

Clinical Image

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# Orbital Invasion in Nasopharyngeal Carcinoma

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## Abstract

A 46 year old man presented with proptosis of the left eye. Extensive explorations revealed undifferentiated nasopharyngeal carcinoma.

**Keywords:** Nasopharyngeal carcinoma; Regaud pattern; Proptosis

## Clinical Image

A 46 year old man was referred for a 3 weeks history of non-painful proptosis of the left eye. Physical examination revealed a tumor involving the orbital region (Figure 1). Orbital computed tomography imaging showed neoplastic expansive mass spread to the ethmoidal cells (Figure 2). Low-power microscopic examination of the orbital mass showed atypical cells with ovoid vesicular nuclei and prominent nucleoli, with inflammatory infiltrate composed of some eosinophils and lymphocytes. These findings were consistent with the Regaud pattern of undifferentiated nasopharyngeal carcinoma (NC). The tumor showed abundantly expressed Epstein-Barr Virus (EBV) positivity by EBER in-situ hybridization (Figure 3). Although the pathogenesis of the nasopharyngeal carcinoma is not yet clear, it has been suggested that several factors appear: the EBV infection, environmental and genetic factors which are of major importance for the carcinogenesis. Direct orbital invasion is rare in NC. Inferior orbital fissure and the

pterygopalatine fossa are the most common routes of invasion, followed by invasion via the ethmoid sinus. After the patient was treated with radiotherapy and chemotherapy, the mass regress (Figure 4). There were no signs of recurrence after 12 months of follow-up.



Figure 1:



Figure 2:

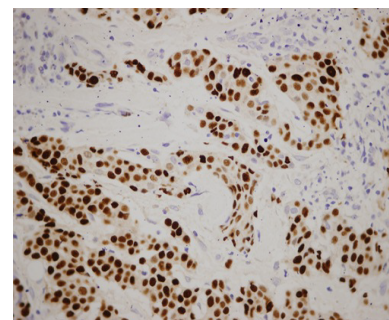


Figure 3:



Figure 4:

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