

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo PIBIC

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Service (sector)

Retina and Vitreous

Nº CEP

Treatment of Retinopathy Prematurity: Transscleral vs Transpupillary Diode Laser.

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Purpose: To study the efficacy and safety of transcleral diode laser photocoagulation for treatment of retinopathy of prematurity (ROP).

Methods: Twenty-eight of 14 preterm infants with ROP threshold in both eyes were treated with diode laser photocoagulation. One eye with transscleral (TS) and the fellow eye with transpupillary (TP) photocoagulation with indirect ophthalmoscope.

Results: Birth weight ranged from 640 to 1240 g (median: 956 g). Gestational age: 24 to 35 weeks (median: 28.5 weeks) and the age of treatment range from 8 to 14 weeks after conception (median: 11,5 weeks). Follow up ranged from 3 to 9 months (median: 6.57 months). In 13 (92.8%) of the TP treated eyes and in 13 (92.8%) TS treated eyes, ROP regressed after single treatment and the retina was attached. One (7.2%) eye with disease in zone I treated with TS laser progressed to ROP IV B and one (7.2%) treated with TP progressed to ROP IV A. Side effects found with TS photocoagulation were chemosis and conjunctival bleeding in 3 (21.4%) eyes and hyphema grade I in one (7.14%) eye with dense tunica vasculosa lentis. There was no cataract formation after laser treatment. Small areas of retinal bleeding were present in the ridge in 4 (28.6%) TP treated eyes and 5 eyes (35.7%) treated with TS. One (7.14%) TS and 2 (14.2%) TP eyes showed minor vitreous hemorrhage that disappeared in 2 weeks.

Conclusion: Transscleral diode laser coagulation is as effective as transpupillary photocoagulation in the treatment of retinopathy of prematurity. Only minor side effects were noted. In cases with disease in zone I we suggest to open the conjunctiva as the best way to treat the posterior pole. Transscleral laser can be an alternative treatment to ROP specially when we need to spare the lens to avoid cataract formation, for example in cases with tunica vasculosa lentis.