5-Cİ BEYNƏLXALQ BARİATRİK-METOBOLİK CƏRRAHİYYƏ KONQRESİN

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5TH INTERNATIONAL BARIATRIC-METABOLIC SURGICAL CONGRESS

Treatment and prophylaxis for constipation in overweight patients with bed

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Introduction: New pharmacological means against constipation are particularly important in the treatment and prophylaxis for constipation in overweight patients with bed. Constant inactivity, sedentary and bedding lifestyle, dominant and collateral chronic diseases along with other functional systems accentuate severe disorders of the gastrointestinal tract, especially constipation.

Aim: Studying the results of treatment and prophylaxis for constipation in overweight patients with bed.

Material and Methods: In the years of 2015–2019, the results of treatment on 14 patients (11 women) aged 38–85 (average age – 63.2±5.9) who treated with constipation, as well as surgical (therapeutic) diseases in Educational - Surgical clinic of Azerbaijan Medical University and Military Medical Office of State Security Service and in ambulatory conditions were studied. The body mass index (BMI) was 33.9–45.0 (average – 41.2±3.7) in overweight patients. Duclosoft purgative preparation (Ireland) has been added to commonly accepted conservative treatment complex and support treatment arsenal. For the purpose of treatment, the drug was taken 1–2 times per day in 35–40 ml volumes. In the next 5–7 days the volume of the drug was reduced to 20–25 ml and recommended to take 1 time per day. When the drug was separated for prophylactic purposes, it was used everyday in these volumes.

Results: As a result of the usage of drug, defecation was provided in the early days of treatment, first feces mass was 350–420 g (average – 361.5±25.4) and feeling of full discharge occurred. In the next days, although the dosage of the drug was reduced and transitioned to monotherapy, daily defecation occurred in patients and full discharge was achieved, then digestive discomfort eliminated to the desired level. All patients were satisfied with Dulcosoft healing-prophylactic effects.

Conclusion: The treatment and prophylaxis of constipation with Duclosoft in overweight patients with bed is selected with favorable results and its application for the instruction is advisable.

Key words: morbid obesity, constipation, dulcosoft.

Dynamics of liver and spleen elastography after bariatric surgery

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Introduction: Obesity is one of the most common diseases of the day. Non-alcoholic fatty liver disease (NAFLD) is widespread among heavy fatty patients. Elastography plays an important role in determining the level of liver fibrosis during this illness. Thus, when combined with the results of clinical, laboratory and instrumental examinations, the information and advantages of the method of determining the degree of fibrosis and cirrhosis of the liver are great.

Aim: Monitoring the dynamics of liver and spleen elastography after bariatric surgery.

Material and Methods: From October 2017 to April 2019, 14 patients (13 women, 93.3%) were admitted to the Department of Transplantology at AMU (mean age of the patients was 41.65±2.1 years). Body mass index increased from 31.2 to 61.3 (mean 44.1±2.3). Diagnostic procedures include routine and specific laboratory tests (liver functional tests), liver and spleen elastography, and so on. All patients were examined with The SuperSonic Imagine Aixplorer® before and after surgery. The liver and spleen tissue density were measured according to the Metavir scale: 7 patients with F0-F1, 4 – F1, 1 – F2, 1 – F3 and 1 – F4 respectively. During spleen elastography, the density of tissue was measured at a range of 10.2-42.2 kPa (mean 26.6 kPa). After completing the tests, Sleeve gastrectomy was performed in all patients.

Results: During the postoperative elastography, the density of liver tissue dropped to normal, and a decrease in spleen density (11.3-29.8 kPa, mean 24.8 kPa) was observed.

Conclusion: It is advisable to apply liver and spleen elastography as an initial examination to assess the dynamics of liver obesity and fibrosis in patients with bariatric operations.

Key words: Obesity, hepatosteatosis, liver fibrosis.

Treatment of gastro-esophageal varices in obesy patients with fatty liver disease

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Introduction: Fatty liver disease (NAFLD) is an oily liver disease in patients without alcohol. In the general population, nonalcoholic fatty liver disease is found to be 2.5% and 15-55% in overweight patients. Liver damage can progress from fatty infiltration to inflammation, fibrosis, and cirrhosis. Generally, risk factors include excessive obesity, hyperlipidemia, and diabetes mellitus. This study provides information on patients with fatty liver cirrhosis, which has bleeding from the gastrointestinal tract and stomach varices. Lab tests, abdominal ultrasonography, elastography, computer tomography and liver biopsy have confirmed liver cirrhosis. Most patients with Fatty liver disease are asymptomatic. It is the first clinical manifestation of sudden bleeding, just like in this study. Band ligation and sclerotherapy were successfully performed to stop the hemorrhage.

Material and Methods: 19 patients with overweight portal hypertension (13 women (68%) and 6 (31%) men) applied. BMI ≥30 kg/m^2, HVPG ≥10 mmHg. In liver functional tests increased. In the endoscopy of the upper gastrointestinal tract 10 patients (52%) have – esophageal varices (EV), 4 patients (21%) - isolated gastric varices (IGV), 5 patients (26%) – gastro-esophageal varices (GOV). The EV performed band ligation, IGV sclerotherapy, and gastric bleeding were performed for sclerotherapy + bands. Two patients had bleeding and repeated sclerotherapy, bleeding was stopped. 1 patient was repeatedly bleeding and was sent to TIPS. After clinical stabilization of the patient, liver biopsy confirmed FLD as histological.

Conclusion: In portal hypertensive obese patients, bleeding of the gastrointestinal tract, firstly sclerotherapy, or bandlygation, or both are recommended at the same time. All patients were re-examined to control the complete obliteration of the heirs.

Key words: portal hypertension, obesity, band ligation, sclerotherapy.

Study of the immediate results of the front resections performed in malignant lesions of the distal 1/3 part of the rectosigmoid and s-shape intestines

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Introduction: Laparoscopic anterior resection (LAR) in the malignant lesions of the distal 1/3 part of the rectosigmoid and s-shape intestines is widely spread throughout the world. A comparative study of the immediate results of open and laparoscopic anterior resection in such localized lesions is one of the main priorities of the current research.

Material and Methods: The clinical materials of Clinical medical center and "Elmed" medical center were used in the research. Patients were divided into two groups: I) LAR subjected patients (78 patients). These patients themselves divided into 2 subgroups. 1) 53 patients diagnosed with distal 1/3 cancer of the rectosigmoid and s-shape intestines and 2) 25 patients with a localized endoscopic polyposis diagnosis (maligned tumors), which could not be extracted by relevant localized endoscopic way. II) AAR group (66 patients). These patients also divided into two subgroups. 1) 45 patients diagnosed with distal 1/3 cancer of the rectosigmoid and s-shape intestines. 2) 21 patients with a diagnosis of properly localized (moderate and severe dysplasia polyps) malignant tumor. General clinical examination of the patients included MRI of the pelvis, abdominal cavity and breast CT scan, colonoscopy (biopsy), definition of CEA, CA19-9 olkomarkers and others was carried out.

Results: The amount of intra-operative loss of blood in the LAR group is less than the AAR group. The duration of operations is much higher in the LAR group than in the AAR group .Physical activity, enteral feeding time, and initial defecation are more frequent in the LAR group than in the AAR group.Pain syndrome (points), accordingly, the need for narcotic analgesics is significantly higher in the AAR group. The number of extracted lymph nodes and the volume of the extracted material were described in close numbers in both groups, and there were no statistical significant differences between the groups.

