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Granular Cell Myoblastoma of the Larynx

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Granuloma cell myoblastoma of the larynx is a relatively uncommon tumor. A review of the literature reveals only 52 cases reported. The lesion is a benign growth which is often asymptomatic, though most commonly associated with hoarseness. The treatment of choice is local surgical excision. Four successfully treated cases are reported. All four patients are Negro — three females and one male.

GRANULAR cell myoblastoma is a relatively uncommon tumor of disputed etiology. Abrikossof (1926)¹ is given credit for the first description. He believed the cell of origin to be the myoblast, the adult muscle cell precursor. However, this explanation is not uniformly accepted. One popular view is that these tumors have a neurogenic origin.²⁻⁴ Others have advanced the opinion that the original cell is a histiocyte which, under some stimulus, accumulates granular inclusions.⁵ Some authors have suggested multiple cellular origins^{6, 7} and an experimental study reports inducing granular cell myoblastomas of the uterine cervix in mice by administering Stilbesterol.⁸ The purpose of this study is not to indulge in the etiological controversies, but to report on four more cases of granular cell myoblastoma of the larynx.

Incidence

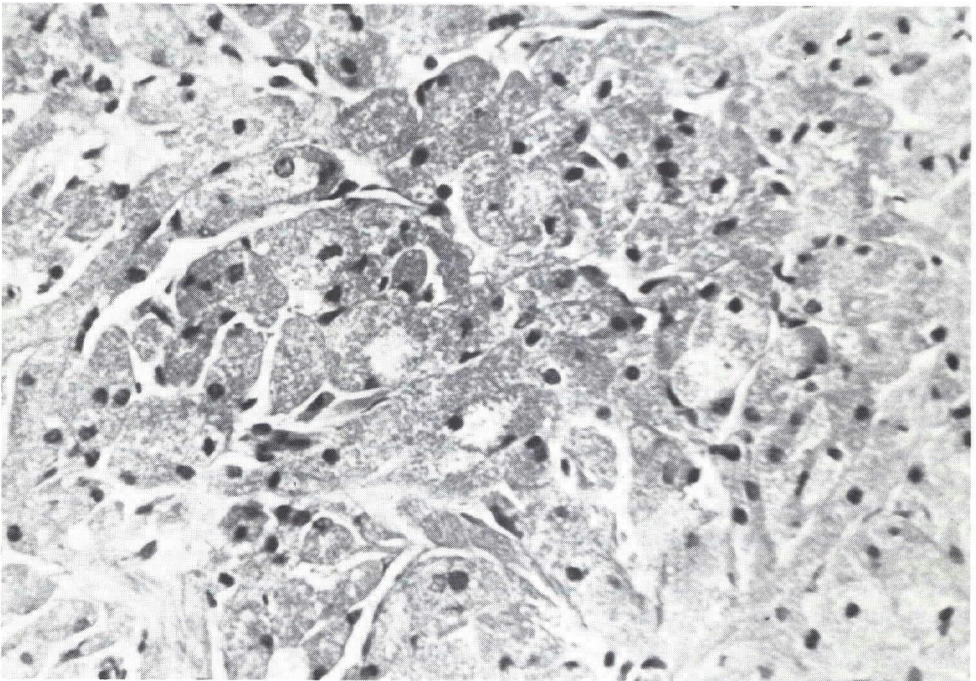
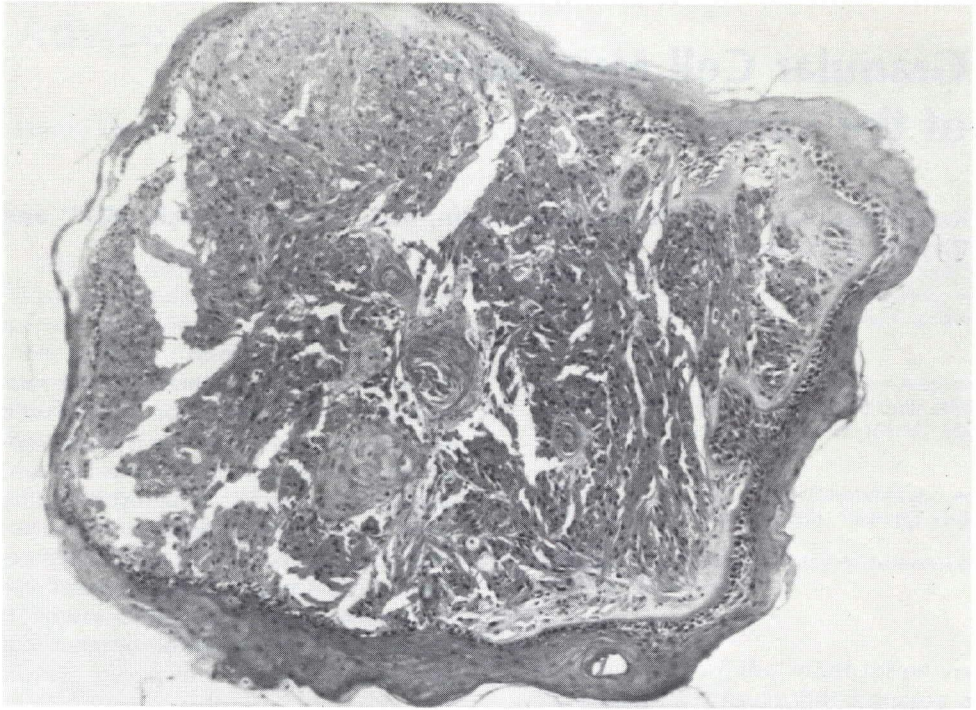
Strong et al⁹ in a recent review of 110 cases noted that 51 of these arose in the head and neck and that the tongue was the most commonly involved structure (39 cases). The incidence of multiple tumors was 8.5% and three cases showed evidence of malignancy.

