

Response to Patching in Amblyopic Patients with and without Fusion Maldevelopment Nystagmus

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Amblyopia is a neurodevelopmental disorder that occurs due to de-correlated binocular input to the visual cortex. The treatment is comprised of occlusion of the non-amblyopic eye to promote the development of vision in the amblyopic eye. Amblyopes who have experienced disruption of binocularity during the first six months of life develop fusion maldevelopment nystagmus (FMN). The slow phase velocity (SPV) of FMN increases under monocular viewing conditions. Limited studies have shown that full time occlusion causes a compensatory decrease in SPV over a period of days. Thus, full time occlusion was recommended in patients with FMN. Currently, part-time occlusion (2-6 hours/day) is prescribed depending on the severity of amblyopia. We analyzed the relationship between presence of FMN and response to part time occlusion. 48 amblyopic patients were recruited [FMN (n= 15) and no FMN (n=33)]. Patients were stratified by severity of amblyopia at the time of diagnosis into (mild=3, moderate=34 and severe=11). Compliance with treatment was comparable between the two groups. 33% with FMN and 30% without FMN were treated with no residual amblyopia (chi squared: $p=0.886$). The number of months of patching was greater in patients with FMN (27 ± 18.5) versus without FMN (22.4 ± 13.5 , $p:0,024$). Amblyopic patients with FMN respond to part time occlusion. The duration of treatment was longer in successfully treated amblyopic patients with FMN than those without FMN.