Nerve congestion in the abdominal and pleated ducts of the flat bowel some aspects of surgical classification

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Introduction: In the course of TME, both laparoscopic operations and the ability of the vegetative nerve elements to detect both conscious and unconscious (for the protection of oncological principles) are likely. Damage occurs both in sympathetic fibers and parasympathetic fibers, which ultimately leads to urogental disorders.

Material and Methods: Observations were performed based on the diagnosis and treatment of 145 patients diagnosed with flat gastric cancer and endoscopic polyps. Patients are divided into two groups: 1) laparoscopic group - 69 patients 2) open group 76 patients. Clinical examination of patients, general analysis of blood and urine, blood biochemical analysis, CT scan of breast and abdominal cavity, MRT of small bowel, R-epophilia of the chest, colonoscopy (biopsy), definition of oncomers in the blood (CEA, CA 19-9) p. inspections were carried out. Nerve injuries were examined as a result of surgical and postoperative clinical analyzes (7 days and 6 months postoperatively).

Discussion: According to literature data and personal observations, anatomical and clinical classification of nerve injuries during TMJ was performed. The damage and the severity of the lesions were attempted to interpret every damaged clinical symptom as NI-1, NI-2, NI-3, NI-4 and NI-5.

Result: We believe that the classification reflecting nerve damage in TME will pay great attention to the theoretical and practical point of view, will be one of the additional guiding forces during operations. Nerve (iatrogenic) and deliberate oncological principles of injury (resection possible) during TME performed in the flat intestine and abdominal dysfunction. In TME, 40% of TME neoplasms are NI-1, 30% in NI-2, 5% in NI-3, 10% in NI-4 and NI-15%. The proposed classification can be used practically in medicine, because anotomically functional interpretation of nerve injuries is somewhat. We think that classification innovations can be added to studies with many patients in the future.

Postbariatric surgical interventions; basic principles and technical notes

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Postbariatric surgery can be defined as the last phase of obese patient's weight loss journey. As a result of obesity become an epidemic and successful results in bariatric surgery, it has become a new subspecialty for plastic surgery.

Prior to application for postbariatric surgery, the weight should be stable for 3 months and this is requested to be changed to a maximum of 2–3 kg per month. It takes at least 12 months for the patients to reach the plateau level and the average duration is 18 months. There is no definite value before surgery, but the most appropriate candidates are those with BMI <30. In patients who cannot lose weight between 35–40 BMI, breast reduction or panniculectomy may increase their exercise capacity and support their weight loss.

Weight loss through bariatric surgery improves health and relieves active disease. This effect occurs between 2nd and 5th months. If the patient has Type 2 DM, HGA1c is applied at the time of the operation, and blood glucose monitoring is performed 6 hours after the operation. If OSA is present, the patient should be asked about current treatments and sleep studies, and if the patient is using CPAP at home, he / she is asked to bring the device for postoperative use. If patient has HT, he/she should be questioned for possible active cardiovascular diseases. VTE is an important complication; obesity, immobility, increased age, hereditary coagulopathies are risk factors.

Determination of expectations starts with motivation and priorities. The most disliked region in the patient's body is determined. Patients should accept scarring and a long recovery period. It is explained to the patient that his body images will be improved but will not be perfect. Although the result is good, patients forget their appearance before the operation. Comparison of preop and postop photographs helps patients to relieve their concerns and increase their motivation.

Combination operations are inevitable. Some methods can be combined in one session. In this decision; the medical condition of the patient, the structure of the surgical team, the facility being operated, the material burden for the patient are taken into consideration. Single procedures are preferred in high-risk patients. The advantage of the gradual procedure is that the deformity in the previous procedure can also be eliminated. Planning should be made at least 3 months between operations. Combining reverse tension vector operations should be avoided. For example, tummy tuck-arm lift or mastopexy and vertical thigh lift can be easily combined.

If the patient is chosen correctly for combined operations, there is no increase in total complication rate.

Abdominoplasty treats excess skin and fat as well as weak abdominal musculature. Liposuction in the adjacent flank and waist is safe and complementary. Many massive weight loss patients have a better result with belt lipectomy or extended abdominoplasty. Breast reduction is indicated for high BMI patients with low excercise capacity.Breast lift with or without implants are usually performed for this population. Although there are many breast left technique defined so far, we prefer central pedicled mastopexy technique. The advantages of this technique are long-term stability and low recurrence rates, ease to combine with implants. It is hard to perform without assistance and has a long learning curve. We usually prefer traditional arm lift and extended medial thigh lift. Direct excision should be avoided, staged excision should be preferred to protect limb perfusion and wound dehiscence. Care should be taken against nerve injuries.

Weight regain after Roux-en-Y gastric bypass and its surgical management

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Background: Weight regain after Roux-en-Y gastric bypass can be up to 20–35% in five years of follow-up. Main issue is the loss of restriction due to puch and anastomotic dilation in patients who had proper surgery. In some patients previously done inappropriate nonstandart techiques can be another reason. In these cases usually a candycane or a huge longer pouch or shorter Roux limb can be detected which necessitatets a revision which is tailored accordong to individual patient.

Materials and Methods: There are variety of techniques to revise a failed gastric bypass:

Surgical Options: Adding Restriction

Endoluminal techniques (Rose procedure/Overstitch /APC)

Lap gastric pouch/gastrojejunostomy correction

Lap Band placement

- Non-adjustable
- Adjustable

More reliable and safe methods the %EWL ranges between 7–21% in 24 months of follow-up. Complication rates vary between 11–30% in short term follow-up.

Adding Malabsorption: Conversion to a distal GBP: Patients without dilation of gastric pouch and anastomosis can be applied safely with leaving at least 200 cm of common channel. Whole bowel length should be calculated before any distalization. Moderate to high degrees of malnutrition, mineral-vitamin defficiency is seen in series with common channel length <200 cm.

Conversion to a DS/ Sadi's: This method is the most effective among others providing excellent and durable weight loss and resolution of co-morbidities in longterm. However, it is technically challenging, requires expertise and needs attentive lifelong follow-up due to high chance of protein malnutrition.

Conclusion: Revisonal surgery for failed RYGB should be done preferably laparoscopically in experienced highvolume centers with multidisciplinary teams. Our proposed algorithm will be helpful to choose the optimal technique for revision in the future and standardization of the procedures.

Metabolic effects of sleeve gastrectomy in patients with type 2 diabetes and prediabetes

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Preface: After smoking, obesity is the second cause of deaths that can be prevented and the most important health problem of the XXI century. The rising incidence of type 2 diabetes risk in obese people means the rising of prediabetes in parallel. Obesity is the most important risk factor of diabetes that can be changed. By weight loss can also be influenced positively by both pathogenesis and complications of diabetes. In recent years, a number of studies show that bariatric surgery is useful on the prevention, treatment of type 2 diabetes and by bariatric surgery is possible to get higher diabetes remission in the less experienced on diabetes young adults with type 2 diabetes who don't take insulin and don't have complications.

Goal: Comparison glikohemoglobin (HbA1c) parameters before and after surgery in patients with type 2 diabetes and prediabetes who had sleeve gastrectomy.

Materials and Methods: In the studies were found out anthropometric, clinico-metabolic parameters of 116 patients (90 female, 26 male) with class II and class III obesity (BMI ≥35.0 kg.m^2) who had laparoscopic sleeve gastrectomy in clinical studies were conducted in Modern Hospital Clinic since August 2014 to September 2017. In the total group there were obese people and type 2 diabetes (n=28), obesity and prediabetes (n=42), obese people that carbohydrate metabolism are normal (n=46).

