CT and MRI Imaging Spectrum of Orbital Masses: A Pictorial Essay and Review of the Literature

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Introduction

- Orbital masses can result from a wide spectrum of etiologies and can often be challenging to diagnose with certainty.
- The imaging appearance of orbital masses can also be highly variable.
- Possible etiologies of orbital masses can routinely include inflammatory/infectious, vascular, traumatic, neoplastic, and non-neoplastic etiologies.

Methods

- A retrospective review of orbital mass cases in children and adults was performed, spanning a time range of approximately 10 years.
- The respective etiologies of the cases were ascertained and catalogued.
- The associated CT and MRI imaging findings were reviewed and compared with those previously described in the literature in each instance.

Conclusions

- The possible etiologies of orbital masses are numerous, and arriving at the correct imaging and clinical diagnosis can be challenging as a result.
- A working familiarity of the expected imaging appearance of common orbital masses can greatly inform the appropriate subsequent management of the patient and help prevent unnecessary procedures.
- The imaging findings were largely similar to those previously reported for most of the lesions although with the expected range of imaging findings commonly seen in particular entities.

Results

Infammatory

- Orbital Sarcoidosis
- Orbital Amyloidosis

Vascular

- Cavernous Malformation
- Venous Malformation
- Arteriovenous Malformation

Lacrical Gland Tumors

- Lacrical Gland Adenoid Cystic Carcinoma
- Lacrical Gland Adenocystic Cystic Carcinoma

Malignant Tumors

- Metastatic Disease

Pleomorphic Adenoma

- Optic Glioma

Lymphoma

- Lymphoma Lacial Sac

Benign Tumors

- Nerve Sheath-Tumor Neurofibroma
- Nerve Sheath-Tumor Schwannoma

Ocular Melanoma

- Congentet Orbital Dermoid

Orbital Rhabdomyosarcoma

- Langerhan Cell Histiocytosis

References