Granular-cell Myoblastoma of the Cecum:
Report of a Case*

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Granular-cell myoblastoma is typically encountered in the skin, subcutaneous tissue or oral cavity, but has rarely been found in the large intestine. A series of 181 granular-cell myoblastomas included two in the appendix.[11] No clinical data were available. In another series of 110, the two in the large intestine were in the cecum.[12] Both patients, 36- and 43-year-old women, underwent radical excision of the lesion because of the clinical impression of malignancy. Five other patients with granular-cell myoblastomas of the colon, all asymptomatic and found incidentally, have been reported.[4-6, 8, 12] From the available data, one was a woman[6] and three were men.[5, 8, 12] They were 40, 49,[12] 55,[5] and 71[12] years of age. One lesion, in the cecum, was excised at laparotomy following the discovery of a small cecal defect on barium-enema examination.[5] One each in the cecum[4] and transverse colon[8] were found at autopsy, and both rectal[5, 12] cases were found by sigmoidoscopy. The sizes of the lesion were available for three cases and were 3 mm,[8] 1×1×0.5 cm,[6] and 2 cm.[5]

One patient, a 73-year-old woman, with malignant granular-cell myoblastoma of the large intestine involving the ascending colon has been reported. There was no evidence of recurrence or metastasis 15 months following right hemicolectomy.[9]

One report of electron microscopic examination of a granular-cell myoblastoma of the cecum described the granules only. Smooth-muscle origin was suggested. No illustration was available.[4] The ultrastructural findings of one of the rectal cases were interpreted as indicative of a schwannian derivation. The illustrations, however, were somewhat difficult to evaluate.[12]

This paper reports a case of granular-cell myoblastoma of the cecum, including its ultrastructure.

Report of a Case

A 17-year-old black girl was admitted to the University of Mississippi Medical Center on December 5, 1975, because of the symptoms and signs of acute appendicitis. Laparotomy disclosed an inflamed retrocecal appendix and a small polypoid submucosal nodule in the cecum. Appendectomy and excision of the cecal nodule were performed. The postoperative course was uneventful and the patient was discharged five days later.

Pathology

The spherical cecal submucosal nodule measured 9 mm in diameter. The cut surface was homogeneous gray-white. Micro-

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scopically, it consisted of large, elongated cells with finely and occasionally coarsely granular eosinophilic cytoplasm and dark-staining nuclei varying slightly in size and shape (Fig. 1). The granules were blue with Alcian blue stain at pH 2.5, red with trichrome stain, pink with periodic acid-Schiff reaction, and remained PAS-positive following treatment with diastase. There was scanty fibrous stroma. The mucosa was not remarkable. The diagnosis was granular-cell myoblastoma.

Sections for electronmicroscopic examination were prepared from the paraffin block since the formalin-fixed specimen was bisected and submitted entirely for light microscopy.

The tumor cells were elongated and had a distinct basement membrane with an occasional desmosome-like structure. The cytoplasm contained fine longitudinal fibrils and a varying abundance of osmophilic granules, and in some cells aggregates of tubular filaments, with angulate bodies. The osmophilic granules and angulate bodies varied in size (Figs. 2 and 3). There were relatively few mitochondria, small Golgi profiles, scattered endoplasmic reticulum, and polyribosome aggregates. Dense condensations within the cytoplasmic fibrils, unmyelinated axon-like structures, and pinocytic vacuoles were not identified. The nuclei were oval, frequently indented, and had margined chromatin and prominent