Summary: Before surgery, sleeve gastrectomy was HbA1c 7.43±1.33% in the group of type 2 diabetes and in the group

of prediabetes was 5.70±0.65, but after surgery it was HbA1c 5.02±0.32% (p<0.001), in the group of prediabetes was 4.86±0.52 (p<0.001).

Discussion: Since sleeve gastrectomy has an effect on carbohydrate metabolism in prediabetes can be prevented type 2 diabetes and can be got diabetes remission in diabetes.

Special concerns of anesthesia and pharmacological pitfalls in bariatric surgery

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Morbid obesity (Obese 3) is defined as a BMI (body mass index) >40 by the World Health Organization (WHO). Because it is a world epidemic which is very difficult to treat, bariatric surgery has gained wide acceptance and is increasing in number. Consequently specialized teams and equipment need to be assigned for these operations.

Pathophysiology of obesity causes specific problems: Central obesity (Waist circumference >102 cm in a man, >88 cm in a woman or waist/height >0.55) is more likely to present with metabolic syndrome (hypertension, insülin resistance, hypercholesterolemia).

Obesity results in decreased functional residual capacity (FRC) which causes atelectasis and shunting while oxygen demand is increased. Many patients develop symptoms of OSA (obstructive sleep apnea) and may need CPAP (continuous positive airway pressure) devices. Hypoventilation and cardiac failure may further complicate this problem. These patients may have several arrythmias and cardiac failure.

Fat tissue produces many cytokines which are pro-inflammatory. Hepcydine causes mild anemia. Coagulation cascade is activated and fibrinolysis inhibited which may cause thrombosis. Low adiponectine levels may stimulate cell proliferation and carcinogenesis.

Intraabdominal pressure and gastric acid secretion increases, lower oesephagial sphincter pressure and motor function may change predisposing the patient to aspiration.

Preoperative evaluation: Obesity Surgery Mortality Risk Score (OS-MRS) or one of the related scoring systems(LABS,MAS etc.) should be used for overall evaluation.

The patient's airway should be evaluated, if possible beards must be cut. Neck circumference is a useful additional criterion. OSA should be evaluated with a relevant system like STOP-BANG. İf necessary CPAP devices should be made available. The patient should be premedicated (preemptive analgesia, aspiration prophylaxis, thromboembolism prophylaxis).

Patient monitorization: Blood pressure cuffs should be the right size and when necessary intraarterial lines can be used. Central lines are usually reserved for patients with serious co-morbidities. BIS (Bi-spectral index), muscle relaxation and urine output should be monitorized.

Positioning and airway: Patients are usually operated in the modified Lloyd Davis position (Reverse Trendelenburg , legs seperated, both arms spread out). Correct padding and fixations should be used, eyes closed.

The patient should be pre-oxygenated, put in the 'ramped' position and difficult airway kits prepared to secure the airway without complications.

Ventilation Strategies: Tidal volumes should be kept low. Recruitment maneuvres followed by adequate PEEP would ensure ventilation. EtCO2 may increase due to laparascopic surgery, increasing heart rate and may worsen arrythmias. Oxygenation and ventilation should be adjusted to the needs of the patient, duration of surgery and laparascopy, intraabdominal pressures and peroperative problems.

Anesthetic Drugs and Muscle Relaxants: Applying drugs based on actual body weight (or total body weight=TBW) usually results in an overdose. So other definitions have been considered.

Ideal Body Weight (IBW): What the patient should weigh with a normal ratio of lean to fat mass. Broca Formula:

IBW(kg)= height (cm)-X

X=105 in females and 100 in males

Lean Body Weight (LBW): It is the patient's weight excluding fat. In obese patients this exceeds IBW. Complex formulae exist, Janmahasation et. al.'s formula is widely used for obese people.

Adjusted Body Weight (ABW): Takes into account that obese individuals have increased lean body mass and volume of distribution.

ABW(kg)=IBW(kg)+0.4(TBW(kg)-IBW(kg))

Predictive Body weight (PBW) etc. other definitions also exist, but are not widely used.

All of these definitions are used for correct dosing of drugs. Anesthetic drugs may have high lipophilic properties, which complicates dosing regimens. Current evidence does not allow recommendation of specific drugs or doses.

Anesthetic drugs: In obese patients Vd (volume of distribution) is significantly increased for lipophilic drugs. Thus initial dosing need to be higher, TBW may be used for barbiturates, benzodiazepines etc. Remifentanil is an exception; as its Vd does not change, its initial dose should be calculated based on LBW. Using longer acting opioids could

be problematic because of postoperative respiratory complications. OSA should be monitored and treated and patients should be sent to an ICU if opioids are to be used. All opioids should be dosed based on LBW, if initial doses are based on TBW because of dilution due to increased plasma volume, dosing will be excessive and more side effects should be expected.

Weakly lipophilic medications, should be dosed according to LBW or ABW.

Propofol produces the desired effect when an initial dose is given based on LBW, but the effect is shortened, and whenever maintanance drugs are not commenced promply, risk of awareness manifests. BIS monitorization is recommended. If propofol maintanance is going to be used ABW is recommended.

Although their PONV (postoperative nausea and vomiting) effects are a concern, halogenated inhalational anesthetics are widely used for bariatric surgery. They are more rapidly metabolized in the obese population. Desflurane and sevoflurane have more rapid and consistent recovery. Changing doses as needed is easy so they are popular maintanance agents.

Muscle relaxants: Among muscle relaxants, suxamethonium used to be preferred for bariatric surgery because pseudocholinesterase levels are increased in obese patients. But it's usage is decreasing in favor of nondepolarizing agents. Rocuronium, vecuronium, atracurium, cis-atracurium can all be used. Reversal of blockade should be guided by a nerve stimulator. Both neostigmine and sugammadex should be used based on ABW. There is a recommended maximum dose for neostigmine (max 5gr).

Local anesthetics: Laparascopic bariatric surgery requires general anesthesia. Epidural for pain management following laparascopic surgery has been recently under discussion, and is not routinely recommended. These patients are 'difficult' epidurals and may require specialized equipment as well as experienced personnel. On the other hand controlling pain and minimizing opioid requirement is a must so epidurals can be employed where appropriate. Subarachnoid block with an opioid adjunct would preserve motor function and lower systemic opioid doses but nausea might still be a problem. Newer techniques (infiltration of incision lines with LA to TAP blocks) are gaining acceptance.

Local anesthetics are not dosed according to weight when performing central blocks. The newer blocks are done using LBW for dosing regimen of lidocaine, bupivacaine etc.

Other drugs: Dexmedetomidine is a useful adjunct. When used based on TBW increased serum concentrations were found, so new studies are needed.

TCI (target-controlled infusion) of drugs have not been studied and guidelines do not exist. Perioperative use of many medications from antibiotics to tromboprophylaxis is indicated. Each drug should be dosed carefully avoding both under- and over-doses.

Studies on obese adolescents and children are few and guidelines are not clearly established. But they ususally seem to tolere drugs well and metabolize some drugs faster than adults. It is important not to use TBWs.

Perioperative Fluid Management: Morbidly obese patients have less total fluid volume per kg. weight. Under general anesthesia with intraabdominal insufflation this could result in hypotensive periods. This hypotension and immobility can be coupled with long procedure times and dehydration, and cause rhabdomyolysis. If this happens, it is important to diagnose and treat this condition. To prevent it avoiding dehydration and hypotension is important.

Although rabdomyolysis requires liberal hydration it is not prudent to use it in all patients. Patients with heart failure and ventilation problems would not benefit from a liberal fluid regimen. It is best to use guiding systems like SVV (stroke volüme variation) when in doubt.

