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ANALYSIS OF “DYSPORT” APPLICATION RESULTS IN AESTHETIC MEDICINE AND NEUROLOGY

INTRODUCTION. The botulinum toxin is used in clinical practice for more than 20 years. It has been used since 1991 for the treatment of torticollis, hemifacial spasm, blepharospasm, (tali)pes equinovarus in cerebral spastic infantile paralysis, spasticity of the hand after stroke and in ophthalmology. It was noticed, that after botulinum toxin injections for treatment of neurologic conditions the wrinkles of expression at the spot of injection were smoothing out. Then, in 1992 *Dysport* was for the first time applied for cosmetic correction of wrinkles. The summary of results in ageing aesthetic correction with *Dysport* application, as well as the application in neurologic conditions (hemifacial spasm, blepharospams, spasmodic torticollis-cervical dystonia).

METHODS USED. During 2005-2017 in our clinic 448 patients were treated with *Dysport* applications, including patients with ageing changes and neurologic conditions with spasms, who received second, third and fourth injections. In cases of patients with apparent static wrinkles and excessive skin, in the first place a surgery with excision of skin was done with further injections of the preparation a few months later.

RESULTS AND DISCUSSIONS. While applying *Dysport* injections we observed the following:

- 1.complaints of pain at injections spots (3% of all patients);
- 2.hematomas at the injection spots (4,5% of all cases), that were located mainly on the forehead and at the external eye corner;
- 3.diplopia in 1 case (0,5%)
- 4.subjective dissatisfaction with the result (1,01%): it should be noted, that in this case psychological and emotional state of the patient are of high significance.

CONCLUSION. It is of high importance to use psychoanalysis in some cases of aesthetic and neurological conditions to minimize the subjective complaints of the patient.

The adverse reactions rarely occur, and are well responsive to corrective and rehabilitation treatment.

Prevention of possible adverse reactions and complications on application of botulinum toxin consist of doctors' familiarization with pharmacokinetics and pharmacodynamics of the preparation, training of the specialists the techniques of the preparation application on dummies and phantoms, taking into consideration bones topographic and anatomic landmarks and projection of vascular and nerve tracts on the face.

The right for injection of the preparation has only the doctors, that have passed special training course and has respective certificate. For wrinkles smoothing the injection can be made to women, as well as to men.

Injection procedure is simple, almost painless, lasts a few minutes. Superficial and medium-depth wrinkles smooths by 90-100%, and deep wrinkles by around 70%. To maintain the result of injection, it is sufficient to make injections twice annually. After few procedures the customary mimic maintaining muscle contraction stops, which brings to better results. It is not advised to do reinjection earlier, than months after the procedure for the reason of antibodies onset probability. It is not advised to apply the injection during pregnancy and breast feeding.

The patient has to read and sign a memo of content. Taking pictures before the procedure is mandatory. During the first 2 weeks it is necessary to maintain a two-way communication “doctor-patient”, as well as conduct the patient's examination.



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artery(AcomA),
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ROLE OF ANTERIOR CEREBRAL ARTERY A1 SEGMENT HYPOPLASIA/APLASIA IN ANTERIOR COMMUNICATING ARTERY ANEURYSM TREATMENT

INTRODUCTION. A1 segment hypoplasia/aplasia is often encountered in patients harboring anterior communicating artery (AcomA) aneurysms. The influence of this variant of development of AcomA on aneurysm treatment are not well understood.

METHODS USED. Digital subtraction angiography (DSA) and CT-angiography images of 88 patients presenting to our university hospital with aneurysmal subarachnoid hemorrhage from a ruptured AcomA aneurysm were reviewed. Variations of parent artery anatomy related to the AcomA aneurysm were classified as follows: unilateral A1 segment aplasia (non-opacification of one A1, filling of both A2 segments from one side) and A1 hypoplasia (if its diameter was less than 50% of the width of the contralateral A1). The relationship of A1 segment hypoplasia/aplasia and possibility of complete embolization at presentation and recurrence rate were then assessed.

