Smooth Muscle Actin: A Confirmatory Immunohistochemical Marker for Myofibroma of Tongue

Sir,

Myofibroma is a rare spindle cell tumor of the oral cavity. An exhaustive review of the literature revealed less than 50 cases of intraoral myofibroma in English literature. Myofibroma occurs within submucosal or intramuscular tissue and has a predilection for tongue, buccal mucosa, and lips. Microscopically, the lesion shows a typical biphasic pattern and it is often misdiagnosed as benign and malignant spindle cell lesion. Thus, immunohistochemical staining is useful to reach an accurate diagnosis. An immunohistochemical panel consisting of antibodies to vimentin, smooth muscle actin (SMA), HHF-35, S-100p and desmin must be applied. In most cases, positivity for vimentin, SMA and HHF-25 can be observed.

An adult female of 30 years presented with a painless swelling of the tongue for 5 months. The past medical history, family history, and review of symptoms were non-contributory. Intraoral examination revealed a firm, localized swelling of the left dorsal surface of the tongue. The color of the overlying mucosa was normal, and no ulceration was noted (Figure 1).

Total excision of the lesion under local anesthesia was carried out and excised tissue was sent for microscopic evaluation. Microscopic examination of hematoxylin and eosin stained soft tissue section revealed a well circumscribed tumor, composed of mature spindle cells with eosinophilic cytoplasm and tapering nuclei arranged in a biphasic pattern. The connective tissue stroma is slightly myxoid and blood vessels lined by endothelial cells were also observed (Figure 2). Immunohistochemical staining showed strong positivity for SMA (Figure 3). On the basis of histological and immunohistochemical features, a final diagnosis of myofibroma was rendered. The patient has shown no recurrence after 1 year of surgery.

Solitary myofibroma is a rare benign spindle cell neoplasm that may arise in the skin, subcutis, soft tissue, bone, and exceptionally in viscera. In the head and neck region, the most frequent site is bone, followed by buccal mucosa and tongue.

Clinically, myofibromas present as soft, slow growing, asymptomatic swellings with an intact mucosa unless secondarily ulcerated. Microscopically, these lesions demonstrate a typical biphasic pattern. Peripheral zone is composed of spindle shaped cell with long oval nuclei and abundant eosinophilic cytoplasm resembles smooth muscle.

Immunohistochemical staining is a useful tool to reach an accurate diagnosis. SMA is a widely used marker for myofibromas.

In present case, a strong positivity to SMA confirmed the myofibroblastic origin of the neoplastic cells.

Conservative surgical excision of the lesion is the treatment of choice for myofibromas and they do not recur.

REFERENCES


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