Postoperative analgesia: A multimodel approach is best. Combining NSAIDs with regional techniques would help to minimize opioid use and maintain early mobilization and organ (renal, hepatic, cardiac etc) function.

References

1) Lang LH, Parekh K, Tsui BYK, Maze M. Perioperative management of the obese surgical patient. Br Med Bull 2017 Dec;124(1):135-155.
2) Nightingale CE et al. Perioperative management of the obese surgical patient 1015: AAGBI and SOBA. Anaesthesia 2015 July;70(7):859-76.
3) Willis S,Bordelon GJ, Rana MV. Perioperative pharmacologic considerations in obesity. Anesthesiology Clinics 2017;35(2):247-57.
4) Leonard KL,Davies SW,Walbel BH. Perioperative management of obese patients. Surg Clin North Am. 2015 Apr;95(2):379-90.
5) Soleimanpour H et al.Anesthetic considerations in patients undergoing bariatric surgery: A review article. Anesth Pain Med.2017 Aug;7(4):e57568.
6) Domi R, Laho H. Anesthetic challanges ,n the obese patient.BJA 2012 Oct;26(5):785-65.
7) Lemmens HJ. Perioperative pharmacology in morbid obesity. Curr Opin Anaesthesiol 2010 Aug; 23(4):485-91.
8) Ingrande J,Lemmens HJ. Dose adjustments of anesthetics in the morbidly obese. BJA 2010 Dec; 105 Suppl 1: i16-23.

Treatment and prophylaxis of constipation after Bariatric operations

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After bariatric surgery, in most of the patients develop functional disorders of the organs and systems, including the gastrointestinal tract. Digestive discomfort, dyspepsia, constipation, general weakness, and so on. The symptoms are most disturbed for patients.

Aim: Study of the causes of constipation after bariatric operations, the application of its conservative treatment and prophylaxis measures.

Material and Methods: After the bariatric operations between 2016–2018 years, 15 patients (aged 25–51) who were suffering from constipation in AMU TPC were treated by us. Patients suffer from mechanical malfunctions (fresh blood on the stool), sleep disorders, mucous membranes associated with pain, weight, meteorism, constipation, lack of feeling of complete emptying after defecation, decreased appetite, poor smell, nasal fracture, complained of worsening mood, regular use of herbs and medicinal herbs. Routine clinical-laboratory and instrumental (colonoscopy, irrigoscopy, US, Radiographic Defecation, etc.).

Conclusions and Discussion: Anamnestic data revealed that the lack of adequate water, sturdy and fibrous foods, and sedentary lifestyle play an important role in the development of constipation. Along with the disease and pathological conditions, pharmacological symptomatic treatment may be suspended, including the suspension or limitation of iron and calcium preparations, including protein-containing medicines, gymnastic and physical movements, sneezing of the pelvis (rectocele), pancreatic illnesses (hemorrhoids, intestinal drainage, chronic paraproctitis, etc.) had a major role in eliminating constipation (6 patients).

Summary: Patients who have undergone bariatric operations are advised to:

- Increasing the acceptance of fodder foods (25 g for men and 35 g for men);
- With fewer portions, 5–6 times a day for food, drink 200–250 ml of Water on an empty stomach (1.5–2 times a day during the day, 1.5–2 times more in summer);
- Reception of whole-baked bread, rye bread, natural juices, compotes, dairy products;
- refusal of foods generating flatulency;
- Apricots, apples, plums, figs and so on. fruit juices, mashed pies, juices and compote without sugar;
- Increased physical activity;
- Rejection of iron, calcium and protein-containing preparations or their admission under the supervision of a physician.

Results of isolated and combined reverse abdominoplasty operations

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Introduction: Expansion of the application circle of the minimally invasive surgical technologies has increased the frequency and share of favorable results of aesthetic-reconstructive surgical procedures in overweight patients.

Aim: Studying the results of isolated and combined reverse abdominoplasty operations.

Material and Methods: In 2010–2019, isolated and combined reverse abdominoplasty operations were performed by us after bariatric operations (sleeve gastrectomy – 2, Bypass operation – 1) on 10 patients (8 women) aged 18–65 years (average age – 43.7±2.3), as well as on 3 patients in MediLux private clinic of Baku city. The body mass index (BMI) in overweight patients was 35.2–44.7 (average – 40.6±2.2), during the period of 6 months-2 years after bariatric operation, the body mass index (BMI) was at the range of 29.8–36.1 (average - 33.1±1.8). All patients complained about excessive sagging of anterior abdominal wall, but women complained of excessive sagging of mammary glands, excessive skin maceration and ulcer case in the appropriate skin folds, as well as physical discomfort (carrying excessive "load"). Due to the necessity of mammary glands plastics (elevating, aggravating, plumping) along with abdominoplasty, it was decided to perform reverse abdominoplasty and implemented. The presence of striae (stretch mark) was not considered contraindicated to the reverse plastic. The incision was conducted on submammar line and extended to front armpit line. Skin, subcutaneous fat layer was mobilized by Saldanha technique and flat muscle diastase and hernia (in 4 patients) was made plastic, then mammoplasty with superior parsial central-backed pediculus and abdominoplasty were performed with the condition of navel dislocation.

Results: Surgical and reanimatological complications requiring repetitive surgeries did not occur. All patients were satisfied with the conclusion of the procedures, 1 patient complained about excessive strain of mammary glands, but 1 patient complained of "prominent ear" at wound edge. The defects were eliminated by repeated surgical correction. There was no any death incident.

Conclusion: Reverse abdominoplasty operation allows the satisfying surgical reconstruction of mammary glands and saggy abdominal wall with the same incision and at the same time, therefore, the expansion of its application circle is expedient.

Key words: morbid obesity, saggy abdominal skin, bariatric operations, reverse abdominoplasty.

The results of body lift procedure after bariatric operations

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Introduction: Due to the development and expansion of application circle of minimally invasive laparoscopic and robotic surgical technologies, newly accelerated weight-loss bariatric surgical procedures are going to increase. Therefore, there was necessity about the implementation of operations for severe complications of bariatric surgery, as well as aesthetic-reconstructive correction, resection of excess, saggy skin and soft tissues resection of excess, saggy skin and soft tissues, displacement from the field of view, body lifting. Especially young and middle-aged people want to free from the aesthetic defects that create deep discomfort.

Aim: Studying the results of body lift procedure after bariatric operations

Material and Methods: In 2010–2019, simultaneous and two (multi) stage body lifting procedures were performed by us after different bariatric operations (sleeve gastrectomy – 7, Bypass operation – 2) on 12 patients (9 women) aged 22-54 years (average age – 32.1±2.3) in MediLux private clinic of Baku city. Before the first operation, the body mass index (BMI) was 37.5–51.1 (average – 44.6±1.9), during the period of 6 months-2 years after the operation BMI decreased to the range of 31.2–35.4 (average - 33.1±1.8). In all patients had occured the excessive sagging cases on the front part of skin and soft tissues of saggy abdominal skin, mammary glands, waist, humerus, thigh, neck. Excess skin, subcutaneous fat layer and sagging cases of soft tissue, deformities had been resected, then the procedures for skin stretching, abdominoplasty by Saldanha technique, Mammoplasty with tramp cloth, thinning of waist, etc. have been carried out.

Results: Surgical and reanimatological complications requiring repetitive surgeries did not occur. 10 patients were satisfied with the conclusion of the procedures, then planned phased operations were performed on 2 patients due to aesthetic changes, scar deformations, skin surges and extra soft tissue saggings. There was no any death incident.

