Introduction: Orbital masses remain a challenging diagnosis, despite meticulous clinical examination and ancillary imaging evaluation. Frequently surgery is required with either a curative or diagnostic purpose. In this study we aim to review the epidemiology, clinical presentation and definitive diagnosis of operated orbital masses in our center.

Materials and Methods: Retrospective, consecutive case series of patients referred for an orbital mass that underwent surgery (including incisional biopsy) in our center over a 4-year period (2013-2016). Presumptive diagnosis was based on clinical and imaging findings. Definite diagnosis was obtained by histopathologic analysis.

Results: The study included 22 eyes of 22 patients with a mean age of 66.5±13.8 years (range 38-93 years), of which 68.2% (15/22) were female. Symptoms were present for 11.4±12.9 months at presentation. The most frequently identified sign or symptom was a palpable mass in 68.2% (15/22) of cases, followed by proptosis in 63.7% (14/22), disturbed ocular motility in 40.9% (9/22), palpebral edema in 31.8% (7/22) and ptosis in 27.3% (6/22). All patients underwent orbital computed tomography, with 50% (11/22) also being evaluated by magnetic resonance imaging. The lesions were exclusively intraconal in 45.5% (10/22) of cases, exclusively extraconal in 40.9% (9/22) of cases, and affected both the extraconal and intraconal space in 13.7% (3/22) of cases. The superior temporal quadrant was the most frequently involved, in 36.4% (8/22) of cases. In 59.1% (13/22) of patients only incisional biopsy was performed.

A malignant etiology was determined in 63.6% (14/22) of cases, including 6 cases of lymphoproliferative origin (3 cases of MALT lymphoma, 2 cases of diffuse large B-cell lymphoma and 1 case of follicular lymphoma). We identified 3 cases of orbital metastases, 2 from known breast cancer and 1 from an unknown primary prostate cancer. Patients with a malignant disease were significantly older (71.5±13.5 years vs 57.8±10.0 years, p=0.021), had shorter symptom duration at presentation (7.8 months vs 17.6 months, p=0.043) with no differences regarding gender distribution (p=0.141).

Conclusions: Our results demonstrate a high proportion of malignant orbital masses, though biased by the need of surgical intervention/diagnosis in such cases. A palpable mass and proptosis were the most frequently encountered clinical signs and lesions mostly affected the intraconal space and the superior temporal quadrant.

In our sample, patients with malignant disease were significantly older and had shorter symptom duration at presentation.