, examination and assessment of the patient; knowledge, if the indication is good or not good, knowledge about CI, to know if other therapists/other kinds of therapy are more useful

How do you check the CI when you treat a patient?

What is your idea of absolute and relative CI?

 \Rightarrow definition: circumstance which prohibits the application of a treatment, although it is normally indicated (absolute); circumstance which allows careful treatment, if the benefit to the patient is greater than the risk;

How do you determine whether or not to treat a patient with a special technique?

 \Rightarrow example from your practical work

Do you have further comments on this general topic, otherwise I will ask you now some questions about CI for osteopathic treatment

2) OSTEOPATHIC TREATMENT

When is osteopathic treatment contraindicated for you apart from being a threat to the patient's life?

 \Rightarrow unknown circumstances/condition of the patient (danger for the patient), is it better for the patient to see first a doctor and then the osteopath or vice versa; Loss of time for the patient (is there another better suited therapy)

How often and why did it happen in your practice that you did not treat your patient in the first session?

In which situation would it make no sense for you to continue osteopathic treatment?

 \Rightarrow lack of efficiency/there is no change of the situation/stagnation of the patient's problem

Where did you get the information about contraindications for an osteopathic treatment?

 \Rightarrow from your own education, from literature, from your experience, legal situation/legality in England

Do you have any further comments on the CI for osteopathic treatment, otherwise I will now ask you some questions about CI for special osteopathic techniques.

There are 3 main areas of techniques in osteopathy: structural, cranial and visceral – Which one is your preferred part? Do you use all 3 parts equally in your treatment?

Which osteopathic technique has contraindications for you?

3) STRUCTURAL TECHNIQUES

Now I want to expand on the first of the 3 parts in detail. I would like to divide the questions for the structural techniques into 2 areas: thrust techniques and non-manipulative techniques.

Thrust technique: There are disagreements within the literature whether special diseases are a relative or an absolute CI. – What are your thoughts on thrust techniques in the case of anticoagulants and aneurysm?

 \Rightarrow Can you tell me some experiences/situations from your practical work

What do you think about a thrust in the case of a slipped intervertebral disk (on the level of the slipped disk)?

 \Rightarrow absolute/relative CI

Do you treat patients with osteoporosis or spondylolisthesis with thrust techniques?

 \Rightarrow absolute/relative CI

In the literature, vertebrobasilar accidents are the most common adverse event after the manipulation of the spine. In what situation will you not use HVLA technique on the cervical spine?

 \Rightarrow Especially in the upper cervical spine after rotational cervical manipulation, vertebrobasilar accidents are more difficult to prevent because they tend to occur in relatively young patients without known abnormalities, and there is little consensus about potential risk factors. (Ernst E., 2002)

Which screening tests do you use before a cervical thrust? How expressive/convincing are they for you?

~ Do you inform your patient of adverse events before your treatment?

In your opinion, what are the CI for non-manipulative structural techniques (MET, BLT, MFR, strain-counterstrain)?

 \Rightarrow literature: lack of the patient's permission, inability of patient to follow the instructions, inability of patient to maintain a position of comfort, fracture or dislocation of the bone, undiagnosed localized infection/inflammation, pulled muscle or tendon; own experience/examples

I really found little literature for non-manipulative treatment. So I would like to know your opinion about the following absolute CI for long-lever techniques (Croibier, 2006): fracture, knee/hip/shoulder endoprosthesis, osteosynthesis for the spine/extremities, arterial aneurysm?

 \Rightarrow own experience/examples

Where did you get the information about contraindications for structural techniques?

 \Rightarrow from your own education, from literature, from your experience, legal situation/legality in England

Do you have further comments on structural techniques, otherwise I will now ask you some questions about CI for visceral techniques.

4) VISCERAL TECHNIQUES

In which situations would you not use (deep) visceral techniques?

 \Rightarrow literature: metastasis, risk of perforation/vascular rupture, acute pencreatitis, aortic aneurysm, 4-6 weeks after abdominal surgery, left/right ventricular insufficiency, acute infection/inflammation, uterus: intraunterine device, internavaginal manipulation: pregnancy, virginity

In literature there are also disagreements concerning absolute and relative CI for visceral techniques.

What do you think about the local visceral treatment of gall and kidney stones?

 \Rightarrow Barral: no Cl/Indication; Liem: relative CI; absolute CI: renal and bilious colic

What are your thoughts on visceral work with a patient who has an abdominal tumour?

 \Rightarrow Croibier/DeCoster: absolute (tumours in digestion area); Liem/Dobler: relative (tumours without acute symptoms)

Concerning pregnancy: when and how long do you think visceral techniques for the uterus are contraindicated?

 \Rightarrow Barral: absolute for intravaginal manipulation; Mayer-Fally: first 12 weeks, Croibier: relative: whole pregnancy

There are opposing statements in literature as far as visceral techniques on the uterus with an intrauterine device are concerned – what is your opinion?

Barral: relative – internal techniques; DeCoster: absolute – all visceral techniques

Where did you get the information about contraindications for visceral techniques?

 \Rightarrow from your own education, from literature, from your experience, legal situation/legality in England

Do you have further comments on visceral techniques, otherwise I will ask you now some questions about CI for cranial techniques.

5) CRANISACRAL TECHNIQUES

How do you evaluate the following statement: "Cranial osteopathy is completely safe, and can be used without any restriction"?

 \Rightarrow Croibier ("To say cranial osteopathy is completely safe and can be used without any restriction is unreasonable; that's just like saying there are no specific indications and it can be used any time")

In your opinion, are there CI for cranial osteopathy? And why do you think they are CI? Your arguments?

 \Rightarrow Crobier: disease with high intracranial pressure (skull fracture/aneurysm/ haemorrhages/cerebral stroke, tumours, skull trauma), meningitis, vibrating/shaking trauma; Mayer-Fally: undiagnosed epilepsy/to tend to spasm, undiagnosed psychosis

In the literature there is no division into absolute and relative CI for cranial techniques. What is your idea of this non-existant division for cranial techniques? Would a division be of any use at all?

When is a CV-4-technique contraindicated for you?

 \Rightarrow pregnancy, low blood pressure, instable neurological disease (skull fracture, cerebral haemorrhages)

In my opinion there is a close connection between CI and adverse events, therefore I would now like to ask you some questions concerning this topic. In the literature I found some case reports about craniosacral iatrogenesis.

Are there adverse events after a cranial treatment?

What was your worst adverse event after a cranial treatment?

 \Rightarrow McPartland, Greenman (1995/96): patients with serious past medical history (whiplash, trauma records) should treat cautiously, because they tend to adverse events; intraoral techniques

In the article "craniosacral iatrogenesis" Harold Magoun (junior) states: "All of the more serious and permanent injuries I have seen have been at the hands of "cranial chiropractors" and Upledger-trainded physical therapists." What do you think about this statement?

 \Rightarrow case reports (Mc Partland, 1996)

Where did you get the information about contraindications for cranial techniques?

 \Rightarrow from your own education, from literature, from your experience, legal situation/legality in England

Do you have further comments on cranial techniques, otherwise I will now ask you a general question about side effects: What was your worst adverse event in your practical work up to now?

Is there anything else you would like to tell me about CI in Osteopathy?

Thank you for the interview!