GLOMUS TUMOURS OF THE COCCYGEAL BODY ASSOCIATED WITH COCCYDYNIA

A PRELIMINARY REPORT

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Two cases of coccydynia are presented. Their definitive treatment was excision of the coccyx and the pericoccygeal tissues. The histology in both cases revealed a glomus tumour of the coccygeal body and the symptoms were completely relieved after operation. Glomus tumours of the coccygeal body may be the cause of some cases of coccydynia.

Coccydynia, in its broadest sense, includes any painful condition in the region of the coccyx. In those patients where there is no demonstrable pathology to account for the pain, both conservative and operative treatment are often unsuccessful and the patients may be labelled neurotic. These patients, who are usually female, complain of coccygeal pain of insidious onset and varying in intensity: some may have severe pain. The pain is usually described as burning or throbbing in character. Local pressure on the tip of the coccyx produces severe, sharp, stabbing pain. We are reporting two patients with coccydynia who failed to respond to conservative treatment and who were treated by excision of the coccyx and the pericoccygeal soft tissues. In both cases, histological examination revealed a glomus tumour in the soft tissues at the tip of the coccyx. We suggest that a glomus tumour of the coccygeal body may be the cause of some cases of coccydynia.

CASE HISTORIES

Case 1. A 14-year-old girl presented in July 1979 with a one-month history of localised burning pain in the region of the coccyx: local pressure aggravated the pain. There was no history of trauma. On examination the girl was fit, afebrile and had a normal haemoglobin, white blood count and erythrocyte sedimentation rate. Lateral radiographs taken at the time of onset and again six weeks later showed an isolated erosion of the terminal coccygeal segment. There was no evidence of a fracture. As the pain was increasing in severity and on account of the coccygeal erosion, she was treated by excision of the coccyx and a layer of pericoccygeal soft tissue. Macroscopic examination revealed no abnormality in the coccyx nor in the surrounding soft tissues. The specimen was bisected longitudinally and was serially sectioned. Microscopy did not reveal any significant bony abnormality. At the tip of the coccyx and embedded in the perichondrium there was an encapsulated nodule which had the typical histological appearance of a glomus tumour (Figs 1 and 2). At follow-up 10 months later, the patient was completely free of pain and had resumed all her activities, including horse-riding.

Case 2. A woman of 35 presented in 1967 with a history of low backache and sciatica after an injury. Myelography showed a prolapse of the disc between L5 and S1. A laminectomy was performed in 1967 and again in 1973, but her backache persisted. At this time she began to complain of intermittent burning pain in the region of the coccyx. The pain was severe and was aggravated by local pressure. In 1975 a posterior lumbosacral fusion was performed. This cured the backache but the coccygeal pain persisted, in spite of local injections of steroids and local anaesthetics. Radiographs of the coccyx showed no abnormality. In August 1979 the coccyx was excised together with a thin rim of soft tissue surrounding its tip. Macroscopically there was no abnormality in the coccyx nor in the surrounding soft tissues. The specimen was bisected longitudinally and serially sectioned. Microscopy did not reveal any abnormality of the bone. However, at the tip of the coccyx there was an encapsulated nodule which had the typical histological appearance of a glomus tumour (Figs 3 and 4). At follow-up nine months later the patient was completely free of pain.

DISCUSSION

Glomera are arteriovenous anastomoses found most often in the dermis of the hands and feet, but also in many other sites, including the coccygeal body. A glomus has an arterial segment, the Sucquet-Hoyer canal, and a venous segment. Glomus tumours are generally benign (Masson 1924) and they are usually solitary, although they may be multiple. The multiple tumours are usually asymptomatic unlike the solitary ones which are painful, the pain being burning or lancinating in character and severe. When the tumour is situated beneath a nail, radiographs may show a small erosion of the distal phalanx. A glomus tumour is an encapsulated nodule usually a few millimetres in diameter, although some may be too small to be seen with the naked eye. The tumour is composed of small vascular spaces, each lined by a single layer of endothelial cells surrounded by glomus cells. Glomus tumours have been described in various parts of the

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Fig. 1

Fig. 2

Case 1. Figure 1—Histological section of a glomus tumour. The tumour is surrounded by a fibrous capsule. The blood vessels are surrounded by aggregates of glomus cells and separated from one another by fibrous stroma. (Haematoxylin and eosin, $\times 78$). Figure 2—Histological section of a glomus tumour. The higher magnification shows the characteristic vascular lumina lined by a single layer of flat endothelial cells and surrounded by several layers of darkly staining glomus cells. (Haematoxylin and eosin, $\times 312$).

Fig. 3

Fig. 4

Case 2. Figure 3—A histological section of a glomus tumour. The encapsulated tumour is composed of blood vessels surrounded by aggregates of small, closely packed cells. The vessels are separated by irregular bands of fibrous stroma. (Haematoxylin and eosin, $\times 78$). Figure 4—A histological section of a glomus tumour. The higher magnification shows the characteristic pattern of vascular spaces lined by a single layer of flat endothelial cells and surrounded by layers of darkly-staining glomus cells. (Haematoxylin and eosin, $\times 312$).

body but it was not until 1980 that Ho and Pak reported the first case in the coccygeal region.

The two lesions we describe have the typical histological appearance of glomus tumours. From their positions we think it is likely that they originated from glomera in the coccygeal bodies. The remarkable similarity of the symptoms of glomus tumours elsewhere to those of coccydynia and the complete relief of symptoms after removal of the tumour in our two patients, strongly suggest that the symptoms of coccydynia were due to the glomus tumours.

When treating this condition surgically orthopaedic surgeons have assumed the coccyx to be the origin of the

pain and have therefore concentrated on removing that bone leaving the surrounding soft tissues as intact as possible. In the examination of coccygectomy specimens attention is usually centred on the bony coccyx, and relatively little attention is paid to the pericoccygeal soft tissues. These facts together with the almost microscopic size of many glomus tumours may explain why these lesions have not been described until recently. Failure to remove them may explain why symptoms have persisted in some patients after coccygectomy. These facts emphasise the importance of removing and very carefully examining the soft tissues around the tip of the coccyx in all coccygectomy specimens.

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