RESULTS AND DISCUSSION. Of 88 patients that were admitted with subarachnoid hemorrhage secondary to a ruptured AcomA aneurysm, 40 (45.5%) were found to have a hypoplastic or aplastic A1. Aneurysms with concomitant A1 segment hypoplasia/aplasia were less amenable to complete coil embolization (Raymond scale grade 1) (45.5% vs 54.2%). AcomA aneurysms occurring in the setting of a hypoplastic or aplastic A1 had a higher recurrence rate (22.5% vs 8.3%) and were more likely to undergo second treatment. Treatment of these aneurysms was associated with higher intraoperative complications (10% versus 6.25%).

A1 segment hypoplasia is a common anatomical variant that is encountered frequently in patients with an AcomA aneurysm [1]. In the present study, an A1 segment was considered hypoplastic if its diameter was less than 50% of the width of the contralateral A1. According to this definition, 40 (45.5%) were found to have a hypoplastic or aplastic A1. As within this anatomical context, the contralateral A1 perfuses bilateral ACA territories, this association is thought to arise from the increased hemodynamic stress that occurs with greater flow across the AcomA, which may predispose to aneurysm formation [2]. In a modeling study examining the biophysical effects of flow across the AcomA, increased cross-flow was correlated to high levels of shear stress on the arterial wall. In another computational study, the increase in wall shear stress rose dramatically when the difference between A1 segment widths was greater than or equal to 50% [3], which was the rationale for the definition of A1 segment hypoplasia chosen in this study. Given the potential effects on arterial wall shear stress, it is possible that A1 segment hypoplasia may also confer an increased risk of AcomA aneurysm rupture. We assessed the relationship of A1 segment hypoplasia/aplasia and possibility of complete embolization at presentation and recurrence rate after initial treatment. These results suggest that a hypoplasia/aplasia of A1 segment affects the morphology of AcomA aneurysms, which makes complete embolization on initial treatment less likely.

In addition, our results suggest that hemodynamic factors may have an influence on aneurysm regrowth and need for further retreatment.

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THE EFFICACY OF VARIOUS SURGICAL APPROACHES TO THE TREATMENT OF BILIARY DUCTS PATHOLOGY IN PATIENTS WITH HIGH SURGICAL-ANAESTHESIOLOGICAL RISK

INTRODUCTION. Biliary ducts pathology remains one of the most pressing problems of biliary surgery. The purpose of the study was to determine the efficacy of various surgical approaches to the treatment of biliary ducts pathologies in patients with high surgical-anaesthesiological risk.

To this end, results of treatment of patients who had undergone one-stage endoscopic intervention, as well as those who had gone through a two-stage treatment-transpapillary stenting with subsequent endoscopic surgery- are being compared.

METHODS USED. 300 patients from surgical-anaesthesiological high risk group with biliary tract pathology have participated in the study, of which 74.33% (233) women and 25.6% (77) men. The average age was 74.72±/± 2.31 years, because people aged 60-74 years prevailed in the selected group. Practically ¾ of the selected group consisted of patients with GDP stenosis and stricture of terminal segment of common bile duct and were practically similar. All patients had undergone low-invasive endoscopic interventions of biliary tract, also choledocholithotomy (which is being carried out during Lap cholecystectomy) was performed in 125 patients, and in the remaining 175 cases endoscopic sanitation during EPST was performed. Wherein, all patients, regardless of endoscopic intervention type were divided into 2 subgroups:

- Subgroup 1 - 97 (32.56%) patients in this subgroup underwent a one-stage surgical procedure;
- subgroup 2 - the remaining 203 (67.44%) patients underwent two-stage surgical treatment. During the first stage, all patients in this subgroup underwent transpapillary stenting of bile ducts, and the second stage - endoscopic surgery (if it still was necessary).

