

## BUTTOCK AND PELVIPERNIEAL PAIN OF SPINAL ORIGIN

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The most common pelvic causes of buttock pain are **piriformis syndrome, obteratur internus syndrome, hamstring syndrome** (pain caused by damage or inflammation of the hamstrings where they join the hip bone), **pubental neuralgia** (with associated myofascial pain syndrome), **sacroiliitis, tendonitis of the gluteus medius, superior, medial or inferior cluneal nerve entrapment.**

Certain buttock pains are of spinal, rather than pelvic, origin; the most common being radicular pain, **facet syndrome** (inter-vertebral joint pain), thoracolumbar junction syndrome or **Maigne syndrome** and facet syndrome of the lumbosacral junction.

### Buttock pain of radicular origin

**On a clinical level**, buttock pain of radicular origin normally comes with pain that spreads below the knee and often as far as the toes. This is the infamous sciatica, with damage to the L5 or S1 root. Sometimes the pain remains restricted to the buttocks. The clinician will look for a spinal disorder to support a lumbar origin. A neurological examination will be necessary, in order to identify a sensory or motor deficiency in the extremities. For example, a deficiency in the big toe extensor, along with isolated buttock pain, points to a compression of the L5 root. Reflexes should be investigated as well as sphincter issues. A radicular diagnostic hypothesis will be confirmed by spinal imagery, namely a lumbar scan, or better still MRI. The cause of the radiculitis may be compression from a slipped disc, foraminal stenosis, or more rarely lumbar spinal stenosis. Buttock pain tends to occur more when walking in such cases, and is relieved with rest.

**The treatment of radicular pain of disc origin** consists of a scanner-controlled epidural injection for a discal herniation situated within the canal or in the recess. Epidural adhesiolysis is an interesting alternative to the epidural injection which is usually proposed.

It is possible, in certain cases, to use a scanner-controlled foraminal injection when the root compression is located in the foramen.

When injections have failed, it is possible to discuss the possibility of surgery, particularly so when the radicular component of the pain or a motor deficiency are prominent. If lumbago clearly prevails over radicular pain, it is better to propose a rehabilitational approach with a multidimensional component aimed at strengthening the muscles.

**Treatment of the narrow lumbar canal** involves epidural injection, or epidural adhesiolysis where possible. If this does not succeed, lumbar recalibration and possibly arthrodesis may be proposed, taking into account whether or not there is an associated spinal instability.



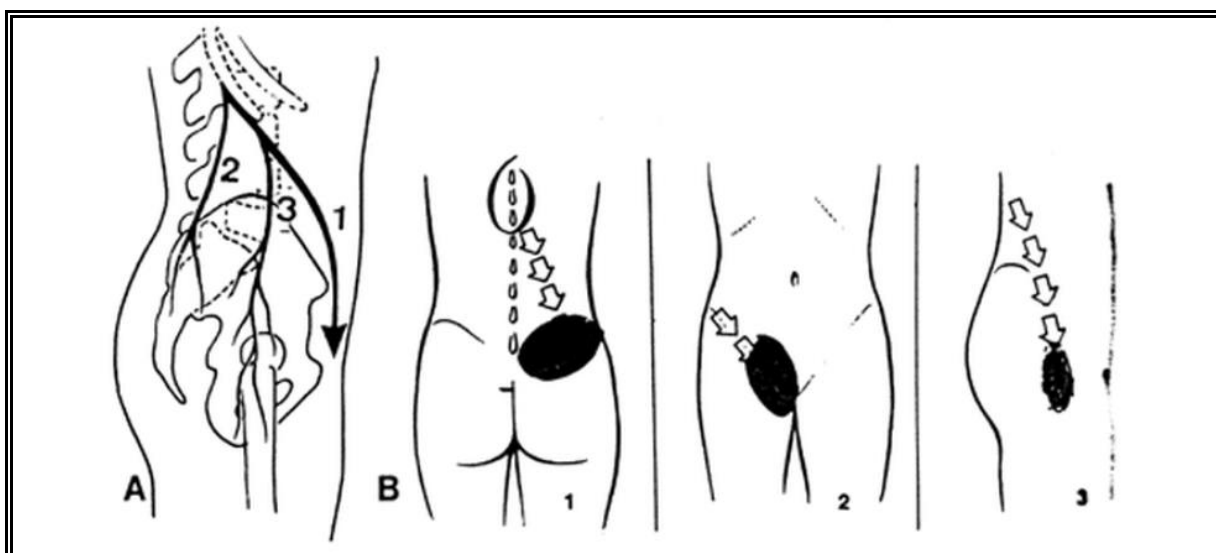
Foraminal stenosis at left L5S1 potentially leading to conflict with the L5 nerve root, this compression indicating sciatica that may spread as far as the big toe, or may be restricted to the left buttock.



