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Ampli-pulse phoresis in patients with partial optic nerve atrophy

AUTHORS: Basinskii SN; Shtilerman AL; Mikhal'skii EA PUBLICATION TYPES:
REGISTRY NUMBERS: 9007-34-5 (Collagen)

ABSTRACT:

A new complex method for treating partial atrophies of the optic nerve unites surgical, physiotherapeutic, and drug effects. One electrode is attached directly to the anterior segment of the optic nerve by a collagen infusion system and the other is fixed at the back of the neck. The involved optic nerve is exposed to sinusoidal modulated currents in the rectified mode, permitting direct drug electrophoresis in parallel with electric stimulation of nerve fibers. The efficiency of the method is two times higher than of standard treatment.

NLM PUBMED CIT. ID: 10741257

SOURCE: Vestn Oftalmol 2000 Jan-Feb;116(1):18-20

NLM CIT. ID: 97246808

Transdermal electrostimulation of optic nerves in neurosurgical patients with vision disorders

AUTHORS: Eliseeva NM; Serova NK; Gnezditskii VV; Eolchiian SA
PUBLICATION TYPES:

ABSTRACT:

Transcutaneous electrostimulation of optic nerves after Ye. B. Kompaneyets et al. (1985) was used in the treatment of 203 neurosurgical patients aged 5 to 65 years with vision disorders. Improvement of visual functions (vision acuity and/or visual field) was attained in 112 (55.2%) patients. No changes were observed in 91 (44.8%) patients. The authors investigated the relationship between the efficacy of transcutaneous electrostimulation of optic nerves and neurosurgical disease, status of visual function, history of vision disorders, ophthalmoscopic picture, and electrophysiological parameters. The best results were achieved in patients with traumatic injuries of the optic route at the base of the brain, with cerebrovascular aneurysms, and the hypertensive hydrocephalic syndrome. The results depended on the history and stage of vision disorders.

NLM PUBMED CIT. ID: 9133037

SOURCE: Vestn Oftalmol 1997 Jan-Feb;113(1):19-22

NLM CIT. ID: 96413162

Use of transconjunctival electroimpulse therapy in diseases of the optic nerve

AUTHORS: Chentsova OB; Riabtseva AA; Bazai Sh Iamshchikova IV

AUTHOR AFFILIATION:

Moscow Regional Research Clinical Institute of MF Vladimirski. **ABSTRACT:**

Seventy-one patients with optic nerve abnormalities of different origin were treated using transconjunctival electrostimulation of the eyeball with electrodes positioned in the ciliary body projection. A positive effect was attained, particularly manifest in the acute period of optic nerve diseases (neuritis, anterior ischemic neuropathy) and in involvement of the optic nerve in glaucoma patients. The results were assessed from the principal parameters of visual function, intraocular pressure, data of hydrodynamic and electrophysiological studies.

NLM PUBMED CIT. ID: 8966855

SOURCE: Vestn Oftalmol 1996 Jul-Aug;112(3):15-7

NLM CIT. ID: 96098997

The results of using therapeutic periorbital electrostimulations in neurology patients with partial

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atrophy of the optic nerves

AUTHORS: Shandurina AN; Panin AV; Sologubova EK; Kolotov AV
Goncharenko OI; Nikol'skii AV; Logunov VIu

ABSTRACT:

Results of clinical application of method of non-contact periorbital electrostimulation in 6 groups of neurologic patients (total number-246) with optic nerve pathology of different origin (post-traumatic, hypertensive, inflammatory) are summarized. Analysis of interdependence between positive results and severity of visual disorders, type of the disease, responsible for partial atrophy of optic nerve, was performed. This method of restoration of vision in investigated patients proved to be effective both in hospitals and outpatient departments.

