Case Reports

Acupuncture for Back Pain in a Patient with Forestier’s Disease
(diffuse idiopathic skeletal hyperostosis/DISH)

Tim Mears

Summary
Acupuncture was used to treat a 54-year-old man with low back pain and Forestier's disease. His symptoms were markedly improved with acupuncture where other treatments in the form of analgesics, non-steroidal anti-inflammatories, physiotherapy and hydrotherapy had proved ineffective. There would appear to be no cases reported in the literature where medical acupuncture has been used to treat back pain in a patient with this condition.

Keywords
Acupuncture, Forestier's disease, diffuse idiopathic skeletal hyperostosis, back pain.

Presentation
This 54-year-old gentleman first presented in 1992 with a ten year history of central low back pain which radiated into his right buttock. No other joints were affected. There was no significant past medical history, no history of trauma and he took no regular medication apart from co-dydramol for pain control. He had not responded to conservative treatment in the form of rest, non-steroidal anti-inflammatory drugs or physiotherapy, and was finding it increasingly difficult to carry on his work as a self-employed builder. He could only manage to work two days a week.

His previous general practitioner had been concerned about ankylosing spondylitis or possibly psoriatic arthropathy as he had a past history of mild psoriasis although there had been no associated joint problems.

He was referred to the local rheumatologist in 1993. There was some definite stiffness and restriction in movement and the patient was only able to achieve 60 degrees of flexion without pain and lateral flexion was restricted particularly to the left due to pain in the right buttock.

There were no neurological signs and no evidence of spinal stenosis.

The consultant arranged for routine x-rays of the lumbar spine, and these revealed the characteristic features of Forestier's disease, particularly bony overgrowth and ligamentous ossification due to the associated enthesopathy. Although there is no universal criteria for diagnosis, flowing calcification over the anterolateral aspects of four contiguous vertebrae is the generally considered diagnostic in the absence of spondyloarthropathy or degenerative spondylolisthesis. The patient was referred for further physiotherapy and hydrotherapy, in an attempt to control pain and maintain flexibility. He was discharged from the clinic in 1994, and he stopped work altogether within a few years. He effectively took early retirement on medical grounds.

He first presented to me in April 2000 to discuss the use of acupuncture in the treatment of back pain, and to see whether I felt he would be a suitable case for such treatment.

Treatment
I suggested an initial course of three treatments at my general practice surgery, at weekly intervals, using a visual analogue scale (0-100 (0=no pain, 100=extreme agony) as a subjective measure as well as analgesic use (monitored via prescription computer records) as an objective measure of response to treatment. At that time he was using co-dydramol 2 tablets qds on a daily basis. On examination there was no overt bony tenderness although the pain centred around the lumbar
region which was consistent with his x-ray appearances. There were no definite trigger points but some tender points in the adjacent musculature.

His initial visual analogue score (VAS) varied between 60 to 80, and I suggested initially needling EX21, paired points 0.5 cm lateral to the lower border of the spinous processes. Using a standard, single use, sterile needle (0.3mm x 40mm) with introducer, I needled at the level of L2 to L4 bilaterally, deeply without stimulation. These points seemed to be the most appropriate way of needling near to the region of the ossification. I also needled the two tender points. The duration of treatment was 10 minutes. He experienced no side effects and returned the following week, reporting a marked reduction in his overall pain, VAS was 40, with a dramatic reduction in the frequency of painful ‘spasms’ in the back, that he had not previously mentioned. I repeated his treatment as before, but added on this occasion EX21 at the level of L1 bilaterally as well as BL40 on the left side and a tender point in the left calf has he had some pain extending down into his left leg. He subsequently cancelled his follow up appointment, reporting further improvement VAS was 18, and suggested that he would arrange a follow up appointment if his symptoms recurred. He was able to stop taking his co-dydramol, using only infrequent paracetamol for analgesia.

**Discussion**

Forestier’s disease (diffuse idiopathic skeletal hyperostosis) is a common condition affecting up to 10% of the male and 8% of the female population at age 65 years and over. There would appear to be some inherited factors associated

![Figure 1](image_url)  
*Figure 1* These radiographs of the thoracolumbar spine show flowing ossification anteriorly and on the right without significant disc disease or degenerative spondylosis.
with this condition as the prevalence in certain populations is as high as 54% at age 65 years and over (Pima Indians).5

It is associated with various other medical problems including impaired glucose tolerance and adult onset diabetes, hyperinsulinaemia, gout and hypertension.3 Although the condition can often remain asymptomatic, discovered incidentally at autopsy, it presents with low back pain in up to 91% of cases. It would appear that growth factors, particularly insulin, are implicated in the pathogenesis of the disease, as the earliest changes detectable prior to ossification are connective tissue proliferation, relatively rich in matrix and cellularity, separating randomly orientated collagen bundles.3 There has been some doubt as to whether low back pain is more prevalent in this condition than in an appropriate control group,6 but the general consensus in the literature would appear to confirm the disease as an important cause of low back pain, which can be complicated by spinal stenosis.1-3

Forestier’s disease is a common condition,2-4 and although it can be asymptomatic, it usually presents with low back pain. There is no specific treatment for the condition, although physiotherapy and non-steroidal anti-inflammatories improve pain and flexibility. Acupuncture would appear to offer an additional treatment option, although its exact mode of action in this condition can only be postulated. Acupuncture is likely to act primarily through modulation of pain transmission in the dorsal horn, but it may also mediate local release of neuropeptides in the region of the enthesopathy, inhibiting or antagonizing the growth factors that produce the hyperostosis.

Reference List
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