Granular cell myoblastoma involving the larynx is rare. In a review of the literature Canalis and Cohn¹⁰ discovered 45 cases which involved the larynx and added five of their own. Since then two

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Figures 1A and B — Case report #1

Myoblastoma of the Larynx

more cases have been reported,^{11,12} bringing the total number of reported cases to 52.

Most tumors involving the larynx are solitary lesions. Only two reported cases show a granular cell myoblastoma of the larynx associated with a similar lesion elsewhere.^{11,13} No incident has been reported of a malignant lesion in the larynx.

Clinical Findings

Within the larynx, granular cell myoblastomas generally occur as well defined, localized lesions on the posterior third of the vocal cords. Many have been described as occurring on the posterior commissure or the arytenoids. In Case #2 of our study the lesion was located in the anterior one-third of the right vocal cord. The tumor may be pedunculated, sessile or plaque-like and the color varies from a pearly white to yellow or grey. The lesions are often mistaken for polyps, granulomas or cysts and usually measure ½ - 2 cms in diameter. The principal laryngeal symptoms attracting attention are hoarseness, cough and stridor. Only rarely do patients show acute respiratory embarrassment. However, there are at least four separate reports of larger lesions requiring tracheotomy to ensure an adequate airway.^{11,13,14,15} Hemoptysis is also uncommon since the tumor does not ulcerate. Smaller lesions may be asymptomatic as in Case #1 of this report.

Histological Findings

Microscopically, granular cell myoblastomas are composed of polyhedral cells with small, central, deeply basophilic nuclei and an eosinophilic cytoplasm which is distinctly granular.

The epithelium overlying the tumor is intact and histologically normal. However, on occasion it demonstrates a pseudoepitheliomatous hyperplasia. When this occurs, epithelial rete pegs ex-

tend down into the connective tissue stroma and intraepithelial keratin pearls may be seen. This appearance, if not recognized, is readily mistaken for a well differentiated squamous cell carcinoma.

Treatment

Surgical excision is the treatment of choice for laryngeal granular cell myoblastoma; of the 52 cases reported in the literature, the majority had the tumor removed endoscopically. Ten patients were treated using a laryngofissure. Three of these subsequently required hemilaryngectomy and recurrence in one patient required a total laryngectomy.^{16,17} Radiation therapy has no place in the treatment of granular cell myoblastoma whether of the larynx or elsewhere in the body. However, it may be used as a palliative measure in the rare malignant case.

Case Report #1

A 34-year-old Negro female was seen in the ENT Clinic for a sebaceous cyst behind the left ear. Routine indirect laryngoscopy showed a 5 mm rounded yellowish sessile mass attached to the posterior aspect of the right arytenoid. Her voice was normal and she had no other complaints.

Excision of this lesion was advised. However, the procedure was delayed because the patient needed an urgent gynecological operation.

Examination at direct laryngoscopy two months following the initial examination showed no change in the size or character of the lesion. When the tumor was excised, histological examination demonstrated a picture characteristic of granular cell myoblastoma (Figure 1). The cells were large, polyhedral, with dark staining nuclei and a granular eosinophilic cytoplasm. No mitosis was seen. The epithelial covering showed no hyperplasia.

Follow-up examination four months later showed no recurrence.

