Vascular Tumors Confused with Vascular Malformations and Hemangiomas

Francine Blei, MD

2 month old female referred for evaluation of “vascular lesion on chin”
First noted at birth, stable since
Ultrasound at 2 weeks of age: 8x2.8x1.0 cm well-defined hypoechoic mass with vascularity – impression was hemangioma.
MRI with contrast: well-defined lobulated mass in the right inferior premandibular soft tissues, measuring 2.7 x 2.2 cm in maximum area in the axial plane and 2.1 cm in maximum cranio-caudal dimension. T2 enhancement posteriorly, fat signal with central curvilinear area of enhancement and small flow voids
Impression: hemangioma
Surgical excision: Fibrous Hamartoma of Infancy

7 week old fraternal twin
Referred for evaluation of 6 cutaneous “hemangiomas”
2 hemangiomas
4 subcutaneous round brownish lesions
Biopsy: Leukemia Cutis, Congenital AML

14 ½ yo male
Lump on calf
Ultrasound:
“superficial vascular process with draining veins – vascular malformation vs tufted angioma”
Coronal FS T1
8.4xcm hyperintensity and thickening of dermis

Blastic plasmacytoid dendritic cell neoplasm (BPDCN)

10 year old male
vascular lesion on left side of face with occasional twitch
First noted at birth. Since then, has become darker on the surface and swollen.
Ultrasound: “tortuous tubular structure in left pre-auricular area of unclear diagnosis”
MRI with contrast: 5x2 cm hyperintense mass, intense heterogeneous enhancement

Conclusion: Clinical and radiological appearances of plexiform neurofibromatosis maybe confused with low flow vascular malformations.

Facial neurofibromatosis mimicking vascular malformations: case reports
YCL Leung, JWS Hung, MBY Leung et al
2 cases of facial neurofibromatosis presented with typical clinical and radiological characteristics of low-flow vascular malformations.
A 14 year old female presented with right submandibular mass
- ultrasound and MRI suggestive of right submandibular lymphatic malformation with parapharyngeal involvement
3 years old male referred with right cheek subcutaneous mass
- ultrasound and MRI suggestive of extensive facial venous malformations.
Both patients planned to have image-guided sclerotherapy. However, pre-sclerotherapy venogram showed neither backflow of fluid nor contrast delineation.
- ultrasound guided core biopsy of the lesions confirmed the diagnosis of plexiform neurofibroma.
Conclusion: Clinical and radiological appearances of plexiform neurofibromatosis may be confused with low-flow vascular malformations.

ISSVA 2015 20th International Workshop
6 ½ yo female with subcutaneous mass on forearm
MRI with contrast: "lobulated soft tissue mass between distal radius and ulna, 
~3cm 1.8x1.4, T2 bright, with some remodeling of ulnar aspect of distal radius 
without invasion. Normal bone marrow signal.
Dx = “soft tissue hemangioma or other type of vascular malformation”.

Infant referred with diagnosis of Hemangioma

Vascular lesion of left vaginal labia
- s/p ulceration improved with Metrogel
Several subcutaneous lesions
Ultrasound x2 – lesions compatible with hemangiomas
Thriving

Ultrasound of abdomen - ?adrenal mass?

Excision of labial and scalp masses - Neuroblastoma
MRI – stage IV Neuroblastoma

Thank you