THE SYNDROME OF THE PROLAPSED THORACIC INTERVERTEBRAL DISC

Some of the most perplexing clinical syndromes are manifest by prolapse of a thoracic intervertebral disc. Because of its rarity and because of the protean nature of presentation the condition is often overlooked. It has been estimated that the incidence may be as high as one patient per million population per annum.

Degenerative change in the intervertebral disc may allow narrowing of the disc space. Marginal osteophyte formation and buckling of the ligamentum flavum by this approximation of adjacent vertebral bodies constrict the theca. This compression may be total or partial. Two possibilities emerge: 1) a syndrome produced by simple local or circumferential compression; and 2) a clinical picture probably due to pressure on the anterior spinal artery with concomitant disturbance of blood supply to the cord.

The sequestrated disc is often the size of a cherry, calcified and adherent to dura. Prolapse may be acute with sudden onset of symptoms and signs, or chronic protrusion with gradually progressive symptoms of bizarre pattern.

Historically, patients frequently recall an injury such as a fall on to the buttocks. They record a variety of subjective symptoms representing all modalities of sensibility. Pain in the back is most common; referred pain may be extensive or confined to one or two dermatomal segments, sometimes in girdle distribution or radiating into one or both lower limbs; numbness may be discomforting; burning pain and disorders of temperature sensibility and hot and cold sensations in the trunk and lower limbs disturbing; obtrusive and unpleasant paraesthesiae may be a feature. Proprioceptive sensibility may be affected. One patient who sustained a Pott's fracture after tripping on a paving stone in the garden insisted that her fall was caused by unsteadiness. Impaired positional and vibration sense was demonstrated, but only after three years when the complete picture unfolded. Tenacity in obtaining an adequate history is essential, and perhaps the authors of the paper in this issue could have laid more stress on this.

All patients notice weakness in the lower limbs. It is not always easy for the observer to confirm this, and one must examine the patient's ability to sustain strong muscle contraction against resistance, because our clinical tests are too imprecise to expose minor degrees of weakness easily. Lower motor neurone signs with flaccid paralysis may be seen in lower thoracic disc disease, but upper motor neurone lesions with spasm, clonus, exaggerated reflexes and an extensor plantar response are common. The complaint has been made that when sitting cross-legged the supported limb "trembled" in clonic spasm. Rombergism may be a feature and bladder function is sometimes impaired.

Pain and weakness can be sufficient to confine patients to bed. Each symptom and sign may present in isolation and the cause remain obscure. Pain referred to the abdomen may be considered sufficient indication for laparotomy. Conditions like oesophagitis, peptic ulceration, cholecystitis, appendicitis and neoplasm have been mistakenly diagnosed. Disseminated sclerosis is a diagnosis supported by the tendency to remission in disc disease. Symptoms have been ascribed to familial ataxia and polymyalgia rheumatica.

Radiographs can confirm the diagnosis. A pitfall is failure to radiograph the thoracic spine, especially when signs suggest a lower motor neurone involvement. Narrowing of the disc space, and on the antero-posterior film of the vertebral column calcification in the spinal canal, may be seen. Partial or complete obstruction of the spinal canal can be demonstrated by contrast myelography.

The principal contribution of the authors of the paper in this issue is their warning against laminectomy in treating the condition. Its danger was clear from Logue's (1952) contribution and the present paper confirms this. After the laminae are removed, the disc under tension and now unopposed, extrudes into the spinal canal. Paraplegia may supervene.

Transthoracic excision of degenerated discs is acceptable and easy when there is no sequestration and long tract signs are absent. The posterolateral approach described by Carson, Gumpert and Jefferson (1971) is undoubtedly the safest method and the first choice for removal of a sequestrated thoracic disc.

The complications of operation rest heavily on wrong surgical approaches, vascular impairment to the cord and failure to handle the cord with the utmost delicacy. Effective treatment depends on a correct surgical approach.

More intelligent patients often present a lucid and lively history of this beguiling disorder. A perceptive clinician elicits often scant objective signs and interprets them correctly, but the easiest way to the diagnosis is to think of it.

N. E. Shaw.


REFERENCES
