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Paraganglioma of the cauda equina

Sir: Paraganglioma of the cauda equina is a rare tumour which was first described in 1972.[1] Recently Anderson and Gullan[2] reported the occurrence of this tumour in a 63 year old woman and commented on the small number of reported cases. We would like to document 2 more cases of paraganglioma of the cauda equina.

Case A was a 50 year old man who was referred to the University Hospital of Wales, with an 8 year history of back pain. In the year prior to admission the pain had become associated with paraesthesiae in the buttocks and legs, and he had developed hesitancy of micturition. The only positive physical signs on examination were absent tendon reflexes, and pain on movement of the lumbar spine. A radiculogram revealed a complete block to the downward flow of contrast at the L3 level. At operation a vascular tumour occupied most of the lumbar spinal canal. The tumour was adherent to the roots of the cauda equina. The tumour was excised except for a small amount of capsule adherent to the nerve roots. Postoperatively he was given a course of local radiotherapy. He was last seen 2 years after surgery, and was well with no further back pain.

Case B was a 38 year old man, who presented at the Dundee Royal Infirmary with a 6 month history of back pain, which radiated down the back of the thighs. The only abnormal physical signs were a positive bilateral femoral nerve stretch test, and mild weakness of the left quadriceps. A myelogram showed a rounded intradural mass at the L1 level. At operation the dura was opened to reveal a vascular mass measuring about 2 cm, which was lightly adherent to the roots of the cauda equina. The tumour was completely excised. Post operatively he made a good recovery. He was last seen 6 months after surgery, and was well with no further back pain, and no neurological deficit.

Histological examination of the tumour from Case A included examination of a smear preparation at the time of operation. The smear revealed separate groups of round to oval nuclei with eosinophilic cytoplasm, and occasional rosette formation. The appearances were quite similar to smear preparations of an ependymoma. Paraffin sections of the tumours revealed a vascular stroma, with nests and sheets of round to oval nuclei, with eosinophilic cytoplasm. A very occasional mitosis was evident in Case A, and there was no mitotic activity seen in Case B. A Grimelius stain demonstrated numerous neurosecretory granules within the cellular cytoplasm in both cases. Using a peroxidase labelled antibody system both tumours showed a strong positive reaction for neuron specific enolase. Electronmicroscopic examination revealed the presence of cytoplasmic membrane bound granules which measured between 800–1500 Å. The diagnosis of paraganglioma was made in both cases.

There have been few descriptions of smear preparations of these tumours, and it is of interest that the smear preparation from our Case A, and of that reported by Gaffney, Doorly and Din[3] resembled an ependymoma. In this respect Anderson and Gullan emphasised the importance of making the correct diagnosis with regard to both prognosis and treatment. We have found 18 reported cases in the literature,[1–17] which with the addition of our two cases brings the total to 20. We observe that all of these cases appear to have followed a benign course, but documentation and follow up remains important in furthering our knowledge of the long term behaviour of paraganglioma of the cauda equina. Male predominance is suggested for these tumours, since 14 of these cases were males.

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Does the peripheral blood leukocyte count predict the risk of transient ischaemic attacks and strokes?

Sir: The peripheral blood leukocyte count has been shown to be a predictor of myo