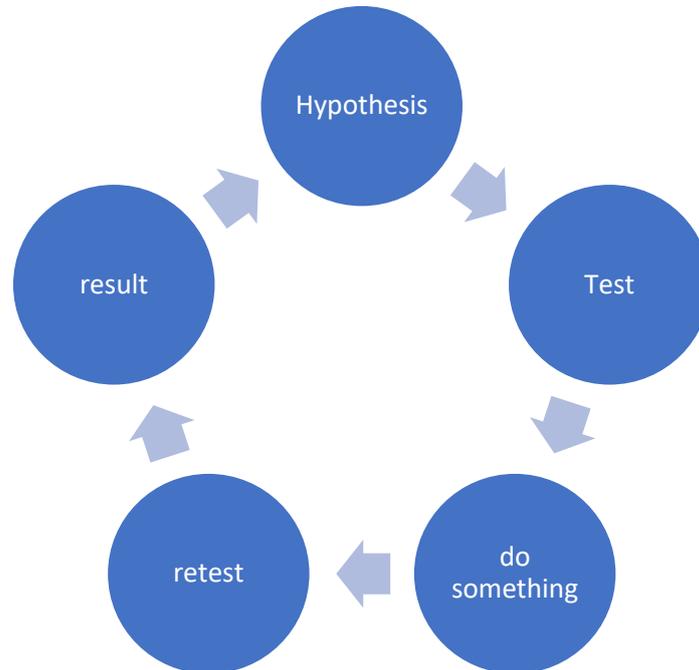


SCIENCE



Hypothesis= I want to know if what I perceive is true

Test = You have to design a test based on method and reasoning so as to how to look at the hypothesis in a logical and reproducible way .If I use this method, others should be able to copy the method and see similar results.

Do something = make a change that will affect the hypothesis. Treat a tissue based on your hypothesis i.e. the case history

Retest= look for any change when comparing the findings measured before to the findings afterwards.

Result = I have changed something or not . This in turn will lead to discussion and conclusions showing the hypothesis to be proven or not.

SHOULD AN OSTEOPATHIC EVALUATION OF A SUFFERING PATIENT BE ANY DIFFERENT ?

OSTEOPATHIC EVALUATION BEGINS WITH THE CASE HISTORY

Why do we need to take a case history? Is a palpation based evaluation enough?

Reasons for taking your own case history and how problems can arise

SAFETY

1. Is this a case that is right for me to treat or should they be referred for either further testing (MRI ? Lab Tests? Another modality ?)
2. Should I therefore treat them now or is the symptom such that I need to wait the result of the aforementioned testing and then decide who treats them?
- 3.
4. Language. This is very subjective but what it means is
 - a. Are you both speaking the same language to the same degree of fluency? Can they understand you and can you understand them?
 - b. Is there an appropriate interpreter available.
 - c. Can we ever be sure that our questions have been really understood such that the response is meaningful?
5. Does the patient have the mental capacity to respond to your questions? If not what do you do?
6. Who suggested the patient consult you?

- a. GP or another suitably qualified medical practitioner?
 - b. Family or friend?
 - c. Referred for your opinion by a colleague?
 - d. Internet?
 - e. Other means?
7. If it was another medical practitioner , did they carry out a skilled examination or simply refer them to you blind ? “Oh my doctor said I have a slipped disc and that he sends all his disc patients to you because you deal with them best ? “ Can we really rely on someone else’s evaluation and diagnosis thinking that they have used the same degree of skill that you might use ? Did they even examine the patient before making the diagnosis you are expected to use or are they really relying on you to do the job for them?

WHAT TO TREAT AND HOW

1. To find the correct tissue diagnosis . Does my skill set qualify me to deal with this case using osteopathic techniques ? Have I done the required training to be able to justify my response?
2. Look at predisposing factors . Is there something in the patients family or social or past medical history that is going to guide my responses to the above. i.e. elderly lady with history of previous osteoporotic fractures? Something in the patients family history that may be relevant to the decision as to who is best to treat them and when?

TREATMENT HISTORY

1. Past and present medical history. Questions arising from patient with visceral problems as well as somatic ones can be used to exclude treatment in the case of suspected pathology, or to include them in your treatment programme if your skill set so dictates.
2. How relevant is the medical history past and present? For example has there been a history of previous neoplastic disease which may now be presenting as a metastatic problem.
3. History of previous consultations. With other osteopaths ?
Why did they then come to you?
 - a. With other “alternative” practitioners?