Case Report #2

A 33-year-old Negro female, employed as a community worker, reported that she had had a hoarse voice for several months. She smoked three packs of cigarettes a day and consumed alcohol occasionally. Indirect laryngoscopy showed a small polypoid lesion on the right vocal cord at the junction of the anterior and middle thirds.

Follow-up examination two months later revealed increase in the size of the lesion and the patient was admitted for excisional biopsy. This was accomplished endoscopically under local anesthesia.

Histological examination showed stratified squamous epithelium overlying a solid core of large cells which were round, small and hyperchromatic and having small, rounded hyperchromatic nuclei and an abundant eosinophilic cytoplasm showing distinct granules (Figure 2).

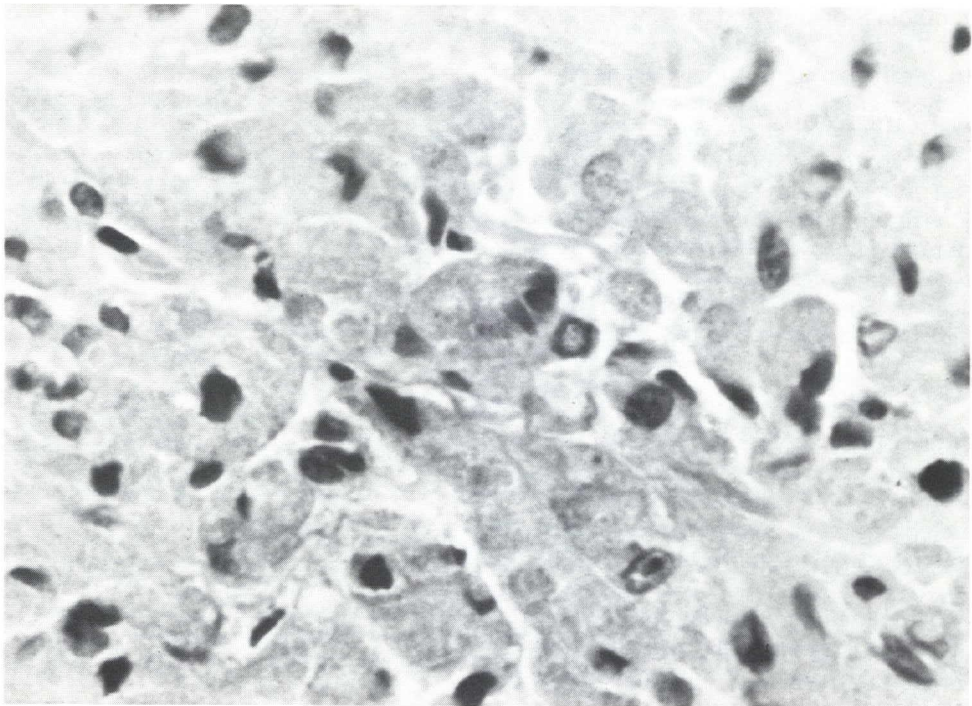


Figure 2 — Case report #2

Case Report #3

A 31-year-old Negro male had a history of hoarseness for ten months. He denied any history of cough, haemoptysis or pain. Indirect laryngoscopy revealed a smooth, polypoid one cm mass on the posterior third of the free margin of the right vocal cord. The lesion was grayish in color and extended to the posterior commissure and the immediate subglottic region. Laboratory data showed a normal hemoglobin. White blood count, urinalysis and serology were negative. Radiologic films of the chest showed it was normal.

Tissue taken for biopsy at direct laryngoscopy under local anesthesia showed the characteristic appearance of granular cell myoblastoma. The cells showed eosinophilic, granular cytoplasm and large vesicular nuclei. The surface epithelium showed a pseudoepitheliomatous hyperplasia (Figure 3).

Following this histological report, direct laryngoscopy was repeated and the remainder of the lesion excised. Indirect laryngoscopy, three months later, showed no abnormality.