Conclusion: After bariatric operations, the execution of body lifting procedure is expedient for the effective aesthetic appearance and positive functional results in the specialized clinics. It is very important for preservation of perforating veins and getting conservative and arterialized parts of soft tissue by using Saldanha technique.

Key words: morbid obesity, sleeve gastrectomy, bariatric operations, body lifting.

Efficiency of intra peritoneal treatment with laparoscopic cholecystectomy and ozonized solution in the destructive cholecystitis complicated with peritonitis

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Cholecystectomy operation of patients with chronic calculous cholecystitis by the method of laparoscopy has now widespread and it is considered a gold standard for the patients of this category. As a result of improving and medical equipment-technique in the recent years, this method is applied in acute cholecystitis and successful results are being obtained. Besides, during destructive cholecystitis complicated with peritonitis, possibility of execution of laparoscopic cholecystectomy and performing an ozonized sanitation of abdomen during operative and post operative period has not been studied yet and not reflected in the literature and periodic medical press.

Main purpose of job: Choosing a laparoscopic method in acute destructive cholecystitis and determining an efficiency of intra-operative and post-operative sanitation of abdomen with ozonized solution.

Material and Method: In order to implement the purpose proposed, we investigated over 145 patients who were admitted with a diagnosis of acute destructive gallstone cholecystitis to TCK and Medi-Lux clinic in 2010–2017th years.

- Acute. Phlegmonous cholecystitis-42 (49.7%)
- Acute phlegmonous gangrenous cholecystitis-45 (31.0%)
- Acute gangrenous perforative cholecystitis-28 (19.3%)
- Perivesicular infiltrate-24 patients
- Perivesicular abscess -19 patients
- Cholecystitis complicated with local peritonitis-12 patients
- Complicated with diffuse peritonitis-3 patients

The average age limit of the patient was 57. 124 (85.5%) out of these patients were women and 21 (14.5%) were men. There are a lot of difficulties in the performing the operations of the laparoscopic cholecystectomy complicated with peritonitis.

1. Excessive enlargement of a gallbladder;

2. Straining, very inflammatory and soft wall of a gallbladder;

3. Inflammation of a liver and duodenal ligament and inability of identification of its elements;

4. It creates difficulty in holding it by handle. In such cases, aspiration and execution of inner part of bladder, sanitation

and puncture of sac content with antiseptic solution help both retention a traction of a gallbladder. In these cases, if there is a puncture in gallbladder-running bile content to the inferior region of liver, we don't recommend to an open operation. You need to be careful about conducting an inter-gallbladder sanitation in acute destructive cholecystitis. It should be considered a falling possibility of small-sized conglomerates into sac duct or common bile duct during sanitation.

In case of infiltrative process in liver-duodenal ligament in destructive cholecystitis, in terms of the safest approach, we applied an endoscopic water dissection or subserous dissection at the Hartman level. It is possible to aspirate content accumulated in an operation area, at the same time to separate gallbladder from source in condition of hemostasis. In the destructive cholecystitis, a responsible stage of laparoscopic cholecystectomy operation is a verification of the Hepatobiliary triangle in the patients of this category. In 12 patients, difficulties for doing verification of the elements of this Hepatobiliary triangle causes opening of a wall of the gallbladder (anterior resection) and a sac duct was clipsed. But in 3 patients, because of a sac duct was obliterated fully and has a lack of certainty, we had to pass an open operation-laparotomy. In 5 patients, after closing a duct, a sac was separated from a source by performing hemostasis and whole sac was removed. In 5 patients, because a posterior wall of a gallbladder was fully necrotic and there was destructive process, we didn't try to remove that part completely and by cleaning that region from the tissues that had been necrotic by a drawing, an electro-diathermoexcision was performed and we sanitized a sac source with maximum enriched solution by antibiotic. The destructive gallbladder was removed placing into a container. Close to the end of the operation, the abdominal cavity was sanitized by an ozonized physiological solution.

The inferior region of liver was drained by 2 sided pipe. This allows us to wash out again that area by an ozonized solution in post-operative period. The left lateral canal was drained up to the border of diaphragm. Over a middle line 3 cm lower from the xiphoid process, the abdominal cavity was made a sanitation within 2–3 days via an ozonized solution by the method of microirrigator. Abdominal cavity was made a sanitation by a physiological solution in a dose of 8–10 mg/l–1000 ml. In order to determine the efficiency of the method applied, in the pre-operative and post-operative period, OMP.MDA.Dk.CRP in the toxic indicators of blood and changes occurred in leucoformula.

Conclusion and Discussion: The result of the operations conducted shows that it is possible to perform laparoscopic cholecystectomy during the destructive cholecystitis complicated with peritonitis. In case of destructive inflammatory process on a sac wall, a puncturing of sac is performed; in case of difficulty of an identification of the elements of the Hepatobiliary triangle, making resection of an anterior wall with huk coter, closing of a duct carefully and making excision by the method of acute laparoscopic drawing affected on the operation process positively. An issue of draining of abdominal cavity during destructive cholecystitis remains a principle problem. During destructive cholecystitis complicated with diffuse peritonitis, putting drainage pipe with 2 openings to inferior liver region, draining of right and left lateral canals and lesser pelvic cavity affect on the result of the treatment. During operation and for two days after operation, abdominal cavity was made a sanitation via a drainage pipe placed into the inferior liver region by an intraperitoneal ozonized solution. We paid special attention to a treatment complex and adding sanitation of abdominal cavity by an ozonized solution. For 3–4 days after operation, the drainage pipes in the abdominal cavity were removed. Lethality was not found in the patients examined.

Conclusion

1. In case of verification of the elements of the Hepatobiliary triangle with an acute inflammation of hepatoduodenal ligament, it is necessary to begin with a soft dissection at the level of Hartman for finding a sac duct. If this is not effective, it is necessary to perform a resection of anterior wall.

2. During gangrenous-perforated cholecystitis complicated with peritonitis, draining the abdominal cavity, subliver region affects positively on a result of treatment conducted after operation.

3. Besides complex treatment of diffuse bile peritonitis, via the drainages placed into the abdominal cavity, the abdominal cavity was made a sanitation within 8–10 minutes in 2 days being 2 times in a day by an ozonized physiological solution in 6–8 gr/l doses intraperitoneally. The above-mentioned complex treatment affected on the result of a complex treatment positively.

4. The efficiency of the treatment conducted was evaluated according to OMP, MDA, DK, CRP and leucoformula characterizing initial toxic indicators in blood.

Multidisciplinary approach to patients with morbid obesity and diabetes mellitus type 2

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Today, the epidemic of obesity and type 2 diabetes is becoming an increasingly significant problem throughout the world. In the absence of an effective conservative treatment, the surgical method of bariatric surgery has become widespread. After bariatric operations, an effective weight loss

occurs, about 50–60% of overweight. In addition to directly affecting body weight, there is a significant regression of concomitant metabolic disorders - arterial hypertension, dyslipidemia, and type 2 diabetes. Given the complexity of the pathogenesis of obesity and the importance of the influence of various etiological factors on the patient, bariatric treatment cannot include only the surgical stage. Obtaining high-quality and long-term results in the treatment of obesity is possible with the work of a multidisciplinary team. This group should include - an endocrinologist, a nutritionist, a psychologist, a therapist, an anesthesiologist, and, if necessary, highly specialized specialists (somnolog, gastroenterologist, cardiologist, etc.).