RESULTS AND DISCUSSIONS. As a result, effective transpapillary biliary excretion was achieved in the overwhelming majority of cases - in 187 (92.12%) patients. It should be noted that the frequency of complications in the mentioned subgroups was almost the same - 5.15% (5) in subgroup 1 and 4.43% (9) in subgroup 2 ($p > 0.05$). The most common complication in both subgroups was pancreatitis. The frequency of local complications was significantly higher in subgroup 1 (28,87%, in subgroup 2 - 8,37%, $p < 0,01$), while the level of general complications was comparable. Obviously, the nasobiliary drainage used as the first stage in subgroup 2 served as a measure of effective prevention in the development of postmanipulation pancreatitis. The mortality rate in the selected groups was 3.33% (10). Wherein, a lethal outcome after choledocholithotomy had occurred in one case - in a patient from subgroup 1 on the second day after surgery with increasing signs of cardiovascular insufficiency. The average duration of hospitalization in patients with high surgical risk was 17.32 ± 1.86 days, including 19.48 ± 1.63 days in subgroup 1, and 16.87 ± 1.03 days in subgroup 2 ($p < 0.05$).

Thus, at present, endoscopic transpapillary drainage of the bile ducts is an effective method of preparing patients from high surgical-anesthesiological risk group to further surgical interventions on the biliary tract. This is manifested as a more rare development of local complications in the postoperative period, a low level of mortality, and a reduction in the duration of hospitalization.

CONCLUSION. In this regard, the use of a two-stage approach (transpapillary drainage followed by endoscopic surgery) seems to be the most optimal in the treatment of high surgical-anaesthesiological risk group patients with bile ducts pathologies.



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CLINICAL PECULIARITIES OF ACUTE CHOLECYSTITIS AMONG OLD PATIENTS

INTRODUCTION. Assessment and continuous improvement of the quality of healthcare are among the priority goals of the health system reforms in our country. Surgical treatment of acute cholecystitis is a major part of healthcare system of Armenia. During the period of 2007 to 2014 some researchers have been carried out concerning two different groups having different symptoms of one and the same disease. One of the groups included young patients (aged from 18 to 59) having pain in the right upper quadrant, dyspepsia and fever. To the second group belonged old patients (aged 60 or more) having heaviness in the right upper quadrant and nausea.

The main goal of this study is the thorough examination of acute cholecystitis among elderly patients to improve the preoperational diagnosis and to choose the best version of treatment.

METHODS USED. The following scientific and practical methods were used throughout the study: mathematical, statistical and expert assessment. The data was obtained from 1273 outpatients medical records, the objective research data, as well as the results of labora-clinical complexes and instrumental methods of research.

RESULTING AND DICUSION. The following diagnostic methods have been introduced to develop the preoperational treatment of acute cholecystitis among elderly patients:

1. Sonographic examination with the aim of finding out the symptoms of a particular group.
2. Endoscopic Retrograde Cholangiopancreatography to find out the patients having this specific type of complication of the disease, name Choledocholithiasis or Biliary Hypertension.
3. Analysis of data to make the picture of the disease with all its subtypes clear. As a result it was found out that the symptoms of the disease essentially vary from young to elderly patients. Also it proved clear that comorbidities such as cardiovascular and other diseases make the duration of the operational treatment for more complicated.

CONCLUSION. In conclusion, after a detailed study of acute cholecystitis it was made clear that the duration and the clinical peculiarities of the above mentioned disease are vitally different for the two different age group in study. Especially, the peculiarities of the expression of the actual cholecystitis among the target group of study, that is to say among the elderly patients are the following: shortage the symptoms in the beginning of the disease, long duration of the disease and a presence of concomitant disease. What refers to the main disease, it is usually accompanied by its complicated forms, such as flegmonous, gangrenous and their complications. All these, undoubtedly make the operational treatment of acute cholecystitis much more complicated among the elderly patients and it demands extremely deliberate steps.

KEYWORDS:

*the characteristics of acute cholecystitis,
research among elderly patients,
endoscopic retrograde cholangiopancreatography*

OUR EXPERIENCE OF TAPP HERNIOPLASTY IN ADULT PATIENTS

INTRODUCTION. The first data regarding hernias go back as far as 3000 years, still, inguinal hernia surgery type selection remains a subject to numerous discussions. Nowadays, various types of autoplasty are considered to be ineffective as recurrences are observed in up to 45% of patients. The use of new methods and materials has decreased the rate of recurrences up to 1-5%. Laparoscopy has already shown its advantages in many areas of abdominal surgery, but its use in groin hernioplasty is still being studied.

