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Granular cell tumour of the larynx in an eight-year-old girl

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Abstract

Granular cell tumour is a rare benign neoplasm, that can affect many parts of the body, as single or multiple lesions. It is more common in black people and females. Typically it occurs between the fourth and fifth decades of life, with the median age for the laryngeal variety as 36 years. About 30 to 50 per cent occur in the tongue and 30 per cent in the skin.

A case of granular cell tumour of the larynx is reported in an eight-year-old girl, presenting with hoarseness of voice. She was successfully treated with local excision of the tumour. This tumour is rare in the larynx where it is more common in males than females although granular cell tumours are found more frequently in females generally.

For these reasons the authors suspect that their case, of a laryngeal granular cell tumour occurring in an eight-year-old girl might be the youngest to be reported.

Key words: Laryngeal neoplasms, granular cell tumour; Child

Case report

A Pakistani female, born on the 14th of September 1981, was brought to the Hamad General Hospital on the 17th of July 1989, with hoarseness of voice of nine months' duration. There were no other remarkable features in her medical history and no history of trauma or intubation. Physical examination of a very cooperative, healthy, young girl, showed all her systems were normal including the nervous system. Indirect laryngoscopy showed an irregular greyish-white nodular mass, involving the posterior third of the true left vocal fold. There was no cervical lymphadenopathy and the rest of the ENT examination was clear. Blood counts, sputum and urine analysis were normal and the chest X-ray was clear.

Microlaryngoscopy was performed on the 22nd of July 1989. The lesion was found to be localized to the posterior part of the left vocal fold. It was greyish in colour, nodular but not ulcerating and apparently not infiltrating the vocal fold. The rest of the larynx and pharynx were clear. The lesion was fully excised and sent for histopathology.

Macroscopic examination showed the lesion as greyish-white in colour, with a nodular surface, measuring about $1 \times 0.6 \times 0.3$ cm. Microscopic examination, showed infiltration of the subepithelial layers by compact aggregates of polygonal, elongated and sometimes multinucleated cells, having a faintly eosinophilic granular cytoplasm (Figures 1 and 2). The overlying epithelium was hyperplastic. There was no evidence of malignancy. It was considered to be a granular cell tumour.

The child had an uneventful two days' stay in hospital. Later follow-up of the patient in outpatient clinics showed a normal larynx and normal vocal folds.

Discussion

Granular cell tumour is a neoplasm of controversial origin thought by most workers to be neurogenic.

Histologically, the tumour cells are polymorphic, ranging from polygonal to spindle-shaped and are sometimes multinucleated. They have small nuclei, which are usually central (Figures 1 and 2). They exhibit an acidic granular cytoplasm (Figure 2) which stains strongly with PAS and Sudan black.

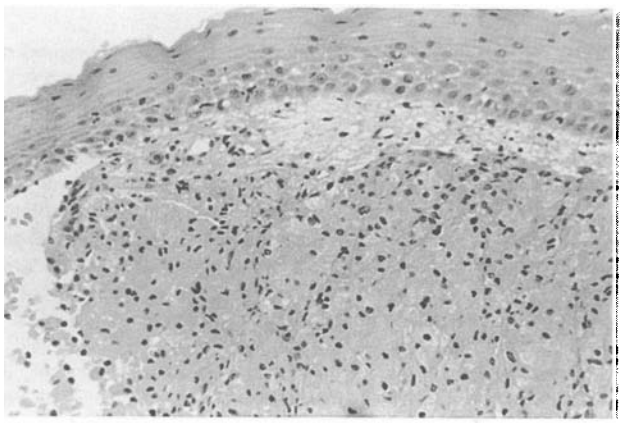

FIG. 1

Laryngeal biopsy showing squamous epithelium, over a granular cell tumour.

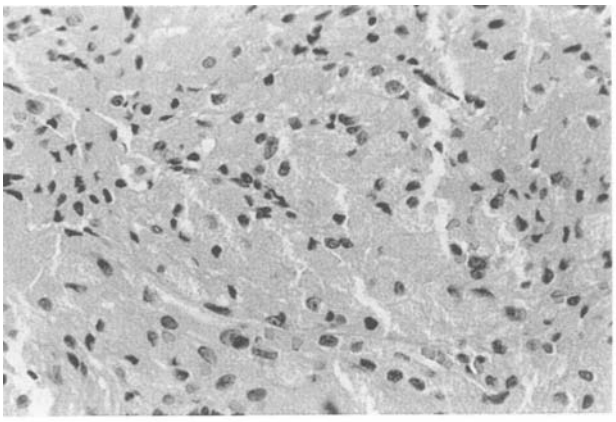

FIG. 2

Granular cell tumour of the larynx, showing large cells with granular cytoplasm.

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These demonstrate the tumour better than haematoxylin–eosin stains. The epithelium overlying the tumour shows pseudoepitheliomatous hyperplasia, in about 50 to 65 per cent of cases (Batsakis, 1979). This feature might cause the tumour to be mistaken for a squamous cell carcinoma. According to Compagno *et al.* (1975), this feature caused a diagnostic problem in only 22 per cent of their cases. All the laryngeal granular cell tumours reported are benign.

Clinically, the laryngeal granular cell tumour, presents with hoarseness of voice followed by dysphagia (Schottenfeld *et al.*, 1987). The larger ones can present with difficulty in breathing (Schottenfeld *et al.*, 1987). Our case presented solely with hoarseness of voice. The average age for laryngeal granular cell tumours is 36 years, ranging from 40 to 50 years. It has a male predominance and is seen more in black people.

Booth and Osborn (1970) reviewed 60 cases of laryngeal granular cell tumours. The age of presentation in the review ranged between nine and 82 years. The age of our patient at the time of presentation was less than eight years.

As this tumour is rare and its occurrence in a female rare in the larynx where it is more common in males at a much higher age, we suspect that our case could be for the youngest patient reported.

References

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