At Almazov national medical research center currently implemented a multidisciplinary approach in the management of patients. The primary admission of a candidate for bariatric surgery is conducted jointly by a surgeon, an endocrinologist, and a psychologist. The patient is further referred for preoperative examination. The presence of three specialists makes it possible at the first stage to coordinate the further routing of the patient, taking into account the accompanying pathology. Definition of indications, as well as the choice of intervention is determined by experts together, based on the data of instrumental and laboratory examination, psychological and social status and motivational component. The interaction between the surgeon and the anesthesiologist makes the bariatric intervention safe in even the most difficult patients and allows the patient to be activated as soon as possible (2 hours after the operation the patient walks independently) and discharge for outpatient treatment for 3–4 days.

An important task in achieving the result is postoperative observation and patient support for a long time. Most patients do not come to visit themselves, so the active position of the multidisciplinary team is important. According to the literature, 60% of patients with weight return after surgery ignored visits to the doctor after the surgery was performed. The first year there is an active call of the patient to visits after 1, 3, 6 and 12 months, where the diet is adjusted, psychological problems are solved, physical activity modes are determined. Then the patient is invited to visit once a year. An important aspect in changing the patient's condition, after bariatric treatment, is the transition from the restoration of physical activity and health, to the need for aesthetic changes in the body. Therefore, in a team approach, working with a plastic surgeon is very important.

This approach allows you to most effectively implement a lifestyle change in the patient's mode and fix it for a long period.

Male gender is an independent risk factor for patients undergoing laparoscopic sleeve gastrectomy or Roux-en-Ygastric bypass; an MBSAQIP® database analysis

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Background: Male patients undergoing bariatric surgery have (historically) been considered higher risk than females. The aim of this study was to examine the disparity between genders undergoing laparoscopic sleeve gastrectomy (SG) and Laparoscopic Roux-en-Y gastric bypass (RYGB) procedures and assess gender as an independent risk factor.

Methods: The MBSAQIP® Data Registry Participant User Files for (2015–2017) was reviewed for patients having primary SG and RYGB. Patients were divided into groups based on gender and procedure. Variables for major complications were grouped together, including but not limited to PE, stroke, and MI. Univariate and propensity matching analyses were performed.

Results: Of 429,664 cases, 20.58% were male. Univariate analysis demonstrated males were older (46.48±11.96 versus43.71±11.89 years, p<0.0001), had higher BMI (46.58±8.46 versus 45.05±7.75 kg/m2, p<0.0001), and had higher incidence of comorbidities. Males had higher rates of major complications (1.72 versus 1.05%; p<0.0001) and 30-day mortality (0.18versus 0.07%, p<0.0001). Significance was maintained after subgroup analysis of SG and RYGB. Propensity matched analysis demonstrated male gender was an independent risk factor for RYGB and SG, major complications (2.21 versus 1.7%, p<0.0001 (RYGB), 1.12 versus 0.89%, p<0.0001 (SG)), and mortality (0.23 versus 0.12%, p<0.0001 (RYGB), 0.10versus 0.05%; p<0.0001 (SG)).

Conclusion: Males continue to represent a disproportionately small percentage of bariatric surgery patients despite having no difference in obesity rates compared to females. Male gender is an independent risk factor for major post-operative complications and 30-day mortality, even after controlling for comorbidities.

Key words: Bariatric surgery; Sleeve gastrectomy; Roux-en-Y gastric bypass; Gender; MBSAQIP.

Does race matter? Racial disparities in access to bariatric surgery and outcomes: An analysis of the MBSAQIP® data registry

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Background: Racial minorities have higher obesity rates. This study examined the MBSASQIP database for racial disparities in adults having sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Methods: Participant User Files from MBSAQIP® were reviewed for patients undergoing SG or RYGB (2015–2017). Patients were grouped by race (Hispanic versus all other races; African American (AA) versus all other races) and primary procedure performed, and variables for major and minor post-operative complications combined. Univariate analyses wereperformed on unmatched and propensity matched populations.

Results: After applying exclusions, there were 75,409 African American (AA) patients and 354,205 non-AA as well as 53,353 Hispanic patients and 335,299 non-Hispanic patients. Despite minorities having higher rates of obesity in America, they are undergoing a disproportionately low rate of bariatric procedures. A univariate analysis demonstrated that Hispanics had the lowest pre-operative comorbidity profile when compared to all other races. Conversely, AA had the most co-morbidities and were more likely to experience major complications when undergoing SG, as well as an increased risk of PE, readmission within 30 days, and to require further interventions within 30 days. This held true when using matched cohort data. Hispanic patients had decreased rates of major and minor complications. No group showed any differences in 30-day mortality or reoperations.

Conclusion: Hispanic patients undergoing bariatric surgery have lower incidence of pre-operative comorbidities and decreased incidence of post-operative complications. Conversely, AA have more preoperative co-morbidities and higher rates of major post-operative complications.

Impact of age on morbidity and mortality following bariatric surgery

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Background: Bariatric surgery is the most effective modality to treat obesity and obesity-related comorbidities. The aim of thisstudy is to utilize the MBASQIP® Data Registry to analyze thelimitations age has on outcomes of sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Methods: The MBSAQIP® Data Registry for patients undergoing SG or RYGB was reviewed (2015–2016). Patients were divided into 4 age groups [18–44 (young adults); 45–54; 55–64; >65yrs (elderly)]. Minimal exclusions for revisional and/or emergency surgery were selected, and combination variables created to classify complications as major or minor. A comorbidity index was constructed to include diabetes, gastroesophageal reflux disease (GERD), Obstructive Sleep Apnea (OSA) and prior cardiac surgery. Univariate and multivariate logistic regression analyses were performed to compare age groupings to the young adult cohort (18-45yrs).

Results: Of 301,605 cases, 279,419 cases (71.2% SG) remained after applying exclusion criteria (79.2% female, mean BMI 45.5±8.1kg/m^2, 8.9% insulin-dependent diabetics). Mean age was 44.7±12.0yrs (51.3% 18–44 yrs; 26.9% 45–54 yrs; 16.3% 55–64 yrs; 5.5% >65 yrs). A univariate analysis demonstrated preoperative differences of lower BMI with increasing age,-concomitant with increasing frequency of RYGB and a higher comorbidity index ($p<0.0001$ versus 18–45 yrs). At age >45 yrs major complications and 30-day mortality increased independent of procedure type ($p<0.0001$). A multivariate analysis controlling for comorbidity indices (BMI, smoking, sex, race)demonstrated increased age (>45 yrs) increased risk for major complications and mortality.

Conclusion: Bariatric surgery (either SG or RYGB) remains a low mortality risk procedure for all age groups. However, all older age groups than 45 years of age have higher major complications and mortality compared to young adults (despite older individuals having lower preoperative BMI) indicatesdelaying surgery is detrimental.

Key words: Bariatric surgery; Weight loss; Age; Sleeve gastrectomy; Roux-en-Y gastric bypass; MBSAQIP®.

Risk factors of hyperlactatemia in out-patients with diabetes mellitus type 2

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Objective: to study the risk factors for hyperlactatemia in out-patients with diabetes mellitus type 2.

Materials and Methods: We examined 180 patients of T2DM (95 women and 84 men). The age of the patients corresponded on the average (53.9±10.47 y.o) with a minimum of 19 y.o patients and a maximum of 75 y.o patients. The disease duration of diabetes mellitus 6.63±0.441 (from 0.02 to 30 years). The average height - 165 cm ± 9.12 cm (146 cm–186 cm), the average weight - 86.7±15.7 (49 kg–145 kg), the average body mass index - 32.60±43 kg/m^2 (49 kg–145 kg/m^2). Determination of lactate levels was performed with the EPOC READER device (Ottawa, Canada) by using standard test strips. All the patients were also examined to determine the level of the following indicators, such as gender, age, blood pressure, heart rate, glycosylated hemoglobin, fasting glucose, insulin, ALT, AST, lipid profile, creatinine, urea and gases in blood. These indicators and lactate level were studied to determine the dependence of the frequency of hyperlactatemia occurrence. Statistical analyses were performed by ^{2} method.