METHODS USED. The purpose of this study is to find out the results of the Lichtenstein(L)(G1) and the Laparoscopic Transabdominal Preperitoneal(TAPP)(G2) method via retrospective analysis and make conclusions.

RESULTING AND DICUSION. During the recent 2.5 years we have carried out analysis on 106 non-incarcerated groin surgery cases, 94 of which were primary, and 12 recurrent. 65(61.3%) patients were operated via (L) and 41(38.7%) via TAPP method. In both groups polypropylene mesh prostheses were used, fixed by polypropylene stitches in G1, and by helical fasteners in G2. The smallest size of mesh prosthesis was 5*10cm in G1 and 10*15cm in G2. In the G2 large direct hernia defect was reduced through stitching the transverse fascia to Cooper's ligament, while in the G1 transverse fascia restoration was always carried out, and in the case of oblique hernias inner ring was reconstructed by Ioffe. G2 was operated under general anesthesia, G1 in 60 cases (92.3%)-spinal, 2(3%)-general and 3(4.7%) cases under local anesthesia. Patients were evaluated according to the duration of surgery, intra- and postoperative complications, number of days at hospital, cost of surgery, and the patients' life quality during the postoperative period. During our observation (1-25 mos), no recurrences or death cases have been observed in any group. In case of complications, no necessity for reoperation was observed in any patient. The average duration of surgery in G2 was longer than in G1 for 22±8 minutes, and the cost about 30-50% higher depended on type of mash and fixation device. Despite these factors no intra- or postoperative complications were observed in G2. In 4(6.6%) patients from G1, bleeding and wound infection were detected, which were resolved via local treatment. The number of hospital days in G1 was 4.5 and in G2 1.8. Patients from G2 showed earlier recovery and full activation, low and short-term postoperative pain and minimal downtime period. Postoperative acute pain and the quality of pre- and postoperative life were assessed by the Visual Analogue Scale (VAS). 4 patients from G2 were intraoperatively diagnosed with bilateral groin hernia. In all cases bilateral hernioplasty was performed by using the same ports. In 1 case combined hernia was observed.

CONCLUSION. Based on our data, we can conclude that (L) method remains to be a reliable and effective method especially for unilateral and primary hernias. In case of anesthesiological risks, direct or incarcerated groin hernias with defect larger than 3.5cm, we consider the TAPP method to be technically complicated and risky. We consider the use of TAPP method appropriate especially in bilateral, combined, recurrent hernias after anterior plastics, as well as suspicious unilateral groin hernias. The use of the TAPP method is justified, but must be performed by an experienced team.



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TREATMENT OF PATIENTS WITH PURULENT WOUNDS BY USING THE ORIGINAL METHOD OF HYDRODYNAMICAL DRAINAGE

INTRODUCTION. The wound process is a combination of successive changes occurring in the wound and associated reactions of the whole organism, characterized by phases of the course. Phase flow occurs when the wound process is open and closed. Closed treatment certainly has an advantage over open, but not always effective, even with modern drainage devices. Frequent complications arising from the application of primary sutures to a purulent wound lead the surgeon to abandon closed treatment and, in most cases, heal the wounds openly, with secondary tension. This leads to the threat of secondary infection, to an extension of the healing period, to the need for bandages, and sometimes to the formation of a coarse rumen. In this article the work of the Omsk State Medical Academy's department of general surgery is described. The work is aimed at treating patients with purulent and necrotic wounds of soft tissue by using the hydrodynamical drainage of new construction.

Objective of the research is: To improve the results of treatment of patients with deep purulent-necrotic wounds by applying the original "aspiration-flow-washing drainage".

METHODS USED. Clinical studies were carried out on the basis of the Budget establishment of health care of Omsk region Regional clinical Hospital №1 named after. A.N. Kabanov, the subject of the study were patients who were on inpatient treatment in the department of purulent surgery from 2010-2013 regarding purulent-necrotic diseases of soft tissues.