Myoblastoma of the Larynx

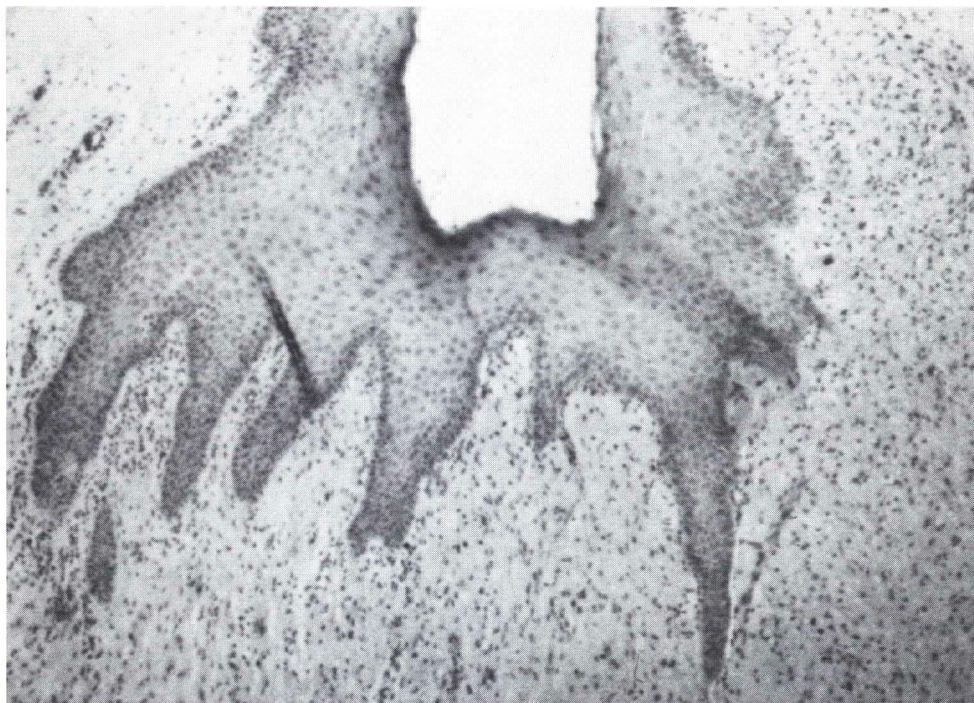


Figure 3 — Case report #3

Case Report #4

A 40-year-old Negro female complained of an intermittent pain in the throat for about one week. She had noted no hoarseness or dysphagia and was in good general health. Indirect laryngoscopy showed a 3-4 mm tan nodule located on the left aryepiglottic fold. This was smooth, non-pedunculated and did not interfere with the cord mobility.

The lesion was excised endoscopically, under local anesthesia. Histological sections showed eosinophilic cells with uniform nuclei and a markedly granular cytoplasm. No evidence of any malignant change was noted (Figure 4, next page).

The patient's symptoms improved and indirect laryngoscopy 4 months later showed no evidence of recurrence.

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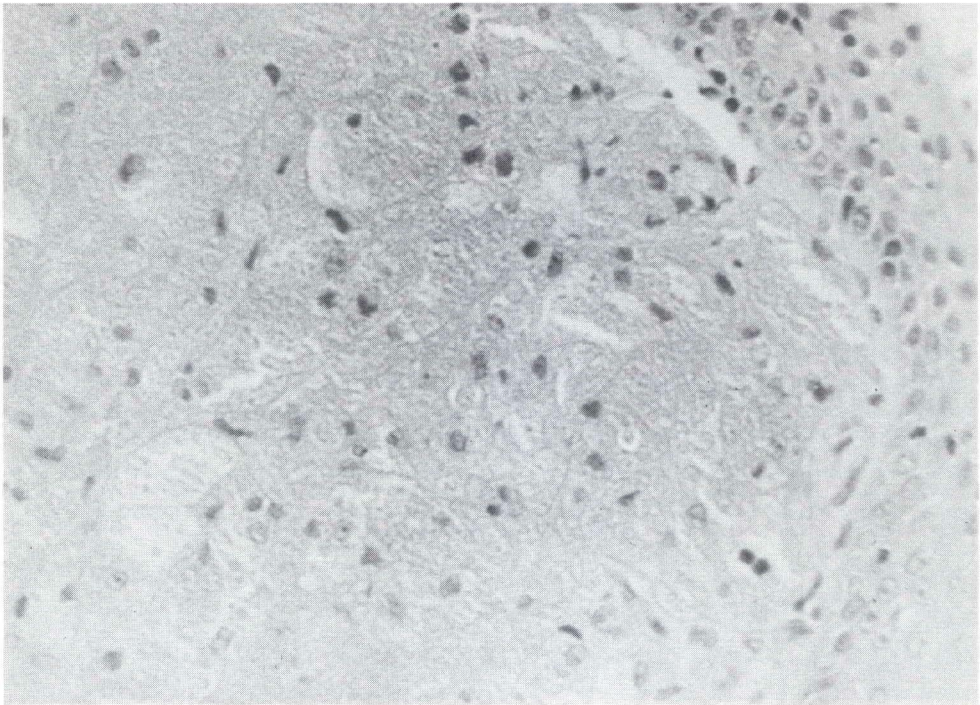


Figure 4 — Case report #4

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