

Lateral Neck Myxoma

Milton J. Dance Center

Head and Neck Tumor Conference

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Case Presentation

- 61 yo Caucasian female
- 1 year history of right posterior triangle neck mass, fluctuating in size
- Sx occasional pain

Past Medical History

- Papillary carcinoma of thyroid, Hashimoto's thyroiditis s/p subtotal thyroidectomy 9/30/99
- Non-smoker
- ROS otherwise unremarkable

Physical Examination

- Healthy appearing
- 2 x 2.5 cm R posterior triangle neck mass, minimally mobile
- Non-tender; nl shoulder motion
- Head and neck exam normal

Diagnostic Workup

- CT scan with contrast shows R paravertebral fat-density mass and thyroid mass
- MRI with T2 enhancing lesion
- FNA : benign myxoid tumor w/ myxoid matrix, spindle cells

Operative Findings

- OR 1/4/00 for excision of presumed schwannoma (based on MRI findings)
- 1.5 cm encapsulated intramuscular mass
- Deep to CN XI, lateral to transverse process C2
- No lymphadenopathy

Pathology

- Encapsulated, ovoid pink-tan soft tissue mass, 1.5 x 1.0 x 0.4 cm
- S-100 stain negative
- Avascular myxoid pattern
- Final Diagnosis: **Myxoma**

Cardiac Myxoma

- Most common primary tumor of heart in adults
- 90% located in atria.
- Left to Right 4:1
- <1 cm to 10 cm size
- Benign mesenchymal tumor

Myxomas

- Virchow (1871) first used term "myxoma" for tumors with histologic similarity to mucinous substance of umbilical cord
 - Virchow R. Die cellularpathologie in ihrer Begründung auf physiologische und pathologische Gewebelehre. 1871.
- Lesions w/myxoid elements are not myxomas

Definition

- Stout (1948) defined myxomas as true neoplasms of mesenchymal origin that do not metastasize and do not contain other recognizable elements.
- 22/143 lesions in head&neck
 - Stout AP. Myxoma: The tumor of primitive mesenchyme. Ann Surg 1948.

Myxomas Are Rare

- **60** cases of soft tissue head and neck myxomas in English literature
- **70** cases of odontogenic myxomas of head and neck, usually mandible
- **7** cases of intramuscular myxomas in head and neck

Odontogenic Myxoma

- Bony myxomas comprise 40-50% of head and neck myxomas
- Histogenetically different from other myxomas (cellular islands similar to reticulum of enamel)
- Osseous myxomas rare beyond jaw, and often near sites of tooth eruption
- Probable odontogenic origin

Soft Tissue Myxomas of Head and Neck

- Majority of lesions in 4th to 6th decades of life
- Slight female predominance
- Usually presents as palpable, painless mass

Sites of Occurrence

(# total cases)

• Palate	10	Oropharynx	3
• Parotid	6	Larynx	3
• Lateral Neck	5	Scalp	3
• Oral	5	Face	2
• Lip	4	Masseter	2
• Cheek	3	Alveolar Ridge	2

Gross Pathology

- Average size 2 x 2 cm
- Ovoid-spherical grayish, gelatinous mass
- Soft to firm consistency
- May be infiltrated with fat and mistaken for lipoma; avascular in appearance
- Often appears encapsulated
 - Canalis et al. Myxomas of the head and neck. Arch Otolaryngol 1976.

Histopathology

- Stellate cells in a mucoid matrix containing hyaluronic acid (all sites)
- Resembles primitive mesenchyme
- Poorly vascularized, no capillary network
- No recognizable differentiated elements (eg. chondroblasts, lipoblasts, rhabdomyoblasts)
- Little or no mitotic activity
 - Shugar et al. Intramuscular head and neck myxoma. Laryngoscope 1987.

Ultrastructure

- Amorphous material of low electron density with scattered tumor cells
- Abundant rough endoplasmic reticulum, numerous filaments, pinocytotic vesicles
- Well-developed Golgi apparatus
- Above features resemble **fibroblasts**
 - Feldman PS. A comparative study including ultrastructure of intramuscular myxoma and myxoid liposarcoma. Cancer, 1979.

4 Theories of Etiology

1. Stellate cells are altered fibroblasts

(Enzinger, 1965)

2. Viral origin

(Glazunov and Puckov, 1963)

3. Basic error in tissue metabolism

(Wirth et al., 1971)

4. Trauma

(Whitman et al., 1971)

Radiographic Findings

- CT usually shows non-enhancing soft tissue mass
 - Pahor and Samant. Retropharyngeal myxoma. J Laryngol Otol 1994.
- MRI may show enhancement on T2-weighted image

Differential Diagnosis

- Myxoid degeneration of sarcomas or neurofibroma (presence of mitoses, vascularity, and inflammatory cells)
- Neurofibromas (neural elements)
- Lipoma (lipoblasts)
- Intramuscular ganglion (lack reticulin fiber network)

Management

- Considered radioresistant according to early studies
- Capsule is usually incomplete, and local infiltration is the rule
- Recurrence after enucleation reported
- **Therefore recommend surgical excision with adequate margins over enucleation**

Summary

- 8th case of intramuscular schwannoma of head and neck
- 3rd reported case in posterior triangle of neck (1 subcutaneous, 2 intramuscular)
- Benign but locally aggressive tumors
- Should follow for recurrence for at least 2 years following excision

