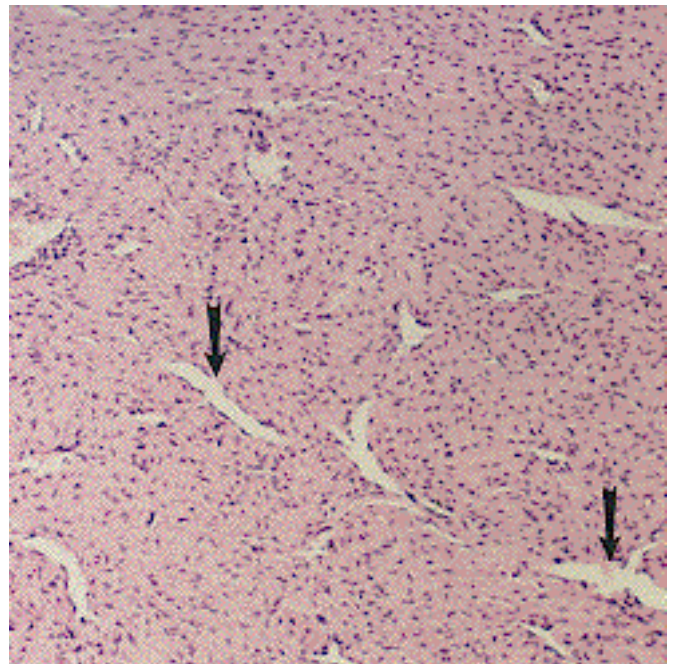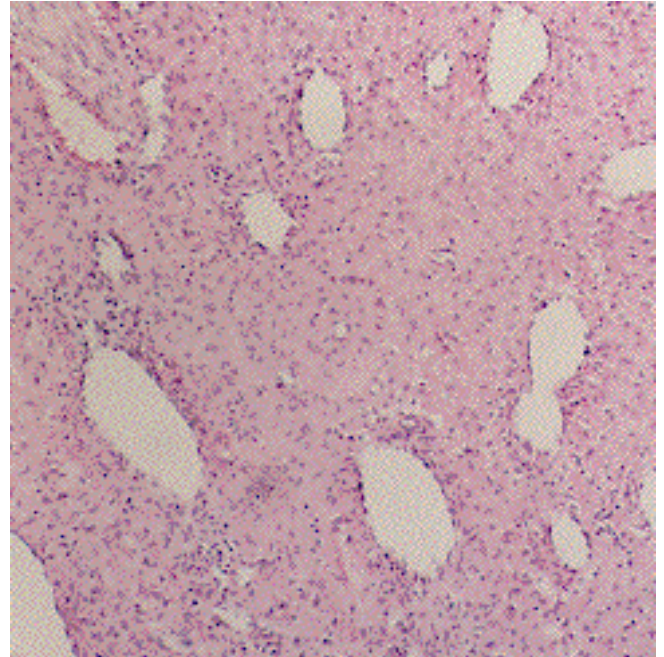# ANGIOFIBROMA
(JUVENILE NASOPHARYNGEAL ANGIOFIBROMA)

These tumors, found in young males, arise in the nasopharynx from the periosteum at the base of the skull. Grossly they are sessile,round or nodular,firm and bluish or dull red. They may be so large as to fill the entire nasopharynx.

