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COMPARATIVE CHARACTERISTICS OF VARIOUS GENERATIONS OF ADHESIVE SYSTEM

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To identify the optimal adhesive system, adhesive systems of 4th, 5th and 7th generations were used. For comparative analysis we used scanning electron microscope. The study measured the thickness of the hybrid layer.

BIOCHEMICAL ABNORMALITIES IN DIABETIC MELLITUS PATIENTS WITH ANGIOPATHY ON THE STAGE OF SURGICAL TREATMENT

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Introduction. Diabetes mellitus is characterized by an elevated blood glucose level resulting from a combination of factors affecting both the peripheral tissue insulin sensitivity and beta cell function of the pancreas [1]. Many studies have shown an association between serum CRP levels and the risk of incident type 2 DM. Since CRP is indirectly involved in the development of prediabetes and diabetes induced vascular complications, the elevated CRP can be an indirect risk factor for the progression of DM. As well as, it evaluates the inflammatory processes and local complications due to peripheral vascular disorder [2]. Some studies have shown an association of increased level of total protein in DM compared to non-Diabetic controls [3]. Several key biochemical parameters, such as C-reactive protein (CRP), blood glucose level, total protein, amylase, triglyceride are examined in the context of elevated blood glucose in diabetes.

Purpose of the study. Analysis of the biochemical abnormalities in patients diagnosed Diabetes mellitus with angiopathy at the stages of surgical treatment to determination of its practical importance.

The materials and method. The analysis of the results of 38 patients who were hospitalized over the past 9 months (2023.01-2023.09) in the purulent department of the University clinic of Grodno State Medical University in Grodno, Belarus with a diagnosis of Diabetic Mellitus. For statistical data processing, the Pearson's χ^2 test was used. The $p < 0.05$ level was accepted as statistically significant. Among the 38 patients there were 28 (73.6%) with diabetic angiopathy and peripheral circulatory disorders. Among them were 18 (64.2%) men and 10 (35.7%) women aged from 56

to 86 years. The majority of patients fall under the category of 61-65 age group. The second highest patients are under the age group of 71-75. Different surgical treatment methodologies have been applied among these patients. 15.7% of each has undergone amputation of lower extremity at lower third of thigh, angioplasty of lower extremity arteries and drainage of phlegmon. Amputation of toes have been done on 7.8%. Necrectomy was performed in 10.5%.

Results. Biochemical parameters in diabetes mellitus patients with severe complications are often disturbed. These parameters include (but are not limited to) blood glucose level, total protein in the blood, CRP, amylase, triglycerides, urea and creatinine. The abnormalities associated with each of these parameters have been shown to be related to clinical complications seen in these patients, such as foot ulcers, necrosis of wounds, phlegmon of the foot and gangrene of the foot. This study has elaborated on a few of the biochemical parameters mentioned above, before and after the treatment in the purulent department.

Evaluation of one of the main biochemical parameters in diabetic mellitus patients is blood glucose level. The mean value of blood glucose level at admission is 10.5 ± 0.8 mmol/L (normal value range 3.5-6.2 mmol/L). The mean value at discharge is 9.2 ± 0.4 mmol/L. Even though the blood glucose level at discharge is not in the normal range, we have been able to manage and decrease the level compared to admission. One of the main reason is that over the time body becomes resistant to treatment.

C-reactive protein, a sensitive marker for the evaluation of systemic inflammation has been shown to be increased in patients with type 2 diabetes mellitus. Only 17 out of 28 (60.7%) patients have a C-reactive protein analysis. The mean value of CRP at admission is 75.5 ± 9.3 mg/L (normal value range 0-6 mg/L). After treatment, the mean CRP value at discharge is 22.0 ± 5.8 mg/L. Even though it is not in the normal range at discharge, when compared to admission, a dramatic fall in the level can be seen, which is a positive sign of clinical treatment.

Total protein is evaluated in only 25 out of 28 (89.2%) at admission, the mean value is 67.5 ± 1.5 g/l (normal value range 65-85g/l), which is in the normal range. Only 16 patients have the analysis results of total protein at discharge, which is insufficient to make a comparison. The mean value is 64.0 ± 1.9 g/l. Both amylase and triglyceride parameters are in the normal range and the mean values are 43.2 ± 5.4 units/L (normal value range 25-100 units/L) and 1.4 ± 0.1 mmol/L (≤ 1.52 mmol/l) respectively.

Conclusion. When evaluating the blood glucose level at admission and discharge, elevated levels are seen among all the patients at admission but at discharge overall decrement of 12.3% seen, which is a positive dynamic of clinical treatment. Diabetic mellitus predisposes to many infections and complications. CRP evaluated the inflammatory processes and local complications induced by peripheral circulation disorder. Our study has shown significant fall of CRP at discharge when compared to admission, this drastical fall is 70.6%, showing suppression of inflammatory process and the efficiency of surgical treatment. Between the time frame of admission and discharge our study has normal range of total protein,

amylase and triglyceride therefore we can't use these parameters to prognosis the efficiency of surgical treatment, even though some studies have shown a prognostic value.

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БИОХИМИЧЕСКИЕ НАРУШЕНИЯ У ПАЦИЕНТОВ С САХАРНЫМ ДИАБЕТОМ С АНГИОПАТИЯМИ НА ЭТАПЕ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ

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Проведен анализ биохимических отклонений у больных с диагнозом сахарный диабет с ангиопатией на этапах хирургического лечения для определения его практической значимости.

PRADER-WILLI SYNDROME: A CASE REPORT

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Introduction. Prader-Willi syndrome (ICD 10 Q87.1) is a genetic multisystem disease resulting from lack of expression of paternal imprinting genes of chromosome 15 (q11-q13). This syndrome was first described by Swiss pediatricians A. Prader and H. Willi in 1956. Prader-Willi syndrome occurs with a frequency about 1:15000 to 1:25000 newborns. Around 350000 - 400000 people worldwide suffer from the syndrome [1].

The probability of having a sick child is less than 1% if he has a gene deletion or unipaternal disomy, but if the child has a mutation in the region that is characterized by the phenomenon of imprinting, then this probability increases to 50%, in the case of chromosomal translocations, the risk of developing the disease in the next child is 25% [1]. Prenatal features include decreased fetal activity, fetal growth restriction, breech presentation, and preterm labor. Prenatal testing can be