All clinical material is divided into 2 groups. The first (main group) group consisted of 47 patients who had developed hydrodynamic drainage for closed wound treatment. The second group (comparison group) consisted of 45 patients, whose closed wound treatment was performed in the traditional way using aspiration-washing drainage by a double-lumen tube of Kanshin (MMST - medical multichannel silicon tube).

RESULTING AND DICUSION.

In the course of the clinical research, the results of treatment of 92 patients were analyzed. When analyzing the dynamics of clinical indicators, it was found that the course of the wound process using the proposed technique is more favorable than traditional methods of treatment.

CONCLUSION.

1. The proposed method of treatment of purulent wounds promotes the rapid purification of wounds from necrotic tissues and pus in the first phase of the wound process.
2. The use of the proposed method led to a faster reduction of signs of intoxication (fever, leukocytosis, general manifestations) in patients of the main group.
3. Due to faster purification of wounds from necrotic tissues, the transition from degenerative and inflammatory types of cytograms to regenerative one have occurred 1-2 days earlier than in the comparison group due to a decrease in general manifestations of intoxication in patients of the main group.

TREATMENT OF HOSPITAL-ACQUIRED DELIRIUM IN PATIENTS WITH ACUTE CEREBRAL PATHOLOGY

INTRODUCTION. Acute transient disorders of thinking with difficulty of judgment and subsequent amnesia are the most common psychopathological syndromes that occur in patients with critical status. The most common syndromes of disturbed (confused) consciousness in patients who have experienced anoxic or discirculatory brain disorders are traditionally referred to as stupefaction and delirium. Like stupefaction, delirium develops on the basis of somatic diseases, infections, intoxications, substance abuse, in case of craniocerebral trauma (injury), acute cerebrovascular events, dementia and other conditions. It can be triggered by the use of drugs that have cholinolytic effect (antihistamines and psychotropic drugs, m-cholinergic blocking agents), as well as the use of corticosteroids, beta-blockers, digoxin, clonidine and a number of other drugs.

Over the last years, the agonist α_2 -adrenoreceptor-dexmedetomidine (dexdor) has been used to reduce psychomotor agitation in patients admitted to in the Intensive Care Unit with critical status. The sedative effect of the drug is due to the agitated depression in the blue nucleus (the sleep center) with the imitation of natural sleep.

Our study was aimed at early diagnosis of hospital-acquired delirium in patients in the Intensive Care Unit and development of best practices and methods for its elimination.

METHODS USED. Our study was carried out in 52 patients on the basis of the Clinic of Anesthesiology and Intensive Care of "Heratsi" University Hospital Complex №1. According to the proven diagnoses, 18 patients had severe anoxic brain injuries after cardiopulmonary resuscitation, the remaining 34 patients were hospitalized with severe cerebrovascular accidents (CVA) of ischemic and hemorrhagic origin (23 of them have undergone different neurosurgeries). Almost all patients were on prolonged artificial lung ventilation (ALV) (from 4 to 46 days). Disorders of mental activity were registered in all the examined patients, manifested both as obtundation and severe forms of delirium.

In addition to specific pathogenetic therapy, antipsychotic therapy was performed in this category of patients. The patients were divided into two groups. The first group consisted of 36 patients, in which psychosedation was performed with infusion of midazolam (3-5 mg/hr) or propofol (0.3-2 mg/kg/hr), and the second group (16 patients) had infusion of dexmedetomidine (Dexdor®, "Orion Pharma" LLC) at 0.2-0.7 $\mu\text{g}/\text{kg}/\text{h}$.

