

OCULAR HYPERTENSION IN PEDIATRIC PATIENTS TREATED FOR ACUTE LYMPHOBLASTIC LEUKEMIA AND NON-HODGKIN LYMPHOMA

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Introduction

In order to identify primary and secondary ocular complications, this study encompassed prospective ophthalmologic evaluations of children and adolescents with Acute Lymphoblastic Leukemia (ALL) and non-Hodgkin Lymphoma (NHL) at diagnosis, at the beginning and throughout the period of chemotherapy.

Materials and Methods

All children were evaluated at diagnosis and were treated from June 2013 to June 2015. The standard treatment protocols in Brazil include the administration of a high-dose glucocorticoid resulting in at least 98 days of glucocorticoid use throughout the treatment (prednisone 4g/m2 or dexamethasone 600 mg/m2). Intraocular pressure (IOP) was measured when glucocorticoids were just started (D0), on the eighth (D8), the fourteenth (D14) and the twenty-eighth (D28) days of treatment. IOP results exceeding 21 mmHg were considered as ocular hypertension.

Results

We evaluated 33 patients. There were 29 cases (87.9%) of ALL and 4 cases (12.1%) of NHL. Twelve patients (36.3%) were diagnosed with ocular disorders (leukemic infiltration, bilateral papilledema, paralysis of the sixth cranial nerve, retinal hemorrhage, uveitis Herpes zoster and orbital cellulitis). No patients had ocular hypertension before beginning chemotherapy. Seven patients (21%) developed elevated IOP during the first four weeks of chemotherapy. There were a statistically significant differences (p<0.001) in IOP variation among all measurements, except between D8 and D14 and between D0 and D28. Every patients obtained satisfactory ocular pressure control when treated with 5% timolol maleate and 10% brinzolamide.

Conclusions

Ocular disorders occour in patients during the treatment of ALL or NHL. Ocular hypertension has been detected in previously normotense patients. We suggest a protocol including systematic eye examinations and IOP measurements from diagnosis to, at least, the end of the use of glucocorticoid.

References

1 Pilbeam K, Salvi S, Havani A. Corticosteroid-induced glaucoma as a complication of induction therapy in a child with acute lymphoblastic leukemia (ALL). ASPHO Abstracts. Pediatr Blood Cancer 2012; 58:1014-1097. 2 Yamashita T, Kodama Y, Tanaka M, Yamakiri K, Kawano Y, Sakamoto T. Steroid-induced glaucoma in children with acute lymphoblastic leukemia: a possible complication. J Glaucoma 2010; 19: 188–190. 3 de Queiroz Mendonca C, de Souza CP Jr, Martins-Filho PR, Viana SS, Leal BC, Cipolotti R. Steroid-induced ocular hypertensive response in children and adolescents with acute lymphoblastic leukemia and non-hodgkin lymphoma. Pediatr Blood Cancer 2014; 61: 2083-2085. 4 Khadka D, Sharma AK, Shrestha JK, Shrestha GS, Shrestha PN, Pant SR et al. Ocular manifestations of childhood acute leukemia in a tertiiary level eye centre of Kathmandu, Nepal. Nepal J Ophthalmol 2014; 6: 197-204.