Stenosis of the lumbar canal at L4L5 can be signalled by unilateral or bilateral pain, aggravated by walking or climbing the buttocks.

### **Buttock pain linked to Maigne syndrome or facet syndrome of the lumbosacral junction.**

Maigne syndrome is a pattern of unilateral or bilateral pain. It results from an irritation or damage to the spinal sensory nerve roots T12 and L1. These roots provide sensation in the **buttock region, the iliac crest (at the back), the groin, the pubic area, the inner thigh and the external genital organs (at the front), and the external part of the thigh (laterally)**. The existence of a partial or complete irritation of these nerve branches can cause pain in one or all of these areas. The diagnosis may be missed if the patient does have spinal pain, or a history of spinal pain. This painful disorder is often observed in patients who suffer from perineal neuralgia caused or aggravated by sitting. It is supported by the presence of compensation mechanisms developed by patients, such as sitting on one buttock (because of their perineal pain).



Anterior branch (1), posterior branch (2) and perforating branches (3) of the spinal nerves of T12 and L1 which can cause pain that spreads to the groin and inner thigh regions, both the buttocks and the trochanter zone, as well as the side of the thigh, according to Maigne.

**The diagnosis is clinical**, confirmed by an examination showing the existence of unilateral pain upon palpation of the posterior articular mass of the thoraco-lumbar junction, usually at T12 L1, but it is sometimes found that the pain from the nearby T11T12 or T12L1 predominates. Normally 2 or 3 levels are

involved. Palpation of the iliac crest is often painful. Cellulalgia of the iliac crest or buttocks also exists. Sometimes, when the anterior roots are involved, there is unilateral inguinal or pubic cellulalgia.

**The treatment** consists of performing an osteopathic manipulation or by undertaking an image- or scan-guided injection. The latter may be performed immediately or as a second intervention, after osteopathic treatment has failed. Performing an anaesthetic block test of nerve branches can allow confirmation of the aetiological diagnosis, where the pain disappears immediately. When the pain recurs, it is possible to propose a thermo-coagulation of 2 or 3 levels to obtain a result that lasts over time (improvement of at least 50% in terms of pain in 70% of cases 1 year later).

### **Posterior joint syndrome or facet syndrome of the lumbosacral junction.**

#### **Clinical signs :**

The existence of posterior joint syndrome of the lumbosacral junction can explain buttock pain, but alongside a more prominent lumbar pain that is often unilateral or stronger on one side than the other. Pain is heightened by being stationary for extended periods, and relieved by walking. Usually, there is no spinal disorder (lumbar stiffness).

The neurological examination is normal. The diagnosis is confirmed by an examination where palpation shows sharp pain around the articular mass concerned, most commonly L5S1 or L4L5, where pressure produces the same pain that the patient normally feels. This often presents with pain upon rolling the skin, in segmental fashion. Positive diagnosis is given by the injection block test.

#### **Treatment :**

Injection of anaesthetic allows the confirmation of the diagnosis, injecting cortisone can give lasting pain relief, especially if used alongside functional treatment; but an early improvement in painful symptoms may justify undertaking thermocoagulation, which is more effective than injection (improvement in terms of pain, at least, in 70% of cases, one year later).



*Injection in the posterior articular, controlled with radioscopy.*

### **Conclusion**

Alongside pelvic sources of buttock pain, it is essential not to forget to look for a spinal origin as part of the aetiological assessment. Spinal imagery allows the confirmation of a radicular cause, while a positive diagnosis for a posterior joint cause at the thoracolumbar or lumbosacral junction can be given by an injective approach. Injections should be seen as a diagnostic and therapeutic test which can be followed by thermocoagulation.

**Whatever treatment is proposed, using a rehabilitative approach alongside it, based on muscle strengthening and multidimensional training, allows the enhancement of the result produced by injection or thermocoagulation techniques**