

Jose M. Carnate, Jr., MD

Department of Pathology
College of Medicine
University of the Philippines Manila

Spindle Cell Carcinomas of the Upper Aerodigestive Tract

A 65-year-old male with a two-month history of cough and hoarseness underwent direct laryngoscopy which showed a 1.5 cm diameter polypoid glottic mass. A polypectomy was performed revealing spindle cell carcinoma.

The World Health Organization (2005) defines a spindle cell carcinoma as “a biphasic tumor composed of a squamous cell carcinoma, either in-situ and/or invasive, and a malignant spindle cell component with a mesenchymal appearance, but of epithelial origin.”¹ Spindle cell carcinomas go by a variety of synonyms such as sarcomatoid carcinoma, spindle cell squamous carcinoma and carcinosarcoma.

The larynx is a preferred site of involvement where they often present as polypoid masses.^{1,3} Microscopic examination often shows predominance of the sarcomatoid, spindle-cell component, which can range from fairly bland, reactive-looking fibroblastic-proliferation-like processes, to cytologically malignant and mitotically active proliferations that mimic other spindle-cell sarcomas such as leiomyosarcoma, fibrosarcoma or malignant fibrous histiocytoma.^{1,2,3} (Figure 1, double arrows) The squamous cell carcinoma component may be in the form of an overlying carcinoma-in-situ, or of a focal keratinizing invasive squamous cell carcinoma that requires multiple sections to disclose.^{1,2} (Figure 1, single arrow) Cytokeratin-reactivity in the spindle cells, which may be quite focal as in this case, points to their epithelial derivation.^{1,2,4} (Figure 2)

Favorable prognostic findings include polypoid morphology and, like conventional laryngeal squamous cell carcinomas, a low-stage and a glottic site of origin. Reported 5-year survival rates range from 65 – 95%.¹

Correspondence: Dr. Jose M. Carnate, Jr.
Department of Pathology
College of Medicine, University of the Philippines Manila
547 Pedro Gil St., Ermita, Manila 1000
Philippines
Phone (632) 526 4450
Fax (632) 400 3638
Email: jmcjpath@yahoo.com
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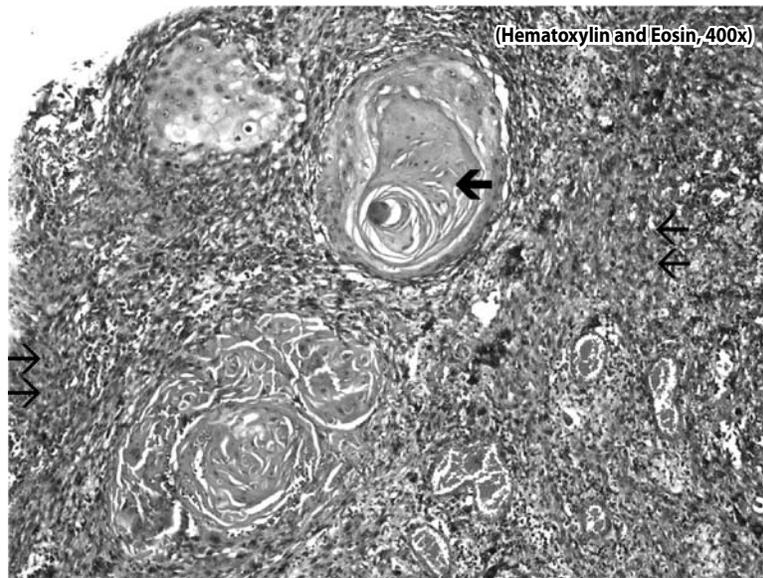


Figure 1. Predominant malignant spindle cell component (double arrows) with focal keratinizing squamous cell carcinoma component (single arrow) (Hematoxylin and Eosin, 400x)

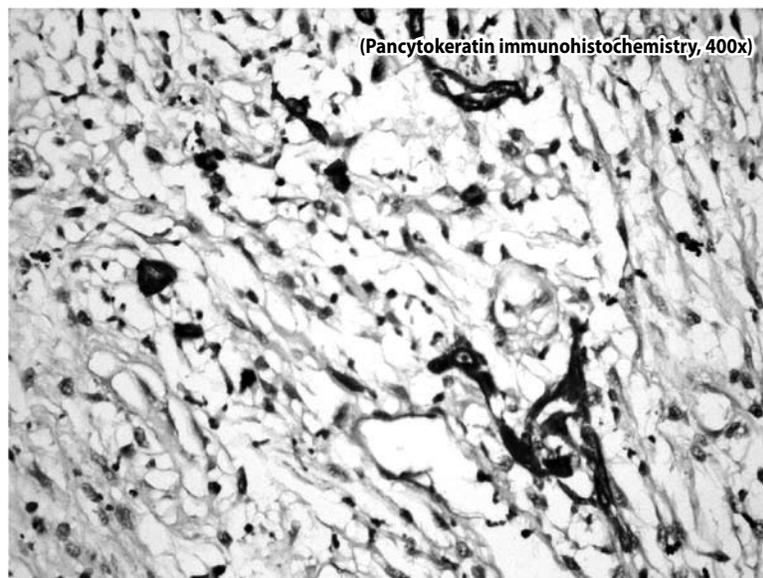


Figure 2. Focal cytokeratin reactivity among spindle cells, (Pancytokeratin immunohistochemistry, 400x)

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