RESULTING AND DISCUSSION. The results of our studies showed that when evaluating the comparable depth of sedation with dexmedetomidine and midazolam in the patients receiving ALV, the patients treated with dexmedetomidine spent less time on ALV. They had lower frequency and duration of delirium, less frequent tachycardia and hypertension. Possessing an independent analgesic effect, dexmedetomidine reduced the need for analgesics, practically did not suppress respiration, had minimal deliriogenic effect unlike other drugs that could provoke the development of delirium. It was also found that the use of dexmedetomidine for sedation in the patients receiving ALV allowed reducing the number of days in delirium compared to other drugs, and a lower level of sedation provided greater anxiolysis and retrograde amnesia, which allowed reducing the time spent in the ICU. The most notable adverse event with the use of dexmedetomidine was bradycardia.

CONCLUSION. The results of our studies have shown that dexmedetomidine provides sedation at the level of traditionally used propofol and midazolam and at the same time reduces both the severity of cognitive impairment and the risk of delirium development in the patients in the Intensive Care Units.



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SINGLE STOMA TUBELESS CUTANEOUS URETEROSTOMY: A NEW APPROACH TO AN OLD OPERATION

INTRODUCTION. It has been reported that at the time of the diagnosis 30% of bladder cancers are already muscle invasive for which the treatment includes surgery and/or chemotherapy and/or radiation therapy. Currently, radical cystectomy with extended lymph node dissection remains a gold standard for local control of muscle invasive bladder cancer. The surgery has a high incidence of both early and late complications, and most of those are associated with the type of urinary diversion. Cutaneous ureterostomy is a well-established surgical technique of incontinent urinary diversion treatment, associated with the lowest rate of early postoperative gastrointestinal and metabolic complications. However, stenosis of the stoma itself limits widespread utilization of this technique, making ileal conduit the standard method for incontinent urinary diversion treatment.

Aim: Present our technique of constructing single site tubeless cutaneous ureterostomy which could reduce complication related to the stomal stenosis and propose a competing alternative to ileal conduit.

METHODS USED. Uretero-uretero-cutaneostomy is performed following cystoprostatectomy among males and anterior exenteration among females with standard or extended lymph node dissection. Ten patients underwent the radical cystectomy followed by single stoma tubeless cutaneous ureterostomy. The main differences of our method from previously described techniques were a) the preservation of parietal peritoneum covering the ureters as a mean for better blood supply preservation and b) fixation of ureteral orifices one to another forming one oval shaped stoma.

RESULTING AND DISCUSSION. In total 10 patients underwent modified technique of single stoma cutaneous ureterostomy in 2016. The advantages of existing urine derivation techniques were explained to all patients. All 10 patients gave their consent for the selected surgery. Six out of the 10 patients were clinically morbid patients and chose the method as a less morbid option, while others chose it because of advanced age. The surgery lasted from 150 to 240 minutes. There was no need for intra- or post-operative blood transfusion. No significant in-hospital complication was observed. Patients were discharged on the 8th day following the surgery. Ureteric stents are removed 4 weeks following the surgery. The patients were followed for a maximum follow-up period of 12-months. Out of ten patients only one experienced stricture of the stoma requiring a further reconstructive surgery on stoma. Nine patients were free of obstruction for a follow-up period of 12 months.

CONCLUSION. Cutaneous ureterostomy is a safe method, which is the preferred method of urinary diversion for morbid patients. Its use is limited to those patients because of high rate of stoma site stenosis. Nevertheless, modifications of the technique are suggested by different authors for its improvement. We present our technique with promising results and believe that this could become a method of choice not only for morbid patients but also for patients who are candidates for ileal conduit.

THE USE OF PHYSICAL METHODS OF TISSUE DISSECTION AND COAGULATION DURING THYROIDECTOMY

INTRODUCTION. After the introduction in 1800 by Theodor Kocher, the thyroidectomy became the one of the most frequently performed surgical procedure. In the last 20 years, thyroid surgery has undergone significant changes. Specifically, the type of surgery has shifted, and more and more people undergo operations for thyroid diseases. Indeed, thyroid surgery is now a routine operation, especially in endemic regions like ours. Thyroid gland has very intense blood supply and hemostasis during surgery is extremely important. This provides a dry operative field and allows to avoid the intraoperative and postoperative complications such as bleedings, paresis of upper and recurrent laryngeal nerves, damage of parathyroid glands. The aim of our investigation was to analyze our clinical data when the Harmonic (Ethicon) ultrasonic scalpel and the LigaSure (Covidien) electro-surgical unit were used in thyroid surgery.