NLM PUBMED CIT. ID: 7483928

SOURCE: Zh Nevropatol Psikhiatr Im S S Korsakova 1995;95(2):27-31

NLM CIT. ID: 95264879

Electric ophthalmologic stimulator Fosfen-1

AUTHORS: Gurov AS

ABSTRACT:

The paper describes a [sequence: see text] electric eye stimulator which works on the principle of transcutaneous electric stimulation of a peripheral part of the eye analyzer. The device is both diagnostic and therapeutical, exerting a positive therapeutical effect in the treatment of ocular nerve atrophy in patients treated in the ophthalmological, neurological, and neurosurgical units.

NLM PUBMED CIT. ID: 7746114

SOURCE: Med Tekh 1994 Nov-Dec;(6):46-7

NLM CIT. ID: 95109011

Electrophysiological and neuroradiological methods in the diagnosis and prognostication of functional outcome in young children with lesions of the visual tract

AUTHORS: Fil'chikova LI; Mosin IM; Kriukovskikh ON
Fishkina EV; Val'skii VV; Gus'kov SI

ABSTRACT:

The authors analyze the data of computer-aided tomography, neurosonography, and visual evoked potentials to chess pattern reversal in 14 infants aged 6 to 11 months with partial atrophy of the optic nerve and/or visual cortex involvement before and in various periods after transcutaneous electric stimulation combined with neurotrophic drug therapy. The advantages of comprehensive examinations in neuroophthalmological diagnosis in infants are shown, as is the possibility of using electrophysiological and neuroradiological methods for prediction of functional outcomes in the said patient population.

NLM PUBMED CIT. ID: 7810040

SOURCE: Vestn Oftalmol 1994 Jul-Sep;110(3):29-32

NLM CIT. ID: 95109003

Ophthalmological symptoms of visual tract lesions in craniocerebral injuries

AUTHORS: Serova NK; Lazareva LA; Eliseeva NM; Eolchiian SA

ABSTRACT:

Craniocerebral injuries are known to involve the visual tract in 2-5% of cases. Fifty-nine patients aged 5 to 68 with visual tract involvement in craniocerebral injury were examined in N. N. Burdenko Institute of Neurosurgery of the Russian Academy of Medical Sciences. Unilateral optic nerve involvement was found in 48 patients, involvement of the chiasm and/or both optic nerves in 11. Involvement of a single optic nerve was associated with vision acuity reduction, 30 patients becoming blind or virtually blind, and with various defects of the visual field. Traumatic injury to the chiasm manifested as a rule by the asymmetric chiasmal syndrome. Follow-up of the patients in the acute period of craniocerebral injury showed that paling of the optic disc manifested in various periods after the moment of the injury, from 3-4 days to 1 month, this depending on the localization of the injury and its distance from the posterior pole of the eye. Besides visual disturbances and ophthalmoscopic changes, oculomotor disorders were found which were caused by traumatic impairment of the oculomotor nerves (in the orbit or skull) and muscles. Transcutaneous electrostimulation of the injured optic nerves was sufficiently effective, its efficacy directly depending on the period elapsed since the injury, excepting blind or virtually blind patients.

NLM PUBMED CIT. ID: 7810032

SOURCE: Vestn Oftalmol 1994 Jul-Sep;110(3):10-1

NLM CIT. ID: 94353584

The effect of noninvasive electrostimulation of the optic nerve and retina on visual functions in

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patients with primary open-angle glaucoma

AUTHORS: Kumar BSh; Nesterov AP

ABSTRACT:

Electrostimulation courses with OEC-2 Ophthalmologic Electrostimulator were administered to 30 patients (36 eyes) with primary open-angle glaucoma and normal intraocular pressure. An active electrode was placed on the upper lid, an indifferent one on the forearm. Electric pulses (150-900

mcA) were grouped in several sessions, 30 sec each, divided by 30-45 sec intervals. Total duration of a procedure was 16 min, the course consisting of 10 procedures. Control group included 24 eyes of the same patients. The patients were examined before, immediately, and 4-5 months after the treatment. Noticeable changes in vision acuity and visual field were detected. Visual field was examined using Humphrey Field Analyzer and 120-point threshold related test. The treatment resulted in reduction of visual field deficit by 10% or more in 28 (78%) of 36 eyes, in its increase in 2 eyes, and in no changes in 2 cases. Visual field deficit decreased by 25% on an average as against the initial value. Four to five months after the treatment the changes in this parameter were negligible. Vision acuity increased after the treatment in 31 of 36 eyes by 0.17 diopters on an average; 4 to 5 months later no changes occurred. In control eyes no changes were detected either in vision acuity or visual field during and after the treatment.

NLM PUBMED CIT. ID: 8073582

SOURCE: Vestn Oftalmol 1994 Apr-Jun;110(2):5-7

NLM CIT. ID: 94353577

The efficacy of transcutaneous electrostimulation of the visual system in partial optic atrophy

AUTHORS: Iusupov RG; Safina ZM; Mul'dashev ER

ABSTRACT:

Effects of transcutaneous electric stimulation of the eyes on vision acuity, visual field, electric sensitivity, electric lability, Hanzfeld ERG and macular ERG were studied in 260 patients with partial atrophy of the optic nerve of various origins and with different degrees of visual function loss. Dispersion analysis of random samples showed that changes in each characteristic after electric stimulation depended on the initial value of this parameter: in general, the more manifest were deviations from the norm, the more marked was the improvement of this or that function. A conclusion is made on physiological nature of electric stimulation method used for the treatment of optic nerve atrophy.

NLM PUBMED CIT. ID: 8073575

SOURCE: Vestn Oftalmol 1994 Apr-Jun;110(2):24-7

NLM CIT. ID: 93198211

Transcutaneous electrostimulation of the primary elements of the visual system in children after the extraction of a congenital cataract

AUTHORS: Khvatova AV; Iakovlev AA; Kruglova TB; Daud Zh
Gamm EG; Ruderman GL

ABSTRACT:

Courses of transcutaneous electrostimulation of the visual analyzer periphery according to E. B. Kompaneets were administered to 31 children (56 eyes) aged 4 to 12 because of low vision acuity after congenital cataract extraction. The amplitude of stimulating pulses was from 150 to 400 microA. The first course consisted of 5-8 sessions, repeated courses of 4 sessions. The results were assessed by vision acuity check-ups and recordings of visual [correction of auditory] evoked potentials (AEP). Vision acuity improved from 0.1 to 0.9 after a course of treatment. AEP amplitude was reduced in all the patients to 15.4 microV on an average, the time of the pulse conduction in the auditory system was normal (113.2 ms). Electrostimulation effects on the AEP were negligible. Electrostimulation may be recommended to children with low vision acuity and low values of the AEP amplitude after congenital cataract extraction. NLM PUBMED CIT. ID: 1295182

SOURCE: Vestn Oftalmol 1992 Jul-Dec;108(4-6):15-7

NLM CIT. ID: 90022020

The results of direct electrostimulation of the involved optic nerves in neurosurgical patients

AUTHORS: Khil'ko VA; Gaidar BV; Kondrat'eva MI
Nikol'skaia IM; Usanov EI

ABSTRACT:

The article generalizes experience in the restoration of vision by direct stimulation of damaged optic nerves after operations for pathological conditions of the chiasmal-sellar region (tumors of the chiasmal-sellar region, optochiasmic arachnoiditis, damage of the optic nerve in the bone canal) in 111 patients. The therapeutic effect was favourable in two thirds of the patients. Indications are determined for the use of the method in various types, duration, and severity of the disease. The use of the method with due

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regard for the determined indications increases the reliability, degree, and rate of restoration of vision in patients who underwent operation. NLM PUBMED CIT. ID: 2800826