Results and Discussion: in patients with diabetes type 2 average level lactatemia was about 1.44±0.043 mmol/l at a rate of (0.56 mmol/l–1.39 mmol/L). We revealed the statistically significant frequency increase of hyperlactatemia occurrence in patients with fasting glucose levels >200 mg/DL (p=0.000002083), triglycerides ≥250 mg/DL (p=0.03055), with level of diastolic blood pressure (p=0.01767).

Conclusion: The main risk factors for the hyperlactatemia occurrence in patients with diabetes mellitus type 2 are: glucose >200 mg/DL, triglycerides ≥250 mg/DL, the level of diastolic blood pressure >80 mmHg.

Piylənməli xəstələrdə tiroid disfunksiyasi

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Giriş və Məqsəd: Müasir təbabətin ən böyük problemlərindən biri piylənmədir. Piylənmə özü ilə bərabər müxtəlif xəstəliklər yaradır və ya mövcud xəstəlikləri ağırlaşdırır. Tiroid xəstəlikləri də son zamanlar xüsusilə qadınlar arasında geniş yayılmışdır. Bizim məqsədimizm tiroid disfunksiyasının piylənmə ilə əlaqəsini öyrənməkdir.

Material və Metod: 2015-2019 tarixlərində Modern Hospitala və ATU-nun Tədris Cərrahiyyə Klinikasına Piylənmə diaqnozu ilə 18–60 yaşarası 349 xəstə müraciət etmişdir. Piylənmə xəstələrdən 45-ndə II dərəcə, 118-ndə III dərəcə və 186 -ndə IV dərəcə olmuşdur. Xəstələrin demoqrafik göstəriciləri, bədən kütlə indeksləri, sərbəst T3 (sT3), sərbəst T4 (sT4), tiroidstimuləedici hormon (TSH), anti-tiroqlobulin (anti-Tq), antitiroidperoksidaza antiteli (anti-TPO) və tiroidin ultrasəs müayinə nəticələri dəyərləndirildi. Dəyərləndirmə məqsədilə SPSS statistic analiz üsulundan istifadə edilmişdir.

Nəticə: Xəstələrdən 9-da tiroid disfunksiyası aşkarlanmış, onlardan 8-də hipotiroid, 1-də hipertiroid vəziyyət qeydə alınmışdır. Bu xəstələr 22.4–59.3 yaşaralığındakı qadınlar olmuşdur. Hipotiroid xəstələrdə orta BKİ 46.5 kq/m^2, hipertiroid 1 xəstənin BKİ 62.1 kq/m^2 olmuşdur. Xəstələrin TSH səviyyələri ilə BKİ göstəriciləri arasında statistic əhəmiyyətli korrelyasiya qeydə alınmamışdır. Bu xəstələr əməliyyatdan əvvəl müvafiq disfunksiyanın aradan qaldırılması üçün müalicə almışlar.

Yekun: Tiroid disfunksiyası piylənməli xəstələrdə ən çox rast gəlinən yanaşı xəstəliklərdən biridir. Xüsusilə, hipotiroidizm piylənməli xəstələrdə tez-tez müşahidə edilir. Bizim tədqiqatımızda 88.8% xəstədə hipotiroidizm aşkarlanması bu fikri dəstəkləyir. Bizim populyasiyamızda, xüsusilə qadınlarda piylənmə ilə birlikdə tiroid xəstəliklərinin aşkarlanması diqqət çəkir. Tiroid disfunksiyası olan xəstələrdə insulinə rezistentlik, metabolik sindrom və piylənmə çox tez – tez müşahidə edilir və bu hal arıqlamağa mane olur. Buna görə, piylənməli xəstələr tiroid disfunksiyası baxımından ətraflı müayinə və gərəkərsə müalicə olunmalıdır.

Açar Sözlər: Tiroid disfunksiyası, piylənmə, hipotiroidizm.

Sleeve gastrectomy for morbid obesity

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Introduction: Sleeve gastrectomy is an effective bariatric operation for morbid obesity with a body mass index (BMI) above 35–45 kg/m^2; in the presence of severe concomitant diseases, when the more complicated operations is contraindicated.

Materials and Methods: Sleeve gastrectomy for morbid obesity has been performed in 49 patients (16 men and 33 women) from 2013 to 2018. Mean age was 46.5 years (from 36 to 57 years), mean body weight was 135 kg (120–150 kg), the average body mass index (BMI) is 45 (30.5–59.5) kg/m^2. Diabetes mellitus, arterial hypertension, and hyperlipidemia were found in all patients. Reflux esophagitis was observed in 13 patients. Chronic calculous cholecystitis in 13 patients. Sleeve gastrectomy was performed according to a single

method. In the presence of recurrent calculous cholecystitis, simultaneous cholecystectomy was performed.

Results: Patients rose 6 hours after surgery, they were allowed fractional drinking in a volume of 500 ml for 2–3 days, puree food was taken 4 days after surgery, solid food was allowed 3 weeks after surgery. The average postoperative bed-day was 6 days. Reflux esophagitis were developed in 3 patients, 2 patients had B12 deficiency anemia. Protein and electrolyte disorders were not observed. The decrease in overweight during the year was 50%. In subsequent periods of observation, the rate of loss of overweight decreased. In the long-term period, 1 patient died 6 months after surgery from an acute violation of cerebral circulation.

Conclusion: Sleeve gastrectomy is a promising, safe, physiological, effective, low-impact surgery for morbid obesity. Sleeve gastrectomy can be considered as an independent operation or as the first stage of more complex bariatric operations (gastro-shunting (GSH), bilio-pancreatic shunting (BPSH). Sleeve gastrectomy is an operation of choice for severe somatic diseases when complex bariatric operations are contraindicated.

Bariatric and metabolic surgery in correction of diabetes of the 2nd type associated with obesity

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Introduction: The Republic of Uzbekistan is the leader among the countries of Central Asia in the number of overweight people (44.5% of the country's citizens, of whom more than 20% are obese). Also, the number of patients with type 2 diabetes is growing. In 2018, 2186924 patients with type 2 diabetes were registered in the Republic.

Materials and Methods: From January 2017 to March 2018, we operated on 42 patients with obesity, 22 of them had type 2 diabetes. The results of 22 patients with diabetes mellitus were analyzed. All patients were with obesity 2-3 degrees. The BMI is average and 34.2. All the analyzed patients underwent a mini – gastric bypass surgery. In 12 cases, mini-gastric bypass surgery was performed by laparotomy and in 39 cases by laparoscopic method.

Results: Observation periods averaged 1–1.5 years. On admission, blood sugar on an empty stomach averaged – 12.2 mmol/l, after a meal – 17.0 mmol\l, the level of c-peptide is 6.1, and the glycated hemoglobin is 9.8. The duration of diabetes mellitus averaged 10.5 years. Of the 22 patients, 6 before admission to the hospital received insulin in combination with hypoglycemic drugs, the rest are only pills. After performing a mini-gastric bypass in the observation period blood sugar decreased to 5.9 on an empty stomach, after a meal – 7.3 mmol\L. the Level of C-peptide decreased to 4.1, glycated hemoglobin average was 6.0. Of the 11 patients who on insulin therapy, after surgery, only one patient continues to take minimal doses of insulin, the rest of the patients achieved complete remission of diabetes.