METHODS USED. A study of the clinical data of 268 patients was made. Patients are divided into three comparable groups. The first group consisted of 82 patients who underwent surgery using the conventional technique of applying clamps followed by stitching or ligating of tissues and vessels. Ultrasound Harmonic scalpel was used in 102 patients of the second group. And at operations on 84 patients of the third group the installation LigaSure (Covidien) was applied. All three groups of patients were comparable in age, sex and pathology. The following characteristics were subjected to comparative analysis: duration of operation (in minutes), intraoperative hemorrhage (ml), duration of postoperative hospital period (in beds / days), postoperative paresis of vocal cords, postoperative hypocalcemia.

RESULTS AND DISCUSSION. The duration of the operation in the first group was 138 ± 24 minutes, in the second group 68 ± 22 minutes, and in the third group this index was minimal and amounted to 56 ± 15 . Intraoperative hemorrhage prevailed in the first group, reaching 66 ± 18 ml. The second and third groups were almost indistinguishable in terms of the indicator of this sign (22 ± 12 and 18 ± 14 , respectively). Quantitative indicators of postoperative hypocalcemia ($\chi^2 -0.227$) and vocal cord paresis ($\chi^2 -0.955$) in all three groups were practically the same, while there was an obvious decrease in the duration of the postoperative hospital period in the second and third study groups.

	Parameters	Group 1 (n=82)	Group 2 (n=102)	Group 3 (n=84)
Intraoperative	Duration of surgery	138±24	68±22	56±15
	Intraoperative blood loss	66±18	22±12	18±14
Postoperative	Duration of postoperative period	3.9±0.47	1.8±0.3	1.12±0.25
	Vocal cords paresis	1(0.82%)	1(1.02%)	0
	Hypocalcemia	4(3.28%)	5(5.1%)	3(2.52)

CONCLUSION. Thus the usage of Harmonic scalpel and Liga-Sure decrease the intraoperative time, blood loss, duration of postoperative period and don't increase the rate of post-operative complications. In conclusion, harmonic scalpels can be used in thyroid surgery. It is important to know the operating principles of this device to use it safely. The cost effectiveness of this device must be further investigated.



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CONFERENCE ABSTRACTS
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ogy (FNAC)

OPTIMIZATION OF THE THYROID NODULES DIAGNOSIS

INTRODUCTION. Patients with suspicious thyroid nodules on ultrasound (US) are usually advised to undergo fine needle aspiration cytology (FNAC). US-guided FNAC is a cost-effective and widely-used method to differentiate thyroid nodules with a high diagnostic accuracy. Over the last decade, the scientific medical literature actively discusses the diagnostic value and accuracy of various types of elastography in the diagnosis of thyroid cancer. But the fine-needle aspiration (FNA) remains the main investigation method and plays an essential role in the evaluation of patients with a thyroid nodule. It helps to minimize unnecessary thyroid surgery for patients with benign nodules and appropriately triages patients with thyroid cancer to surgery.

Objectives: To analyze the informative value of FNA when combining it with ARFI elastography.

METHODS USED. Analysis of clinical data of 122 patients with thyroid nodules was performed. Patients are divided into 3 groups. In all groups, the results of the preoperative diagnosis were compared with the findings of a post-operative histological examination. The first group (n = 36) consisted of patients whose preoperative diagnosis was based on FNA results. The second group is represented by patients (n = 28) who refused FNA, and the operation was performed based on data of ARFI elastography. In the third group (n = 58) ARFI elastography was produced and under control of which the targeted FNA was primarily made from the densest sections of the node.

