# SACROCOCCYGEAL TERATOMA : REPORT OF A CASE IN AN INFANT

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Sacrococcygeal teratomas, although rare, are the commonest teratomas seen in paediatric practice.[1] They are usually evident at birth or shortly afterwards, and are rarely seen in adults.

Calbert, as quoted by Hundling,[2] has given an indication of the rarity of these teratomas. He found an incidence of 1 sacral tumour in 34,582 births, and only a small proportion of these were teratomas. Two large series have been reported in recent years: Gross *et al.*[1] described 40 cases, and Gwinn *et al.*[3] reported 18 children with this tumour seen at the Mayo Clinic between the years 1907 and 1953. No case of sacrococcygeal teratoma in infancy has been reported in this *Journal* over the last 20 years.

## CASE REPORT

S.F., a Coloured female infant, was delivered, breech presentation, on 1 October 1962. She is the third child of a healthy 33-year-old mother, who had an uneventful pregnancy, except

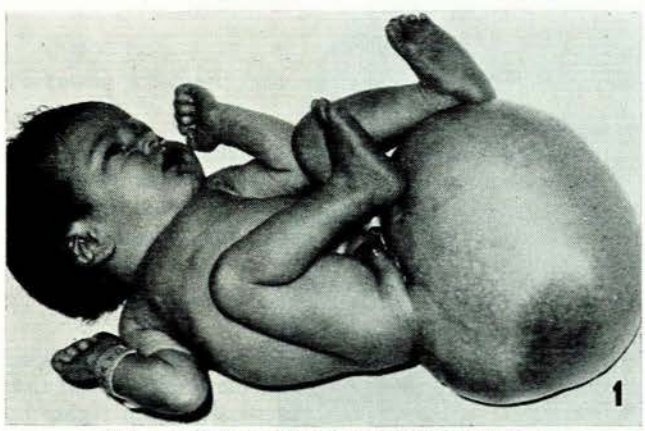


*Fig. 1.* Before removal of sacrococcygeal teratoma.

for some degree of hydramnios. The infant's birth weight was 8 lb. 8 oz. A tumour, somewhat larger than her head, was present over the sacrum (Fig. 1). No other abnormality was found on examination.

A diagnosis of sacrococcygeal teratoma was made on the following points: (1) It was situated in the region of the sacrum and buttocks. (2) On palpation it was felt to contain both solid and cystic areas and was covered by skin. (3) The tumour displaced the anus forwards and laterally (Fig. 1). (4) X-ray did not reveal any abnormality of the sacrum or coccyx and, as commonly found in sacrococcygeal teratomas, there was no calcification of the tumour.

The child was operated on at the age of 19 days. Skin flaps were made and a line of cleavage found, which was followed round until the tumour attachment to the coccyx was located. The coccyx and tumour were excised and the skin flaps trimmed and sutured. The tumour, which weighed 3 lb. 3½ oz., included two major loculi containing 31 oz. of clear yellow fluid. The solid portion was about the size of a small orange.

*Histological report.* A benign teratoma containing ependyma, choroid plexus, brain, cartilage, fatty tissue, skin and appendages. The cystic spaces were lined by a respiratory type of epithelium.

The infant progressed well after the operation. She was discharged when 40 days old, then weighing 8 lb. 8 oz. (Fig. 2).

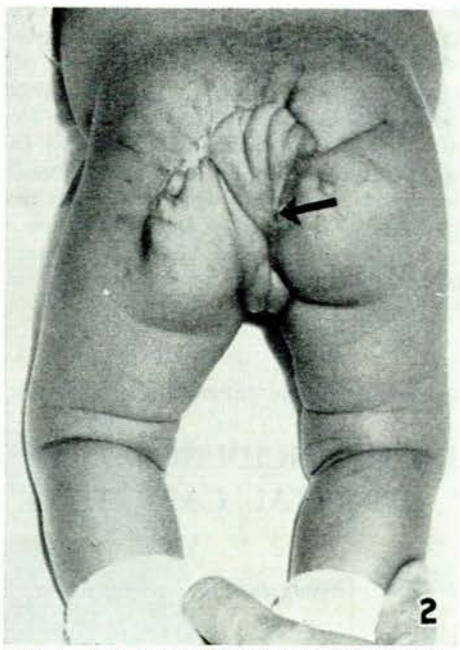


*Fig. 2.* After removal of sacrococcygeal teratoma.

## COMMENT

Sacrococcygeal tumours are seen most commonly in females, and their usual direction of growth is anteriorly to displace and surround the rectum and vagina.

Teratomas are true tumours[4] and contain tissues that are derivatives of mesoderm, endoderm and ectoderm. The most popular theory of origin is that teratomas develop from primordial cells that are totipotent and have escaped the influence of the primary organizers.[1,2,5] One area where these cells are concentrated is that of the primitive knot, and this is the area where sacrococcygeal teratomas develop.

In the differential diagnosis meningocele is perhaps the first consideration, but if the mass on palpation contains solid material this diagnosis can be eliminated. Also, teratomas do not become tense when the infant cries.

Chordomas usually destroy the regional bone, and ependymomas erode the sacrum by pressure necrosis. Pilonidal cysts and sinuses must be considered, and also haemangiomas.

Complications that have been noted are difficulty in delivery of the infant, obstruction to the urethra or rectum due to pelvic extension of the tumour, and ulceration of the skin covering the tumour; hypersecretion of an endocrine component[6] has also been reported. The most important complication is malignant change, almost always confined to one element, and papillary adenocarcinoma is the commonest malignant development.[7] The malignancy is locally invasive and it also metastasizes by lymphatics and blood vessels to lymph nodes, lungs and skeleton. Gross *et al.*[1] found an incidence of 25% of his

40 cases with histological malignant change. Ravitch and Smith[8] reviewed 48 cases of which 17% were malignant, and Gwinn *et al.*[3] found malignancy in 22%.

All cases not showing metastases should be submitted therefore for early excision of the tumour. Gross *et al.*[1] have developed a technique for the removal of sacrococcygeal teratomas and they stress the importance of total resection of the coccyx. There was a 37% incidence of local recurrence when this was not done, and there were no recurrences at all when the coccyx was removed. In some of their cases that proved to be long-term cures (up to 28 years) the tumour contained highly malignant tissue.

Arnheim[9] reports a 68% cure rate, and Gross *et al.* had a total survival rate of 75%. The outlook for newborn infants is generally accepted as being much better than for older children.

SUMMARY

A case of sacrococcygeal tumour in a newborn infant is described. The incidence, diagnosis, complications and prognosis of these tumours are discussed. All cases should undergo surgery as early as possible in view of the danger of malignancy.

I should like to thank Dr. J. A. Tanchel for permission to publish, Prof. H. L. Wallace and Dr. A. Nestadt for their advice and encouragement, Dr. J. Suskin for the histological report, Miss M. Thomson for the photographs, and Mr. H. C. Warner, surgeon in charge of the case.

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