- b. With previous allopathic doctors ? In each case we need to know if the patient has been given a diagnosis or evaluation with the appropriate explanation?
4. What treatment has been tried in the past and what effect did it have?

BEFORE YOU ASK A QUESTION YOU HAVE TO KNOW THE ANSWER SO AS TO BE ABLE TO MAKE SENSE OF THE RESPONSE

For example:

Question :Does the pain go all the way down to the leg to the foot? (This might be an example of a question looking for a sciatic nerve distribution)

Response: On Wednesday before I go to play football I always try to eat before the game!

Clearly the question and the response have nothing to do. With each other, but if you did not have a good working knowledge of your anatomy and pathophysiology you will not realise that there has been a mismatch.

Try to ask open questions and let the patient fill in the picture for you

For example what is your back pain like if you stand ? might elicit a response with the patient saying I am better if I rest rather than trying to walk, or conversely It is better if I try to move around rather than stand still.

As examples of this in patients presenting with acute low back pain you can ask questions based on the function of three common tissues causing muscle spasm and then compare the responses to see the likelihood of which is causing the problems, and thus which of my armoury of technical skills would be better suited to deal with the problem.

SIJ Pain has the following characteristics

Definite laterality to pain

Pain does not cross midline

Can be referred or root pain

Turning in bed provokes pain

Getting in or out of bath lifting leg is painful

Getting out of the car causes pain

Going upstairs i.e. taking the whole weight of the body against gravity causes pain

Pain referred to groin or genitals

Pain with opening legs getting out of a car

Pain related to menstruation

Facet Joint pain has the following characteristics

NOT weight bearing

Related to movement specifically rotation

Does not like lateral compression

History of relatively small injury in relation to great pain

Eased by rest

Referred to an extremity

Not affected by coughing or sneezing

Disc Pain has the following characteristics

Morning pain and stiffness

Weight bearing component

Age of the patient

Increased abdominal pressure

Sleep not usually disturbed

Daily pattern

History of repeated micro trauma

Movement eases pain but not for long they tend to fidget.

Going uphill

Getting out of a chair

DIFFERENTIAL DIAGNOSTIC QUESTIONING FOR THE THREE
COMMONEST STRUCTURAL PROBLEMS CAUSING PAIN IN
PREGNANCY

SIJ pain has the following characteristics

Definite laterality to pain

SI pain alone does not cross the midline , if it does it is more likely
to be disc or facet pain

Can be referred or root pain

Referred pain to a myotome sclerotome or dermatome, or root
pain due to entrapment syndrome. The Piriformis muscle is
usually pierced by the sciatic nerve and an SIJ lesion especially
involving the lower pole can lead to sciatic nerve pain and clinical
signs such as reflex and power changes in the area supplied.

Turning in bed provokes pain

Sleep is disturbed by SIJ pain especially if it is the pain of inflammation but also because to turn in bed you have to use the pelvic girdle to turn and swivel the hips to the new position.

Getting in or out of bath lifting leg is painful

This is all about unilateral weight bearing. The act of stepping over the high sill of the bath involves separating the legs and standing on one leg. Your patient will not be able to stand on the affected leg with SIJ pain. They will also have difficulty getting out of the bath.

Getting out of the car causes pain

Again, this involves separating the legs and then unilateral weight bearing. Depending on whether they are driving or a passenger and if the car is left hand or right hand drive this will be easier or harder. Certainly, they will not be able to get out of a low car seat

without help or without grabbing hold of the door to pull themselves up.

Going upstairs

taking the whole weight of the body against gravity causes pain on the affected side

Pain referred to groin or genitals, and it goes over the hip not to the hip. Patients use the back of the hand showing pain radiating from the PSIS and then over the front of the hip and down to show the pain in the groin

Walking on flat ground

This involves the weight bearing phase on the affected side not the swing phase of walking.

Facet Joint pain has the following characteristics

It does not involve weight bearing

Facet joint pain can occur when the patient is off weight bearing unless there is an anomaly and weight bearing facet joints or spondylarthrosis. Normal facet joints do not carry weight and when they are called upon to do so for example in the last weeks of pregnancy when she has a deep lordosis they can start to hurt.

Pain is related to movement specifically rotation

There is only one degree of rotation per facet in the lumbar spine and so rotation in the neutral plane will engage the facet joints quickly causing pain. If they flex and rotate the pain will go away.

