

Innovative non-surgical method in complex strabismus treatment using new Prismatic Strabismus Compensators (PSC)

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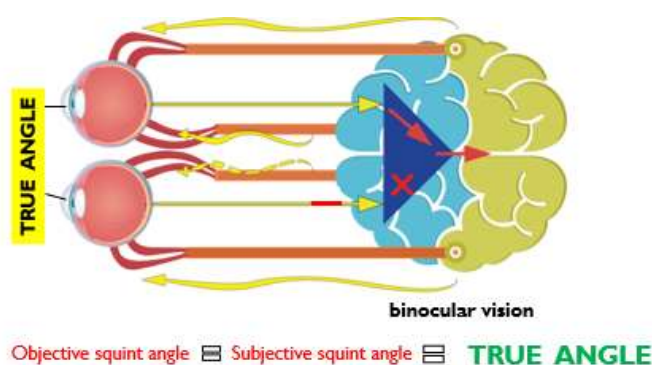
Abstract

Statement of the Problem: Although there are only two main approaches in complex strabismus treatment that exist today – surgical treatment and botulinum toxin injections, the search for alternative techniques of strabismus treatment remains relevant.

The purpose of the workshop is to provide recommendations on the appropriateness of Prismatic Strabismus Compensators (PSC) and specific rules of their use in complex strabismus treatment. **Current Practice:** Although most deficiencies of Fresnel lenses related to visual acuity reduction (foggy glasses) have been overcome by new PSC which have greater range of prismatic power, they remain undervalued by strabismologists and not widely used in practice. The main reason is in prejudice of practicing strabismologists against non – surgical methods of strabismus treatment. The appearance of glasses with PSC, furthermore, is often not suitable for patients and parents. **Best Practice:** At an early stage of strabismus treatment in patients under 5 y.o an attempt of non - surgical treatment using PSC can and should be made, as this method is less traumatic and able to compensate most of the motor and sensor dysfunctions causing strabismus in childhood, i. e. eliminating the cause of disorder using inartificial method. **Expected outcomes:** The abilities of PSC's in forming stable binocular vision will be presented. The correct usage of PSC for patients under 5 years old in most cases leads to successful non-surgical outcome.

For cases, when the surgery involvement is inevitable, the usage of PSC can eliminate the complications of strabismus ("jump symptom", suppression scotoma etc.) and prepare for 1-stage surgical treatment. **Summary:** Non- surgical treatment methods have many advantages, furthermore, the use of PSC is able to eliminate even the most complicated types of strabismus. Incorporating PSC in treatment processes often hampered by practicing strabismologists mistrust.

Figure 1 How to re-establish the integrity of visual system



Yevhenia Shvets – Pediatric Ophthalmologist with 30 years' experience. From 2010 – Chief Doctor for prevention oriented multi-services medical center "Neboleyka". 2006 - implemented ophthalmological solution created by Lametesk Laboratory, Dr.Shvets developed a methodology for visual acuity improvement in children with different ophthalmic pathology complicated by amblyopia.

From 2007 Dr.Shvets has been working on the development of non-surgical pediatric strabismus treatment methodology. From 2011 she started applying prismatic strabismus compensators developed by National Academy of Science of Ukraine in strabismus treatment. From 2011 till 2015 Dr.Shvets conducted a study of this methodology efficacy on patients from 6 m.o.a. to 15 years (the results were presented on 39th ESA meeting). From 2015 to 2017 Dr.Shvets conducted further study on patients aged from 6 to 24 m.o.a. (the results and implementation details were presented within instruction course on WOC 2018). She is Laureate of the Pilman Prize for achievement in Pediatric Ophthalmology.

Speaker Publications:

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2. Kurochkin V, Terekhova T, Glumskova Y, Triludina Y, Shelikhova O (2018) Application of Fresnel Prism in the complex treatment of friendly strabismus. Ophthalmology in Russia 15: 98-105
3. Saunders R (1984) Incomitant vertical strabismus. Treatment with posterior fixation of the inferior rectus muscle. Arch Ophthalmol 102: 1174 -7
4. Serduichenko V (2018) Prisms in the treatment of strabismus: Our experience of the use of prismatic correction in children with small angle of strabismus. J Clin Exp Ophthalmol, Volume 9 DOI: 10.4172/2155-9570-C2-081
5. Sharma P, Gaur N, Phuljhele S, Saxena R (2017) What's new for us in strabismus. Indian J Ophthalmol 65: 184-190.
6. Tour R (1959) Nonsurgical treatment of convergent strabismus. Calif Med 90: 429-432

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