Microscopically, there are plump fibroblasts, ovoid to spindle shaped, with a generous amount of connective tissue. In the compact stroma are blood vessels of different sizes and shapes lined by plump endothelial cells but with little or no smooth muscle or elastic fibers. As the tumor ages, there may be a predominance of stroma so that the vessels are compressed into slits. The blood vessels almost always are devoid of red blood cells.
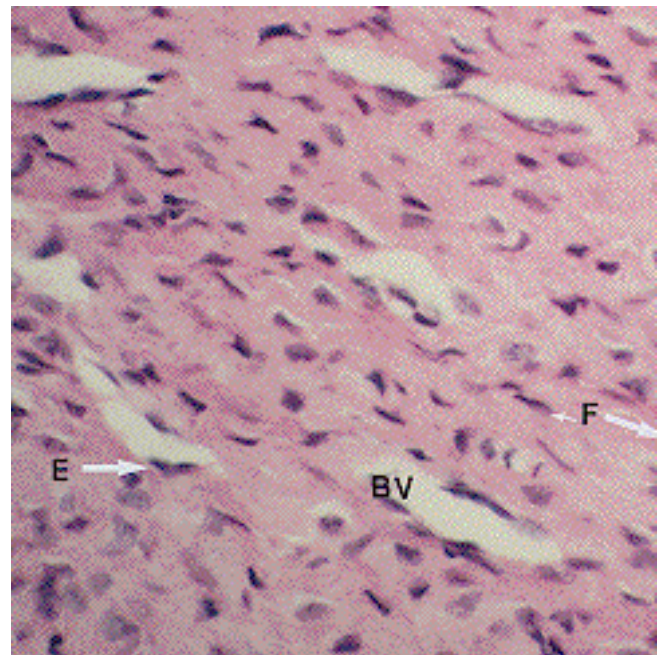
Angiofibroma, 12 year old male. Staghorn-shaped blood vessels (arrows) with endothelial cells but no smooth muscle are compressed by fibrous tissue showing oval to spindle shaped nuclei. Note the uniform cellularity.
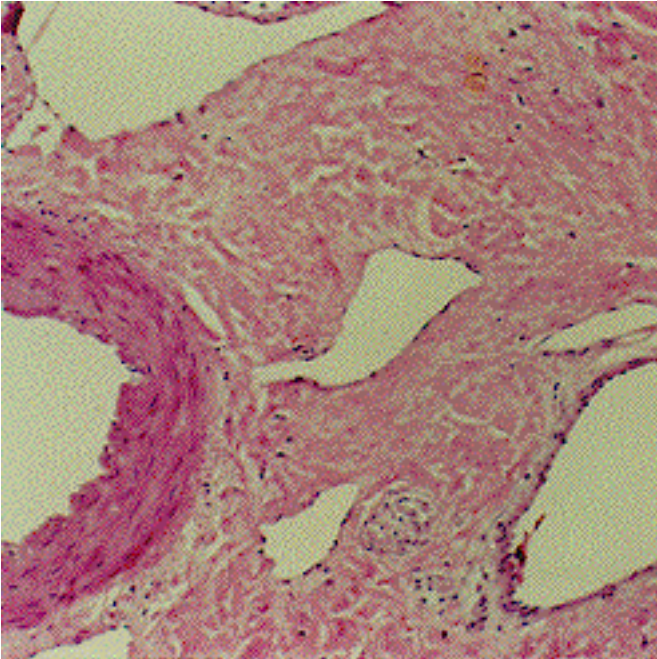
Angiofibroma, 17 year old male. Shows the large size and gaping appearance of some of the blood spaces and the abundant fibrous tissue.

Angiofibroma. Plump endothelial cells (E) and uniform fibroblasts (F). This specimen was a recurrent intracranial extension of angiofibroma. Blood vessel at BV.

Angiofibroma. Demonstrating a vessel unusual in angiofibroma because of its fully developed muscular coat. Fibrous tissue is dense and nuclei are sparse.

CLINICAL ASPECTS:

Angiofibromas are locally destructive and may invade the base of the skull to become intracranial neoplasms but they do not metastasize. They also expand laterally to displace the orbit and grow anteriorly into the nose to cause bleeding and nasal obstruction. Their extent is determined by inspection of the nose and nasopharynx and by imaging techniques including arteriography and CT scans with contrast material.

Surgical removal is the treatment of choice, sometimes with preoperative embolization of the tumor. Radiotherapy, which seems to limit tumor growth but has little effect on tumor mass, has been utilized in some cases.