

Materials and methods: Bibliographical sources were analyzed also recent retrospective studies that described relevance of ERG for clinical evaluation and vision research.

Results: Electroretinography evaluates the functioning of the retina by measuring the retina's response to different light stimuli. ERG is a mainstay of clinical ophthalmic diagnostic testing, frequently being a relevant diagnostic test in pediatric ophthalmology and neurology. The electroretinogram provides an objective, quantitative measure of retinal function and allows the clinician to monitor the function of rod cells, cone cells, and ganglion cells in each eye. ERG can set out the presence or the absence of a global retinal dysfunction, also clearly establishing its importance in the evaluation of pediatric patients with visual dysfunction. The pathologies that give us an unexplained visual loss where ERG is of a highly significance are: Leber congenital disease (LCA), achromatopsia, cone-rod or rod-cone degeneration. The electrophysiological features are: for LCA- a non-recordable or highly attenuated ERG; for achromats- a complete absence of cone response with normal rod-mediated components. The ERG findings do not change with time as children get older. ROP is the leading cause of preventable childhood retinal dysfunction, that's why we decided to pay an especial attention and to include it as a major indication for ERG. ROP has less effect on the cone than on the rod photoresponses. This suggests that cones are more resistant to the ROP disease. The similar shape of the b-wave stimulus-response function in preterms evidences that ROP does not alter the balance of ON and OFF signals in the cone pathway. Information provided by this test in a clinical setting has been used extensively to characterize the retinopathy of prematurity, congenital retinal disease, visual loss with unknown etiology nor clinical association, provided by neuroretinal disease, optics or even a functional visual loss. Nevertheless, the goal of using the ERG is to characterize and diagnose as soon as possible retinal deficits, such therapeutic approach can ensure rapid, targeted and designed to improve the quality of life of both the child and family.

Conclusion: Over the years ERG recording techniques have become progressively more sophisticated in clinical practice. With a basic understanding of ERG techniques is now possible a more precise mapping of dysfunctional areas of the retina. This test has a huge value in establishing the presence or absence of global retinal dysfunction in children. The evaluation of the pediatric patients with visual dysfunction represents a diagnostic challenge. For this reason, ERG represents a real value for improving the children's life quality in the Republic of Moldova.

Keywords: electroretinography, retina, preterm, unexplained visual loss.

206. BIOMECHANICAL PROPRIETIES OF DECELLULARIZED UMBILICAL CORD VESSELS

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Introduction: Each year Cardiovascular Diseases (CVD) are causing over 4 mln deaths in Europe, 47% from total deaths. The high level of deaths caused by vascular pathology and the deficit of

autografts, because of comorbidities and other causes, and deficit of synthetic grafts with small lumen (ID<6mm) as well, creates objectives for using tissue engineering in obtaining compatible alo-xenogenic vessels, after decellularization-recellularization principle. Aim: determining an optimal method of blood vessel decellularization by maximal preservation of it's biological proprieties.

Material and methods: Study object – human umbilical artery (n = 24; 18 – being decellularized, 6 – control lot). The decellularization was done by following methods: enzymatic – 0.25% Trypsin solution; chemical – 1% SDS solution, combined method – 0.25% Trypsin solution + 1% SDS sol. The decellularization efficiency was established through microscopical study of the histological slides.

Results: After decellularization pure matrix was obtained just through combined and chemical method (using SDS sol.), partial decellularization - through enzymatic method (using Trypsin sol 0.25%), being proved histologically. The results for vessel stretch test: $1,8\pm 0,03N$ – combined method; $1,53\pm 0,02N$ – enzymatic method; $1,83\pm 0,11N$ – chemical method and $2,33\pm 0,22N$ for intact vessels. In swelling test all the vessels resisted to maximal pressure, that was possible to obtain by our device – 280 mmHg.

Conclusion: The most effective decellularization was obtained through combined and chemical method. Analyzing the stretch and swelling test results, we can deduct that the vessels obtained through these 2 methods can be used as biological grafts.

Key-words: umbilical artery, decellularization, matrix, allograft.

207. RESULTS OF COMPLEX TREATMENT OF CONCOMITANT STRABISMUS IN CHILDREN

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Introduction: Diseases of the oculomotor apparatus are one of the causes of disturbances in visual function in childhood. According to the generalized data, concomitant strabismus affects about 2-3% of children. Treatment of strabismus in children is important to be done timely and durable. That determined the purpose of the study. The goal of the study is emphasizing the role of the complex treatment (pleoptic, surgical and orthopto-diploptic) of strabismus in children with functional and aesthetic purposes.

Materials and methods: For observations were taken in Ovisus Clinic 45 children with strabismus (26 girls and 19 boys). According to diagnosis were taken as evidence the following children: with convergent alternating strabismus -15,6%; monolateral for the right eye -33,3%, monolateral for left eye 37,8%; divergent alternating strabismus- 8,9%; monolateral for the right eye 2,2%; monolateral for left eye 2,2%. The angle of deviation present in the studied patients before surgery: 11-20* -64,4 %; 21-35* -26,7 %; >36* -8,9%. Preoperative visual acuity in patients is as follows: 0,9-1,0- 24,4%; 0,7-0,8- 37,8%; 0,5-0,6- 20%; 0,3-0,4-15,6 %; 0,1-0,2- 2,2%. The binocular vision was monocular for 51,1%,