EXPERIENCE WITH ORBITAL TUMOURS EXCLUDING RETINOBLASTOMA
A CASE SERIES FROM A TERTIARY CANCER CENTRE
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INTRODUCTION
A wide variety of neoplasms can arise from different orbital structural, which can create a diagnostic challenge to the pathologists.
The histopathological characteristics of these tumours are critical to their biologic behaviour, line of management, outcome and prognosis.
Thus, accurate diagnosis of these tumours based on histopathological examination (HPE) and Immunohistochemistry (IHC) is of utmost importance.

AIMS & OBJECTIVES
✓ To study the pattern and prevalence of orbital tumours in our institute excluding retinoblastoma.
✓ To assess the utility of HPE and IHC in correctly diagnosing orbital neoplasms.

MATERIALS & METHODS
A retrospective analysis of orbital tumours excluding retinoblastoma was carried out over a period of 10 years from 2007-2016 at Dr B Borooah Cancer Institute, Guwahati, Assam.
Only those cases which were evaluated with both HPE and IHC were included in the study.

RESULTS
A total of 35 cases of orbital tumours excluding retinoblastoma, evaluated by HPE & IHC were found.
The age range was 4 months to 83 years.
Male to female ratio was 1.5 : 1.
The most common tumour found was Lymphoma, accounting for 10 cases (28.6%), all of which were Non Hodgkin lymphoma (NHL). All these cases occurred in adults, thus making it the most common tumour in adults in this study.
Diffuse large B cell lymphoma was the most common lymphoma (4 cases), followed by Follicular lymphoma (2 cases), T cell NHL (2 cases) and Marginal zone lymphoma & B cell lymphoblastic lymphoma (1 case each).
The most common childhood orbital tumour was Rhabdomyosarcoma (RMS). These cases were diagnosed on the basis of positivity in IHC for desmin and myogenin, and negativity for other panel markers.
Cases of Poorly differentiated/Undifferentiated Carcinoma and Melanoma affected adults only, age range being 24-85 years.
Granulocytic sarcoma involved the orbit in 3 young patients before any evidence of systemic leukemia (age 2-10 years). HPE showed a picture of small round cell tumour; the finding of eosinophilic myelocytes gave a hint of granulocytic sarcoma. IHC evaluation showed positivity for LCA, CD 34, CD 68 and most importantly MPO.
A rare interesting case of angiosarcoma was diagnosed in a 32 year old lady, after it showed positivity for CD 31.

DISCUSSION
Incidence of orbital tumours is 3.5 – 4%.
Lymphoproliferative lesions are the most common primary orbital tumour in older adults (>60 years of age). Of these, lymphoma is the most common, accounting for 67 – 90% of orbital lymphoproliferative tumours and 24% of all space-occupying orbital tumours in patients older than 60 years of age.
The most common NHL in our study was DLBCL, unlike the finding in the study by Eckardt et al and Stefanovic et al, wherein MZL was the most common.
The most common biopsied malignant tumour in children is RMS, which is similar to our finding. Desmin and myogenin come in handy for its diagnosis.
Granulocytic sarcoma (GS) may occur as a manifestation of a well established systemic myelogenous leukemia or it may precede systemic manifestations of peripheral blood and bone marrow. Nowadays, IHC staining using a panel of antibodies against MPO, CD 68, CD 43, CD 34 & CD 117 would be the mainstay of diagnosis.
Neuroblastoma represents second most common orbital tumour in children after RMS, and only 8% cases first present with an orbital lesion.
Orbital Angiosarcoma is an exceedingly rare subgroup of angiosarcoma. CD31 has been shown to be a highly specific and sensitive endothelial marker that reacts rarely and only weakly with nonvascular tumours.
Depending on the particular type of the tumour the treatment options vary from excision alone, excision followed by radiation therapy (RT), orbital exenteration, exenteration with RT to exenteration with RT and chemotherapy.

CONCLUSION
HPE coupled with IHC is indispensable in segregating the different morphologic types of orbital tumours.
This is very essential for selective management of these tumours because of the differences in outcome.

REFERENCES