

## Spindle Cell/Pleomorphic Lipoma of the Oropharynx

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We report a rare case of spindle cell/pleomorphic lipoma of the oropharynx. A 45-year-old woman presented with a 9-month history of a lump in 2001. A well demarcated polypoid, rubbery mass was found in the left vallecula and was surgically removed. The mass was diagnosed as a spindle cell lipoma. She revisited with the same complaint in 2008. Examination revealed another polypoid mass at the left aryepiglottic fold, near the previous excision site. The excised mass histologically consisted of mature fat cells, numerous bizarre giant cells, and bland spindle cells, features of a typical pleomorphic lipoma. This is the first case of recurrent oropharyngeal spindle cell/pleomorphic lipoma, showing histologic changes during the recurrence. Complete removal and follow-up are necessary for the treatment of this uncommon neoplasm.

**Key Words :** Oropharynx; Aryepiglottic; Lipoma; Pleomorphic lipoma

Spindle cell lipoma was first described as a distinct entity by Enzinger and Harvey in 1975.<sup>1</sup> Although spindle cell lipoma and pleomorphic lipoma show considerable histologic variations, these tumors are now considered the same entity because of shared cytogenetic aberrations.<sup>2</sup> Spindle cell/pleomorphic lipoma usually occurs in the neck, shoulder, or upper back, or more rarely in the upper aerodigestive tract.<sup>3</sup> Spindle cell/pleomorphic lipoma is a completely benign lesion, and its recurrence after total excision is extremely rare, with only one case reported.<sup>4</sup> We report a rare case of oropharyngeal spindle cell lipoma that recurred 7 years later as a pleomorphic lipoma.

### CASE REPORT

A 45-year-old woman presented with a 9-month history of a lump in 2001. On laryngoscopic examination, there was a polypoid mass in the left vallecula of the oropharynx. The mass was completely removed and was diagnosed as a spindle cell lipoma. No remnant lesion was detected on a follow-up laryngoscopy. She revisited with the same symptom in 2008. Laryngoscopy revealed another polypoid mass in the left aryepiglottic fold, near the previous excision site. A head and neck CT showed a low density mass in the area of the left vallecula and pyriform sinus

extending to the aryepiglottic fold (Fig. 1). The mass was removed by laryngoscopic excision. The specimen was a well demarcated, dumbell shaped mass, measuring 3.8 × 2 × 2 cm (Fig. 2). Cut surface showed two distinctive features, grayish solid fibrotic areas and homogeneously fatty areas. Microscopically, there were numerous pleomorphic cells in both mature fat tissues and fibrotic areas. The pleomorphic cells were frequently multinucleated with hyperchromatic nuclei arranged in a circle or semicircle (floret cells), and sometimes nuclear indentation by intracytoplasmic vacuoles, simulating a lipoblast (Fig. 3). The fibrotic areas were composed of uniform spindle cells and mature collagen fibers with intervening mature fat tissue. Both the spindle and pleomorphic cells had diffuse, strong cytoplasmic staining for CD34 (Fig. 4). Review of the previous excisional specimen showed predominant spindle cell components and ropey collagen fibers, but very few floret cells (Fig. 5).

### DISCUSSION

Spindle cell and pleomorphic lipomas are now considered the same entity on the basis of overlapping clinical features, histologic findings, immunohistochemistry, and cytogenetic features.<sup>2,3</sup> They are uncommon tumors usually occurring as a circumscribed,

solitary subcutaneous mass in the neck, shoulder, or upper back of middle-aged or elderly men.<sup>3</sup> The head and neck area is the most common location outside of these, with the cavity being the most frequent.<sup>3</sup> Two Korean cases of spindle cell lipomas arising in the oral cavity or the larynx have recently been described.<sup>5,6</sup> However, the large size (17 & 5.5 cm), and the lack of histologic or immunohistochemical illustrations raise a question about their identity as giant fibrovascular polyps can form these huge oropharyngeal fibroadipose masses.

Microscopically, spindle cell/pleomorphic lipoma may show variable histologic features in the proportion of spindle cells, pleo-

morphic cells, and mature adipose tissue. The differential diagnoses can also differ according to predominant histologic com-

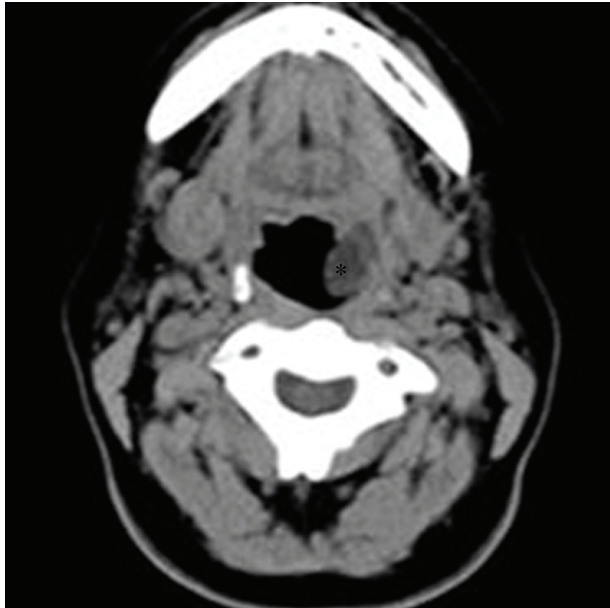


Fig. 1. Head and neck CT shows a low density mass (asterisk) in the area of left vallecula and pyriform sinus extending to the aryepiglottic fold.