SOURCE: Zh Vopr Neurokhir Im N N Burdenko 1989 May-Jun;(3):17-20

NLM CIT. ID: 89389620

Restorative electric stimulation of the optic nerve in patients with diseases of the chiasmal-sellar area

AUTHORS: Khi'lko VA; Gaidar BV; Lyskov EB; Kondra'teva MI
Niko'lskaia IM

ABSTRACT:

Presented is the clinical experience with vision restitution by direct electrostimulation (ES) of lesioned visual nerves in 128 operated patients with chiasmal-sellar diseases (chiasmal-sellar tumors and optico-chiasmatic arachnoiditis). Comparative analysis of ES-treated and control group was performed. Indications for this technique were determined in different forms of the disease depending on its severity and duration. ES showed positive results increasing the reliability and speed of vision restitution in operated patients. NLM PUBMED CIT. ID: 2789459

SOURCE: Zh Nevropatol Psikiatr Im S S Korsakova 1989;89(5):51-4

NLM CIT. ID: 89268117

Indications for the use of a method of direct electrostimulation of the optic nerves in patients with pathology of the chiasmal-cell region

AUTHORS: Shandurina AN; Khil'ko VA; Kondrat'eva MI
Nikol'skaia IM; Shchitov AG

ABSTRACT:

The authors generalize the results of the use of the method of direct electrostimulation of optic nerves in 145 patients with pathology of chiasmal-cellular region (tumours, optochiasmatic arachnoiditis, severe craniocerebral traumas with injuries of the bony optical canal) after the operations. The efficacy of the method was shown in 2/3 of observations with retention of residual visual functions. Differences in the efficacy of treatment of patients with various nosological forms of the disease have been revealed; indications for the use of the new method have been defined.

NLM PUBMED CIT. ID: 2786272

SOURCE: Vestn Oftalmol 1989 Jan-Feb;105(2):33-7

NLM CIT. ID: 89269294

Neuropsychological symptoms in optochiasmatic arachnoiditis

AUTHORS: Nikol'skaia IM

PUBLICATION TYPES:

ABSTRACT:

The picture of neuropsychological signs detected in 34 patients with optoschiasmatic arachnoiditis was analyzed before and after surgical treatment and a course of treatment with optic nerve electrostimulation. Pathological process was shown to spread on optic nerves and chiasma, and on other brain structures as well, e. g., frontal lobes basal regions. Besides, the impairment of a range of psychic functions could result from the decrease in the general brain activation levels related to a reduced flow of visual information due to fast progress of visual disorders. In this respect, the least favorable was first year of the disease. Verbal mnestic functions were improved under effective treatment restoring the vision. NLM PUBMED CIT. ID: 2728724

SOURCE: Zh Nevropatol Psikhiatr Im S S Korsakova 1989;89(2):73-7

NLM CIT. ID: 84276623

Preliminary results of direct stimulation of damaged optic nerves

AUTHORS: Khil'ko VA; Shandurina AN; Matveev IuK

Kondrat'eva MI; Lyskov EB

ABSTRACT:

The authors approbated in the clinic a new method for restoring vision in 22 patients in damage of the optic nerves caused by pathological processes in the opticochiasmatic area of the brain (tumors of the hypophysis, arachnoiditis, the sequelae of trauma). The novelty of the method lies in introducing electrodes under the nerve sheath during operation performed for the main pathological process and producing direct electrostimulation (ES) of the nerves for 3-4 weeks after the operation. The authors chose the optimum parameters of therapeutic ES under control of a direct record of the bioelectrical activity of the optic nerves and ophthalmological examination of the patients. Positive therapeutic effect was obvious in three fourths of patients, in one third of whom vision was completely normalized. The results of using the new method of implantation of electrodes into the optic nerves and the probable

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mechanisms of the restoration of vision under the effect of their direct ES
are discussed. NLM PUBMED CIT. ID: 6331693
SOURCE: Zh Vopr Neurokhir Im N N Burdenko 1984 May-Jun;(3):35-45