Does not like lateral compression

For the same reason above. This is one of the principles behind the triangle test a specific test for SIJ dysfunction.

History of relatively small injury in relation to great pain

There are thousands of nociceptive fibres around the facet joints and so a small injury can produce violent pain and muscle spasm which can die down again very quickly.

Eased by rest in any position but normally laying on the side with the painful side up.

Referred to an extremity

There is little evidence that facet pain will entrap a nerve root but it will refer via a sclerotome, myotome, or dermatome

Not affected by coughing or sneezing

because it does not cause a raise in intra abdominal pressure as in disc pain.

Disc pain has the following characteristics

Morning pain and stiffness

Care should be taken with this question because

inflammatory back pain from rheumatoid disease or any of

the sero negative arthritides will cause morning pain and stiffness.

If there is a structural fault or derangement of the internal architecture of the annulus fibrosis it can lead to a disc bulge or herniation, or if there is extrusion of the material from the nucleus pulposus outside of the protective annulus fibrosis this is a disc prolapse. The discs are like sponges and absorb water and nutrients from the bone end plates during the night when the patient is horizontal and not weight bearing. When the patient rises they put all of the body weight onto the inflated disc and this will encourage the bulging and cause muscular hypertonia as a protective measure, hence the morning stiffness. Once they have been on their feet for a while then they literally squeeze the excess fluid out and they will have more freedom of movement as the hypertonia in the muscles dies down.

Weight bearing component

There are only two tissues that support the body weight under physiological conditions in the spine, these are the intervertebral discs and the vertebral bodies. (see facet

joint pain above). The medical case history questioning should alert the osteopath regarding potential pathology involving the vertebral body such that positive responses to weight bearing activities should suggest the involvement of the disc as a source of pain.

Standing is possible but not for too long i.e. standing at the sink to wash, standing in the kitchen cooking, standing in a queue or supermarket shopping at a slow pace involving frequent stops. These are the questions that elicit a positive response.

Age of the Patient.

The commonest age to develop a prolapsed disc is between 30 and 50 years. Twice as many men as women are affected.

In pregnancy degenerative disc disease is not a common presenting symptom this despite the fact that she is working harder to carry the extra weight of both the baby and the extra weight she has put on during the pregnancy. This is probably because of the high levels of circulating oestrogen having a strengthening effect on her skeletal

muscles. Paradoxically the levels of circulating relaxin will mean that the fibrous structures of the annulus can be weakened. This is why muscular back pain is so common in pregnancy, they literally have to work harder to protect a weak annulus and also in the case of the postural muscles to allow the postural changes of pregnancy.

Increased abdominal pressure

Patients with a weak annulus commonly report pain when sneezing or coughing or on defecation because the raised intra abdominal pressure causes a disc to bulge, and also because these actions encourage an increase in lumbar flexion.

Sleep is not normally disturbed.

Patients with disc problems can sleep throughout the night if they can get into a comfortable position. It is the SIJ patients who are disturbed by pain when they turn over in bed (see above).

Daily pattern

Patients with disc disease commonly report that it is painful and stiff in the morning, easier at lunchtime and then sore as the day progress into the afternoon and evening.

Repeated micro trauma

It is not common for an acute disc pain to be the first time the patient has had an acute back pain incident. Much more common is the history of repeated small attacks which culminate in a major disc prolapse.

Movement eases pain but not for long they tend to fidget

This is because as the small postural muscles contract to support the weak annulus they fatigue and the patient has to move so that they can relax. The new position repeats the action such that they find it difficult to sit for long in the cinema or theatre because of this constant need to change position.

Going uphill

When we walk uphill or up a slope we lean forward into a flexed attitude. Likewise, when we walk down a hill it is a position where the lumbar spine is held in extension. The flexed attitude will challenge the disc lesion.

Getting out of a chair.

Getting out of a chair usually involves spinal flexion followed by extension. Especially if it is a low sofa or easy chair. This is because in the normal mechanism of rising from a chair, especially a soft chair, the patient first has to hyperflex to shift his centre of gravity forward which encourages the pelvis to move over the feet, and then to use all of his spinal extensors and hip extensors to pull him upright against gravity.

THE ABOVE IS ONLY A TISSUE DIAGNOSIS .IT SHOULD LEAD TO THE STANDING EXAM, MOVEMENT EXAM ETC AND THEN A PALPATORY EXAM. THIS IS WE COME TO THE CONCLUSION THAT SHOULD DICTATE TREATMENT.