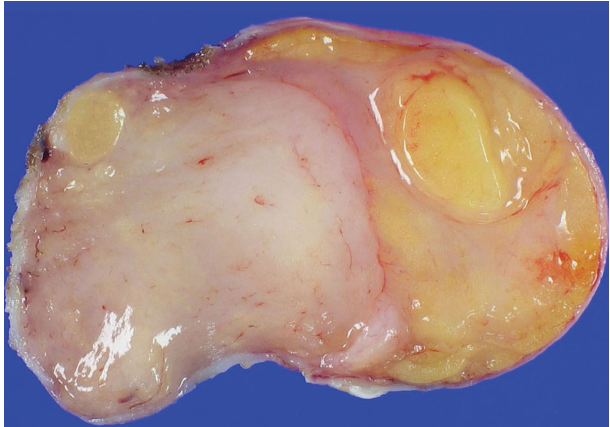


Fig. 2. The cut surface of the mass shows two distinctive features, whitish solid areas and homogeneously fatty areas.

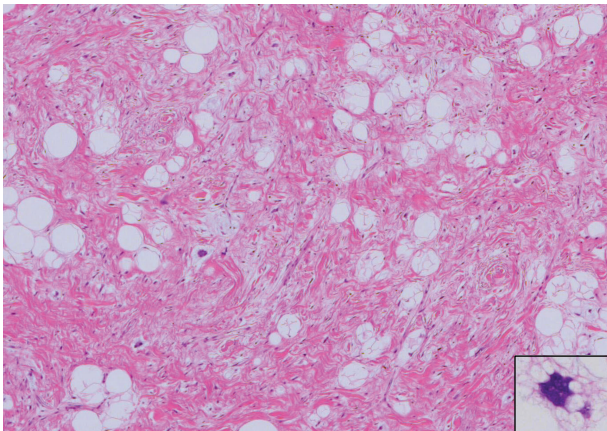


Fig. 3. Microscopic examination shows a mixture of mature fat cells, multinucleated giant cells, and ropey collagen bundles. Inset, Floret cell resembling lipoblast.

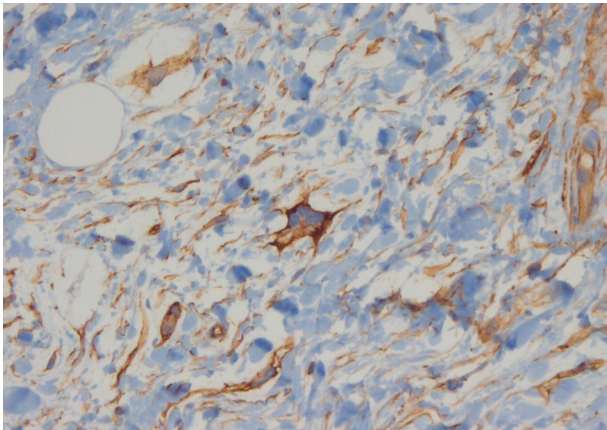


Fig. 4. Spindle cells and floret cells stain for CD34.

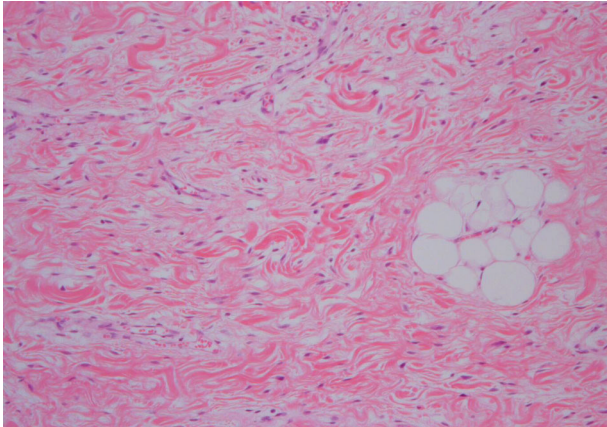


Fig. 5. Microscopic findings of the primary tumor. Ropey collagen bundles and bland spindle cells are predominant.

ponents of spindle cell/pleomorphic lipoma.<sup>7-11</sup> Classic spindle cell lipoma may be difficult to distinguish from the benign peripheral nerve sheath tumor, nodular fasciitis, solitary fibrous tumor, and myofibroblastoma. CD34 staining, along with negativity for S-100 protein, smooth muscle actin, CD99, or desmin, is diagnostic.<sup>12</sup> Classic pleomorphic lipoma can be confused with the sclerosing type of atypical lipomatous tumor/well differentiated liposarcoma. The circumscription, subcutaneous location, floret like giant cells, ropey collagen bundles, CD34 staining, and absence of MDM2 amplification are useful distinguishing features.<sup>12-15</sup> CD34 staining in tumor cells could indicate that spindle cell/pleomorphic lipoma is a dendritic interstitial neoplasm rather than a true lipogenic tumor.<sup>12,13</sup>

The treatment of choice for spindle cell/pleomorphic lipoma is complete excision. The recurrence seems to be very rare even after incomplete excision, with only one case reported.<sup>4</sup> Our case is unusual in that the tumor recurred after 7 years, but also showed histologic changes. This change is evidence for a common lineage of spindle cell and pleomorphic lipomas, and also a significant reminder for pathologists to avoid misdiagnosis.

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