RESULTS AND DISCUSSION. In the first group, the diagnostic accuracy was 77.8% (28/36). However, in this group the diagnostic specificity of FNA was reduced due to impossibility of differentiation between follicular adenoma and carcinoma. This fact makes us to search additional methods to improve the diagnosis. When analyzing the data of the second group, the maximum node density of up to 4 m / sec was determined by ARFI elastography in 16 patients out of 28(57%). The fact of high density in the nodules with thyroiditis Hashimoto sharply reduces the diagnostic accuracy of this group. The diagnostic accuracy in third group was 94.8%. It is important that in this group 2 micro carcinomas were diagnosed preoperatively (one papillary and one medullar). And in 2 patients of 24 with cytological diagnosis of follicular tumor the nodules density was more than 5 m/s.

	Result		Total
	Positive	Negative	
Group 1	28	8	36
Group 2	16	12	28
Group 3	55	3	58
Total	99	23	122

$$\chi^2 = 9.21, p < 0.01$$

CONCLUSION. Thus, the combined use of FNA and ARFI elastography leads to optimization and increase of accuracy and specificity of thyroid nodules diagnosis.

RARE CASE OF PHEOCHROMOCYTOMA WITH THE TUMOR LOCALIZATION IN PARAAORTIC BODY OF ZUCKERKANDL

INTRODUCTION About 80 to 85% of chromaffin-cell tumors are pheochromocytomas, whereas 15 to 20% are paragangliomas. Most of these tumors hypersecrete catecholamines, and if untreated, cardiovascular morbidity and mortality are high. The prevalence of PPGL in patients with hypertension in general outpatient clinics varies between 0.2 and 0.6%. Diagnosis of PPGL may be missed during life; autopsy studies demonstrate undiagnosed tumors in 0.05–0.1% of patients. Paraganglioma of organ of Zuckerkandl (PGOZ) is rare neuroendocrine tumors located around the origin of the inferior mesenteric artery extending to the level of the aortic bifurcation.

METHODS USED. In presented study we performed the clinical and morphological analysis of PGOZ in patient with aggressive course of arterial hypertension and diabetes mellitus. In February 2017, a 65 years old Armenian man was referred to department of general surgery of Astghik Medical Center (Armenia, Yerevan) due to abdominal and back pains. The patient experienced persistent and uncontrolled arterial hypertension and diabetes mellitus despite taking medicines (systolic blood pressure: 170-220 mmHg, glucose level in the blood: 8-21 mmol/l). There was no known family history of tumors. The level of 24 h urinary normetanephrine was elevated (19,230 nmol/24 h, upper reference limit (URL): <1900 nmol/24 h). Other blood and urine tests were normal. CT-scan with contrast revealed a 140×60 mm hypervascular, heterogeneous, para aortic mass located at the level of the inferior mesenteric artery. The tumor had signs of compression of aorta and vena cava inferior. Preoperatively during 14 days the Doxazosine was used to reduce blood pressure further until surgical intervention. In February 2017 tumor was radically removed via median laparotomic incision. Histopathological analysis of the tumor tissue revealed typical paraganglioma features. The index of Ki 67 was low (<1%). In postoperative period the arterial blood pressure and glucose level in the blood completely normalized (blood pressure-120/80, glucose level- 5 mmol/l) without using of any antihypertensive medicines and insulin.

RESULTING AND DISCUSSION. It is important to suspect, confirm, localize, treat, and resect paragangliomas for several reasons. Most of these tumors hypersecrete catecholamines, and if untreated, cardiovascular morbidity and mortality are high. Also, paragangliomas enlarge with time and may cause mass-effect symptoms by encroaching upon or extending into adjacent tissues and organs. Another reason to encourage case detection is that, for familial disease, detection of a tumor in the proband may result in earlier diagnosis and treatment in other family members. Finally, some paragangliomas have malignant potential. Malignancy is defined as the presence of metastases in nonchromaffin tissue; the prevalence varies between 10 and 17%. Mutations in the gene encoding SDH subunit B (SDHB) can lead to metastatic disease in 40% or more of the patients.

CONCLUSION Thus, PGOZ is a rare pathology, which is also confirmed by the scarce literature data. The diagnosis often is not difficult. The PGOZ should always be excluded in patients presented with the aggressive uncontrolled arterial hypertension and increase glucose level in the blood.



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