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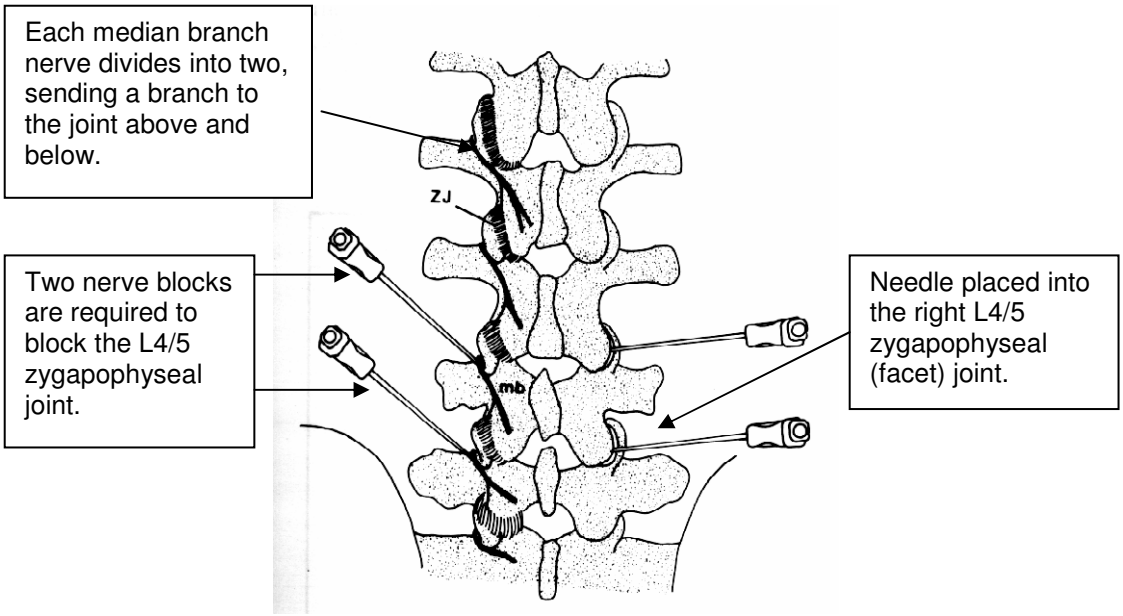
Are the facet joints the cause of pain?

The facet joints are the small joints at the back of the spine. They control the movement of the spine. They are generally non-weight-bearing joints, but in heavier people the lower facet joints of the lumbar spine do become weight-bearing and this can add to pain.

It has been shown in studies that the facet joints in the neck are commonly injured in motor vehicle accidents, and account for around 50% of people with ongoing neck pain and headaches post accident. In the lower back facet joint pain accounts for about 15% of chronic back problems in young people and around 40% in older adults. Some of these changes in the facet joints may not show up on x-ray, CT scan or MRI scanning. Other changes including degenerative changes such as osteoarthritis tend to develop in the facet joints as we get older, but may not necessarily cause pain. Over the age of 50, most people have got some degenerative changes which are visible on x-rays or CT scanning, but these degenerative changes often do not cause pain. Interestingly, over the age of 60 the incidence of back pain and neck pain actually declines, yet the degenerative process continues to progress.

The only way to determine whether the facet joints are the cause of pain is to either inject the joint with local anaesthetic or block the nerves that supply the joint and see if this eliminates the pain. If the facet joints are proven to be a cause of pain, then treatment with radiofrequency denervation of the nerve supply to the facet joints, or with surgical fusion, may be appropriate. Radiofrequency denervation may provide relief of pain for periods up to 12 months at a time allowing a return to normal activities in that time.



Injection protocol.

The nerve supply to the facet joints is via the medial branches of the dorsal rami nerves. The injections that are used to determine whether or not the facet joints are painful are called medial branch blocks. To block the pain form one facet joint we need to numb the nerve above and the nerve below the joint in question. Thus for one joint, 2 nerves need to be injected, for 2 joints on the one side 3 nerves need to be blocked. The injection is done under x-ray control. 0.5ml. of local anaesthetic (either Marcaine or Lignocaine), is injected on to the nerves. A pain chart will need to be filled in with the level of pain reported prior to, and for 6 hours after the procedure.

The injection itself consists of placing a needle through the skin under an x-ray machine, and the needle is guided down onto the bone, next to the path of the nerve. A tiny amount of dye is injected and a picture taken to confirm the correct positioning of the needle before local anaesthetic is injected.

A thin 25 gauge needle is used. Apart from minor local bruising and pain, the procedure does not have any side effects. At times pain and muscle spasm can occur for up to a few days, but the chances of this are around 5%. If you have some pain then some simple stretching exercises should relieve this.

What to do afterwards.

Upper neck injections (3rd Occipital nerve block, C3 and C4 medial branch blocks) may result in dizziness and unsteadiness for up to 6 hours afterwards and thus it is highly recommended that you be driven home after the procedure, but for injections elsewhere in the spine there are less after effects. You should try and simulate the activities that normally cause pain over the 6 hours following the injection to assess whether the injection has truly blocked the pain. Repeat confirmatory injections are performed one to two weeks later if the first injections successfully block the pain. The injections are performed 1-2 weeks apart. If there is no relief then it may be that other levels in the spine may need to be injected and this should be discussed at your next visit to your doctor.

If good relief is obtained at the first session, and this is confirmed at the next session, then we can conclude the facet joints are the main cause of pain and thus you should be helped by the radiofrequency denervation procedure. The denervation procedure is explained in another handout. If there is no relief following the first session then it may be necessary to investigate other levels, which again may require two sets of injections. You should see the doctor again to determine if other injections should be done. If there is still no relief then we can conclude that the facet joints are not the cause of your pain.

Pain Chart

You will be given a chart to assess your pain level. You must rate your pain between 0 and 10, with 0 equalling no pain, and 10 equalling worst pain imaginable. You should rate your pre-injection pain both in terms of your movements and how you feel doing the things that most aggravate the pain, and then over the next 6 hours, the pain chart should be looked at, at the intervals initially of half an hour, and then hourly.

You may need to describe separately different pains that you experience. For instance, you may have low back pain in addition to leg pain and these two pains should be described separately. For example, it may be that the injection may totally relieve the low back pain, but may not help the leg pain. This is important information for your doctor to assess when making recommendations regarding further treatment.

For example:	Before injection;	back pain =5 (moderate),	left leg pain=8 (severe).
	1 hour after,	back pain =0 (nil),	left leg pain=8.

In this example the back pain has been relieved, but the leg pain is the same. This indicates the back pain is related to the facet joint, but the leg pain is not. Pain charts will need to be interpreted by your doctor and discussed with you. Please feel free to ask questions for clarification.

You should keep a record of the pictures taken and the pain chart together with your other X-rays for future reference.

Costs

The procedure is performed by Dr Victor Wilk at the Alfred Hospital in the fluoroscopy suite of the radiology department and has two component costs. One is the X-ray facility fee charged by the hospital (usually bulk billed by the Alfred Hospital) and the other the injection fee charged by Dr Wilk, usual fee is $180 invoiced by the Brighton Spinal Group. The Australian Medical Association recommended fee is $225.00 (Medicare rebate = $80.35)