

# The results of direct occlusion in the treatment of childhood dysbinocular and refractive amblyopia

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## Abstract

**Purpose:** An analysis of direct occlusion in the treatment of dysbinocular and refractive amblyopia in 3 – 5 years- old children.

**Methods:** Twenty five children (25 eyes) were enrolled in the study. All the patients had hyperopic refraction by spherical equivalent and monolateral amblyopia. Sixteen children (mean age 4.5 years) had refractive amblyopia; 9 children (mean age 3.9 years) had dysbinocular amblyopia. All the patients used spectacle correction. Direct occlusion was used according to the scheme: the first month - occlusion of the better eye for the whole day; the second month – 8-hour occlusion; the third month – 6-hour occlusion. Other methods of amblyopia treatment were not used. Follow-up period was 12 months.

**Results:** In the refractive amblyopia group mean BCVA before treatment was  $0.198 \pm 0.089$ . After the treatment it has improved up to  $0.606 \pm 0.069$ . In the dysbinocular amblyopia group mean BCVA before treatment was  $0.235 \pm 0.095$ . After the treatment it has improved up to  $0.728 \pm 0.073$ . The increase of BCVA made 0.408 and 0.424, respectively. BCVA of the better eye before and after the treatment was not less than 0.9. BCVA of the amblyopic eye normalized in 4 children out of 25 (16 %). Before the treatment 22 patients (88%) had monocular vision, 3 patients (12%) had simultaneous vision. After the treatment 16 patients of 25 (64%) developed binocular vision.

**Conclusion:** Direct occlusion alone for three months proves to be an effective treatment for refractive and dysbinocular amblyopia in children aged 3-5 years, enabling to eliminate amblyopia which has less treatment success at an older age.

ophthalmology for about fifteen years. Her field of interest is in pleoptoorthoptic treatment and treatment of amblyopia. She is engaged in active functional therapy correction of refractive errors in children.

## Speaker Publications:

1. Hunter D G (2005) Treatment of amblyopia in older children. Archives of Ophthalmology 123(4):557-8.
2. Lee S Y and Isenberg S J (2003) The relationship between stereopsis and visual acuity after occlusion therapy for amblyopia. Ophthalmology 110 (11): 2088-92.
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4. Scott W E, Stratton V B and Fabre J (1980) Full-time occlusion therapy for amblyopia. American Orthoptic Journal 30:125-30.

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## Biography:

Kolosova Natalya Vladimirovna is a practicing pediatric ophthalmologist, doctor of the high category in the Children's Department of the IRTC Eye Microsurgery Ekaterinburg Center, Ekaterinburg, Russia. She has experience in pediatric