Complications in the postoperative period were observed in 3 patients. In one case, suppuration of the postoperative wound, 1 - a case of hernia of the anterior abdominal wall and one patient with an abscess of the subdiaphragmatic space. All complications were noted in patients with laparotomy.

Conclusion:

1. Mini-gastric-bypass is a highly effective method for the correction of diabetes mellitus of the 2nd type;

2. Laparoscopic mini-gastric bypass surgery contributes to a drastic reduction of postoperative complications and fast rehabilitation of patients.

Comparative evaluation for instrumental and hormonal metabolic markers of the effectiveness of medicamentous treatment in patients with different levels of prolactinoma

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Introduction: Prolactinoma is the most common disease among pituitary adenomas. Firstly, prolactin develops without symptoms and these adenomas grow gradually.

Purpose: Comparison of hormonal, functional, instrumental and anthropometric indicators before and after medicamentous treatment in prolactinoma patients with micro and macroadenoma.

Materials and Methods: Clinical research of 123 patients (79 women, 44 men) who has prolactinoma were studied at HB "Guven" Clinic between 2015 and 2019. Microadenoma is 51.2%, macroadenoma is 48.8%. Comparison of indicators was performed during 3 months of treatment by being 0.5–3 mg for weekly dose of cabergoline therapy.

Conclusion: Size of adenoma in patients with microprolactinoma was 5.5±0.21 mm (3–9), then was 4.0±0.15 mm

(2–7) by decreasing after 3 months of treatment (p<0.001). Size of adenoma in patients with macroprolactinoma was 24.6±1.43 (10–57), then was 19.1±1.22 mm (7–42) after 3 months (p<0.001). Reduction of adenomas after treatment for 3 months in patients with microprolactinoma was 25.6±1.4% (0.0–50.0), it was 22.2±1.9% (0.0–65.7) in patients with macroprolactinoma (p<0.1424). The amount of prolactin in patients with microprolactinoma was 174.8±16.72 ng/ml (50–755), it was 8.9±1.63 ng/ml (3–65) after 3 months of treatment (p<0.003). The amount of prolactin in patients with macroprolactinoma was 720.7±178.35 ng/ml (66.5–8806), it was 54.3±12.44 ng/ml (4–470) after 3 months of treatment (p<0.003). BMI was 29.0±0.70 kg/m^2 (37–110) in patients with microprolactinoma, it was 29.1±0.52 kg/m^2 (21.4–35.2) after 3 months of treatment. BMI was 28.5±0.53 kg/m^2 (19.9–40.9) in patients with macroprolactinoma, it was 28.4±0.52 kg/m^2 (19.9–35.5) after 3 months (p<0.4585).

Discussion: It is important to research the effects of cabergoline therapy on other indicators in patients with prolactinoma.

Rapid glucose changes as a feature of glycaemic instability in insulin-treated diabetes

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Introduction: Rapid changes of blood glucose, for instance in the postprandial state, are associated with endothelial dysfunction. We postulated that patients with insulin-treated diabetes exhibit faster changes in blood glucose as a consequence of periods of hyper- and hypo-insulinaemia than patients not using insulin.

Materials and Methods: We tested our hypothesis by studying the rate of glucose changes in patients with type 1 diabetes (T1D, n=25, on multiple daily injections (MDI)) and insulin-treated type 2 diabetes (T2D-ins, n=31, 21 on MDI, 10 on combination insulin-oral agents), and compared the results with those obtained in T2D patients on oral agents only (T2D-oral, n=12), and non-diabetic individuals (ND, n=4). Data of Continuous Glucose Monitoring (CGM) were obtained with CGMS (MiniMed, USA) or Dexcom G4 (Dexcom, USA). Glycaemic variation and average and maximum speed of glucose changes were calculated based on 24-hour readings at 5-min intervals.

Results: Mean 24-hr glucose levels were similar between the three diabetes groups (9.4–9.8 mmol/l, p=ns). Average (±SE) 5-min glucose changes were significantly higher in T1D (0.21±0.01) vs T2D-ins (0.19±0.01), T2D-oral (0.17±0.01) and ND (0.11±0.01, all p<0.01). Maximum meal-related 5-min glucose increases were similar between all diabetes groups (1.3–1.4 mmol/l), and considerably higher than in ND (0.75±0.02 mmol/l, p<0.001). Similarly, maximum 5-min glucose decreases were 0.45–0.6 mmol/l in the diabetes goups vs 0.28 mmol/l in ND (p<0.01).

Conclusion: In addition to average hyperglycaemia and increased glucose variability, T1D and T2D is associated with more rapid changes in glucose levels due to imbalance between prevalent insulin levels and glucose, which may add to cardiovascular risk. Insulin treatment is associated with higher average 5-min glucose changes.

Vitamin B12 in healthy and prediabetic people in Azerbaijan

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The aim of this work was to study vitamin B12 (B12) levels in healthy and prediabetic people in Azerbaijan.

Materials and Methods: 59 people with normal carbohydrate metabolism (NCM group: 33 female and 26 male) and 24 prediabetic people were included in this study (PD group: 13 female and 11 male). «AxSYM System» (Abbott, USA) were used for B12 measurement. Levels of B12 >221 pmol/l were assessed as normal; levels of between 148 and 221 pmol/l were considered as borderline results and levels ≤148 pmol/l were assessed as B12 deficiency state.

Results: 20 persons of PD group received Metformin. The average dose of Metformin in PD group was 1279.2±626.22 mg (0–1700 mg). The average level of B12 in a PD group was 364.7±149.68 pmol/l and in the NCM group was 401.6±138.06 pmol/l. 4.2% of PD group and 5.1% of NCM group persons had B12 deficiency state. 12.5% of PD group and 8.5% of NCM group had borderline results. Therefore, 16.7% of PD group 13.6% of NCM group persons had abnormal results of B12. 83.3% of PD group and 86.4% of NCM group persons had normal levels of B12.

Conclusion: Although abnormal B12 levels were more common in the pre-diabetes group, the differences between the two groups were not statistically significant, possibly due to the relatively small sample size.

Questionnaires for diabetes risk assessment: how do they work in Azerbaijan?

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The aim of this research was to study is it possible to use FINDRISK, AUSDRISK and American Diabetes Association (ADA) questionnaires for detection of people with high diabetes type 2 (DM2) risk in Azerbaijan.

Materials and Methods: 52 patients (11 men and 41 women) with an assumed risk of DM development were examined. Examined by use of fasting glucose, oral glucose tolerance test and A1c persons were divided into 3 groups: group 1 (DM2; n=16), group 2 (prediabetes; n=30), group 3 (normoglycemia; n=6). There were no statistically significant differences between groups in sex, height, weight, BMI, arterial pressure.

Results: FINDRISK scores for groups 1, 2, 3 were 19.9±2.74, 13.3±4.34 and 13.2±3.19 points respectively; ADA scores were 6.2±1.28, 5.1±1.87 and 4.3±2.25 points respectively and AUSDRISK scores were 22.4±3.63, 13.6±5.74 and 11.7±2.41 points respectively. Differences in scores between groups 1 and 3 were statistically significant for the FINDRISK and AUSDRISK ($p<0.001$ in both cases) and for the ADA ($p<0.05$). Differences between groups 2 and 3 were not statistically significant for any of questionnaires (in all cases $p<0.05$).

Conclusion: In Azerbaijan AUSDRISK and FINDRISK had a greatest predictive value for the DM detection. None of 3 questionnaires may be use for the differentiation of prediabetes and normoglycemia.