

perform laryngoscopy. As a result of damage to the upper laryngeal nerve, impaired mobility of the vocal cords may not be recognized on time. Therefore, in the daily work of endocrinologists there is a need to find alternative, no less effective and simple methods for detecting problems with vocal cords.

One such non-invasive method is ultrasound of the larynx and vocal cords. The presence of an ultrasound device becomes a kind of good tone in surgical departments, including the departments of endocrine surgery. And sooner or later, performing the next ultrasound of the thyroid gland and regional cervical lymph nodes, doctors pay attention to the fact that, in addition to these structures, the anatomical structures of the larynx, including the vocal cords, are quite clearly visible.

Therefore, the aim of our work was to study the possibility of performing ultrasound examination of the larynx on the detection of disorders of mobility of the vocal cords and compare them with laryngoscopy, which is traditionally used for this purpose.

The study was conducted on 187 patients operated in the surgical department of Chernivtsi OKL in 2019-2020. Each patient was studied for ultrasound on detecting different structures of the larynx. The diagnostic accuracy of ultrasound on detecting disorders of mobility of the vocal cords by laryngoscopy was confirmed. An GE LOGIQ 7 ultrasound scanner with a 12 L linear ultrasonic sensor with an aperture of 4 cm (frequency 8.0 MHz) was used. Laryngoscopies were performed using Olympus BF-160 endoscopic systems or direct examination by an ENT doctor. Each patient agreed to be examined. Statistical processing of the material was performed using traditional methods for determining the sensitivity to the specificity of the techniques used.

The structures of the larynx were available for examination by ultrasound (excluding age groups and sex) in 88% of patients, and the following pattern was found: worsening of accessibility for examination in men than in women. Among them 12 patients (6.5%) had impaired mobility of the vocal cords.

According to the results of comparative analysis, the accuracy of ultrasound on the diagnosis of disorders of mobility of the vocal cords in the group of patients in whom the vocal cords were well available for examination did not differ from that of laryngoscopy.

In the course of the study, we found that laryngeal ultrasound was effective and promising for the detection of paresis of vocal cords with sensitivity and specificity of 91% and 95%, respectively. Among patients in whom vocal cords were available for ultrasound scanning, the accuracy of the proposed method could be compared with laryngoscopy and could be successfully used in the daily work of endocrinologists.

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**NEW METHOD OF POSTOPERATIVE VITREOUS HEMORRHAGE PREVENTION
AFTER VITRECTOMY WITH FIBROVASCULAR MEMBRANES REMOVAL IN
PATIENTS WITH PROLIFERATIVE DIABETIC RETINOPATHY**

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The most effective and proven treatment for the complications of proliferative diabetic retinopathy (PDR) is pars plana vitrectomy (PPV). Postoperative diabetic vitreous hemorrhage (PDVH) is a severe complication of pars plana vitrectomy with removal of fibrovascular membranes in patients with proliferative diabetic retinopathy. The reported prevalence of PDVH (occurring 1 or more weeks after a surgery) is between 20% and 30%. Many research studies report that intravitreal anti-VEGF drugs administered before a surgery can significantly reduce the probability of PDVH; however, other studies have contradicted these results and have shown that these drugs fail to prevent PDVH. Tranexamic acid is a synthetic reversible competitive inhibitor to the lysine receptor found on plasminogen.

The aim of the study was to evaluate the efficacy of intravitreal tranexamic acid in reduction of the probability of PDVH occurring in patients who received PPV with removal of fibrovascular membranes due to PDR.

This retrospective, observational, comparative study included 38 patients (38 eyes) who underwent concomitant phacoemulsification with posterior chamber intraocular lens implantation and high-speed (10,000 cuts per minute) 25-gauge transconjunctival sutureless PPV with segmentation and removal of combined fibrovascular membranes. After removal of the vitreous gel at the vitreous base, vitreous base shaving was performed under scleral depression, and blood clots in the peripheral vitreous skirt were also removed using this process. At the end of each surgery, air-fluid exchange was always carried out, and endolaser treatment and endotamponades were performed when required. In group 1 (20 patients, 20 eyes) after the air-fluid exchange, 0.05 ml 0.05% of tranexamic acid was injected from the limbus via the pars plana using a 30-gauge needle. For standard cases, we used air as endotamponade (9 eyes) but for complicated cases (intraoperative retinal tear and extensive fibrovascular tissue dissection), gas (C2F6) endotamponade (19 eyes) or silicone oil (10 eyes) was used. Topical antibiotics and steroids were prescribed postoperatively. The gas volume reduced to about 30% of the vitreous cavity 3 days after surgery and was reabsorbed completely in 10 days. Main outcome measure was the occurrence of recurrent early vitreous hemorrhage. Time points for postoperative examinations were first day, first week, and first month.

Patient characteristics were similar between both groups (intravitreal tranexamic acid and control (group 2)) at baseline and no statistically significant differences were noted between the groups. All 38 eyes were given intravitreal aflibercept within 10 days prior to surgery. On the first postoperative day the rate of rebleeding in the intravitreal tranexamic acid group was 10.0% (2 eyes), which is significantly lower than the control group (38.8%, 7 eyes, $p < 0.05$). The incidence of early manifest PDVH in first week was also significantly lower in the intravitreal tranexamic acid group than the group 2 ($p < 0.05$). Later, one month after a surgery, PDVH occurred in 3 eyes (15.0%) in group 1 and 7 eyes (38.8%) in group 2. So, the incidence of PDVH in the intravitreal tranexamic acid group was significantly lower than the control group.

So, as conclusion, we can suggest that intravitreal tranexamic acid is effective in reduction of the probability of early postoperative diabetic vitreous hemorrhage occurring in patients who received pars plana vitrectomy with removal of fibrovascular membranes due to PDR and may be recommended in clinical usage as a new method of prevention of postoperative vitreous hemorrhages.

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DRY EYE SYNDROME IN PATIENTS WITH GLAUCOMA

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Glaucoma is the second leading cause of blindness in the world and is expected to affect 79.6 million people by 2022.

Glaucoma medications can be associated with toxicities to the ocular surface, most often due to the nature of the preservative included in the medication; however, the incidence of toxicity can be mitigated by the use of preservative free medications, decreased preservative medications, or treatment of dry eye disease.

The aim of the study was to confirm the previously reported association between use of primary open-angle glaucoma eyedrops and corneal staining, suggesting that medications or both are damaging directly the ocular surface.

Materials and methods included the treatment of 30 patients (60 eyes): 20 women, 10 men aged 66 to 91 years (average age 68.5 ± 9.6 years old) with primary open-angle glaucoma. Glaucoma duration varied from 3 to 15 years. All patients were observed on the base of Chernivtsi regional hospital (Chernivtsi). The patients were administered the following topical hypotensive drops: prostaglandin analogues (Bimatoprost, Latanoprost, Tafluprost, Travoprost), α -adrenergic antagonists (nonselective and selective), selective α agonists (Brimonidine), carbonic anhydrase inhibitors (Dorzolamide, Brinzolamide) or combination of two of them.