Retinoblastoma presenting as Preseptal and Orbital Cellulitis: A study of 80 consecutive cases

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Purpose: To discuss the clinical features and management outcomes of retinoblastoma (RB) patients presenting with preseptal or orbital cellulitis.

Method: Retrospective study of 80 consecutive patients of RB associated with preseptal or orbital cellulitis.

Results: Eighty (5%) of 1457 patients with RB presented with preseptal or orbital cellulitis. The mean age at presentation was 32 months and majority were males (n=42, 53%). Forty-five (56%) cases had unilateral RB. Solitary eyelid oedema (n=25, 31%) and eyelid oedema with leucocoria (n=25, 31%) were the most common presenting features followed by eyelid oedema with proptosis (n=22; 28%), red eye (n=7; 9%) and buphthalmos (n=1; 1%). The tumor was intraocular in 30 (38%) patients and had extraocular extension in 50 (62%). Of the 30 patients with intraocular tumor, 29 (97%) were classified as Group E by International Classification of Intraocular RB and one (3%) as Group D. Of the 50 patients with extraocular tumor extension, the tumor was classified as stage 2 (n=1, 2%), stage 3 (n=43, 86%) or stage 4 (n=6, 12%) based on International staging of RB. The primary modality of treatment was enucleation (n=17; 21%) and systemic chemotherapy (n=49; 56%), while 14 (18%) were lost to follow-up. Histopathological high-risk features were evident in 11 (65%) eyes that were primarily enucleated. At a mean follow up of 23 months, 8(10%) children died due to metastatic disease and morbidity.

Conclusion: Preseptal or orbital cellulitis is a rare presenting feature of retinoblastoma with high incidence of histopathological high-risk features and extraocular disease.