PARAPLEGIA CAUSED BY EXTRASPINAL METASTASIS FROM A UTERINE FIBROID

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Uterine fibroids are usually benign tumours, but occasionally, like some apparently benign thyroid tumours, they fail to behave as such and metastasize. "Benign metastasizing fibroid," like "benign metastasizing goitre" (Cohnheim, 1876), is a bad term, however, because it is self contradictory.

There is evidence that the thyroid tumours are carcinomas and areas may be found in them where there has been invasion of blood vessels (Bell, 1924; Graham, 1925). Similarly the apparently innocent fibroid which metastasizes may, if minutely examined, be found to have the appearance of a sarcoma. Steiner (1939) reports a case with a benign appearance in the primary tumour and in the secondary deposit, but careful examination of the former showed invasion of veins. Occasionally, however, thorough examination of these metastasizing uterine tumours fails to reveal any typically malignant structure and the same well-differentiated and benign appearance is present in the metastases as in the primary tumour in the uterus.

Case Report

A married woman aged 37, the mother of one child, was referred because of numbness of the right leg, unsteadiness in walking, and pain in the back radiating into the right breast. Ten years previously hysterectomy had been performed elsewhere for fibroids, and five years later leiomyomata had been removed from the abdomen and pelvis. A note at the time stated that extirpation had been incomplete and two years later a mass arising from the stump of the cervix was removed.

On examination she was found to have weakness of the legs and a diminution of all forms of sensation below the level of the nipples. The abdominal reflexes were absent, the knee and ankle jerks exaggerated, and the plantar reflexes were extensor. Several lobulated tumours could be felt in the abdomen and rectal examination showed a firm tumour involving the sacrum. Radiographs of the spine showed a bony sacral defect, but no other abnormality. Cisternal myelography showed a complete block at the level of the first thoracic vertebra.

On lumbar puncture absence of the Queckenstedt phenomenon indicated spinal block and the protein

FIG. 1.—Tumour removed from sacrospinalis (weight 43 g.).

content of the fluid was 200 mg. per 100 ml. and the cell content 6 per c.mm.

At operation a lobulated tumour was exposed in the sacrospinalis (Fig. 1) and removed. Pressure from the tumour had produced smooth-edged holes in the laminae of the second and third thoracic vertebrae, through which the dura was compressed by it. The tumour was unattached to the laminae and the dura and was easily separated from its bed in the muscle mass.

The pathologist's report (Dr. W. Jones Williams, to whom we are indebted) reads:—

"Numerous blocks were examined from both lesions. The tumours of the spine and of the uterus show similar features. The appearances are those of fibroleiomyoma with no evidence of malignant change and consist of uniform whorled smooth muscle fibres admixed with fibrous tissue. No neural elements are present in either tumour, palisading is absent, and the appearances are not those of neurofibroma or neurilemmoma.

"In view of the fact that the spinal tumour may be a metastasis from the uterus both lesions were subjected to histological grading as if they were uterine sarcoma (Jones Williams and Bancroft-Livingston, 1952). On the criteria used in their article both lesions fall into the

FIG. 2.—Microscopical appearance of spinal tumour $\times 106$.

FIG. 3.—Microscopical appearance of original uterine tumour $\times 106$.

group with the lowest grade of malignancy. In particular they show one mitosis per 25 high-power field and with no blood spaces lined by tumour cells.

"The close similarity of the uterine and spinal lesions (Figs. 2 and 3) characterized by the uniform whorled appearance with absence of the usual features of malignancy supports the view that both lesions have the appearances of benign fibroleiomyoma."

In the year which has elapsed since the laminectomy the patient has made a complete recovery from the paraplegia and has put on weight; she remains well. There are still tumours to be felt in the abdomen and at some time a further attempt may be necessary to remove them.

Comments

Leiomyosarcoma of the uterus occurs in less than 2% of leiomyomata (Wheelock and Warren, 1942) and the histology of such tumours is in most cases characteristic of malignancy. Metastasis is uncommon, the lungs being the principal site, though deposits have been found in the liver, vertebral body, and pelvis (Robbins, 1943).

The present case is unusual, inasmuch as an apparently benign uterine leiomyoma had metastasized and an extraspinal deposit of tumour in the sacrospinalis muscle mass had caused paraplegia from pressure atrophy of the subjacent laminae

and compression of the cord. There was no evidence that the tumour had invaded bone. The production of round smooth defects in the vertebral laminae by the pressure of a tumour lying outside the spine must be very rare. Finally the apparently benign histological appearance of the primary tumour was also seen in the secondary deposit.

Summary

A case is recorded of metastasis from a uterine fibroid of benign appearance in a woman aged 37 in whom paraplegia was produced by pressure from a metastasis in the substance of the sacrospinalis. This tumour had produced pressure atrophy of the laminae which it overlay and had compressed the theca through the resulting laminal defects. Recovery followed removal of the tumour. Neither primary nor secondary tumours had any histological evidence of malignancy.

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