

## Резюмета на отпечатаните в пълен текст научни трудове.

**д-р Тони Иванов Стоянов, д.м.**

във връзка с участие в конкурс за „доцент“ в област на висше образование 7. Здравеопазване и спорт, професионално направление 7.1. „Медицина“ в катедра „Хирургически болести“, МУ-Плевен, обн. в ДВ бр. 10/27.01.2026 г.

Списъкът е изготвен на основание чл. 67 от Правилник за развитие на академичния състав в МУ – Плевен, PL35 – V09 – 26.09.2022 г., стр. 23 от 47, Приложение 1 и Приложение 2 на същия Правилник.

- 1. Stoyanov T.**, P. C. Sanchez, A. P. Calero, A.M. Moreno, E. G. Blazquez, S. U. Rebollo, Casado Santamaria P., P. Tonchev, K. Ivanov, D. Stoikov. *Biliopancreatic diversion with duodenal switch. Long Term weight loss.* Journal of Biomedical and Clinical Research, 2015, 8(1): 61-67; ISSN: 1313-6917

**Abstract:** Biliopancreatic diversion with duodenal switch (BPD-DS) as an operative technique in the management of morbid obesity was created as an alternative to BPD (Scopinaro's operation), because of BPD-DS's fewer malabsorption side effects, better restrictive effect to the stomach remnant, fewer peptic ulcers and dumping syndromes, as well as lower morbidity and mortality rate. Between January 2003 and June 2012 in the University Hospital Center of Albacete, 141 patients with morbid obesity underwent BPD-DS. The patients were divided into groups according to four criteria: length of the common channel, age, gender, and initial Body Mass Index. On the 6th postoperative year in our study, the percent of excessive body weight loss was 67.6% and the percentage of excessive BMI loss was 73%. According to the evaluation announced by Hess D.S. & Hess D.W., our results could be assessed as successful after 6 months, good in the first year, excellent in the second, and good from the 3rd to 9th postoperative years. Our results confirm the hypothesis that the biliopancreatic diversion with duodenal switch is a bariatric intervention, which leads to significant weight loss, well preserved in time.

**Keywords:** duodenal switch, obesity, metabolic syndrome, bariatric surgery

- 2. Stoyanov T.**, Cascales Sanchez P., Garcia Blazquez E., Usero Rebollo S., Martinez Moreno A., Stoikov D., Tonchev P. *Резултати от хирургичното лечение при пациенти с болестно затлъстяване, оперирани с хирургичната техника Билиопанкреатична Деривация с Дуоденално Превключване (Biliopancreatic Derivation with Duodenal Switch).* Сборник - XIV Национален Конгрес по Хирургия с международно участие. София 23-26 октомври 2014, стр. 660-669; ISSN: 1314-2097

**Abstart**

**MATERIAL AND METHODS:** A retro-prospective study of 141 patients with morbid obesity treated by bariatric surgical technique Biliopancreatic Derivation with Duodenal Switch (BPD DS) during the period January 2003 - June 2012 at the University Hospital Center of Albacete. (Centro Hospitalario Universitario de Albacete - CHUA) according to the established protocol. The patients were divided into three groups according to the length of the common loop (channel). The first one, 34 patients with length of the common channel 50 cm, the second one 51 patients with length of the common channel 75 cm and the third one, 56 patients with common loop of 100 cm.

**RESULTS:** Surgery underwent 141 patients with morbid obesity. The average age of the patients was 41.8 years (21-60), with average weight of 139.13 kg. (100-193 kg), the average height was 163.22 cm (141-192 cm) and an average BMI of 51.91 (41.62-75.06 kg/m<sup>2</sup>). 129 patients were operated conventionally and 12 patients with laparoscopic approach.

**DISCUSSION:** Biliopancreatic Derivation with Duodenal Switch is an effective and safe surgical bariatric technique with very low rate of morbidity and mortality leading to significant weight loss and considerable improvement in quality of life among operated patients. BPD DS cure or lead to the considerable improvement of major comorbidities such as, Diabetes Mellitus type2 (DM2) , Syndrome of the obstructive sleep apnea (SOSA), Dyslipidemia (DLP), more than 70% of cases. Less affected, arthropathy of big joints. The postoperative follow-up should be done by endocrinologist in order to avoid postoperative metabolic, ionic, and vitamin insufficiency.

- 3. Stoyanov T.**, Cascales Sanchez P., Garcia Blazquez E., Usero Rebollo S., Martinez Moreno A., Tonev K., Tonchev P., B. Ninov. *Предоперативна и Следоперативна чернодробна функция при пациенти с болестно затлъстяване, понесли Билиопанкреатична Деривация с Дуоденално Превключване (Biliopancreatic Derivation with Duodenal Switch)*. XV Национален Конгрес по Хирургия с международно участие. 29.09.-01.10.2016. Албена, стр. 215-221; ISSN: 1314-2097

## РЕЗЮМЕ

**Материал и методи:** Ретро и проспективно проучване на пациенти с морбидно затлъстяване, третирани с хирургичната техника Билиопанкреатична деривация с Дуоденално превключване – Duodenal Switch (BPD DS) в Университетския Болничен Център на Албасете (Centro Hospitalario Universitario de Albacete – CHUA).

**Резултати:** Чернодробна стеатоза е наблюдавана при 90,3% от пациентите в различна степен на тежест, а при 1,6% е открит хроничен хепатит. Не се намира статистически значима връзка между тежестта на чернодробната стеатоза и големината на индекса за телесна маса. Следоперативно елевацията на чернодробните ензими GOT и GPT е било най-високо през първите 3 месеца, което се обяснява с малабсорбцията. С течение на времето нивата на трансaminaзите се нормализират и на 6-тата година едва 1,8% от пациентите имат леко завишени нива на GOT и GPT до 100 UI.

**Изводи:** Болестното затлъстяване е патологично състояние, което води до чернодробна стеатоза при над 90% от популацията болни. BPD DS е смесена рестриктивна

малабсорбтивна техника, която не води до увреждане на чернодробната функция при липса на малнутритивни състояния.

- 4. Stoyanov T.**, P. Cascales-Sanchez, A. Prat Calero, A. Martinez-Moreno, E. Garcia-Blazquez, S. Usero- Rebollo, P. Casado-Santamaria, D. Stoikov, K. Ivanov, P. Tonchev. *Long term results of weight loss in patients with morbid obesity treated by Biliopancreatic diversion with duodenal switch*. Ibero-American Bariatric and Metabolic, 2016, Noviembre, pp. 1219-1227; ISSN: 2250-737X

**Abstract:** Introduction: Biliopancreatic derivation with duodenal switch (BPD-DS) as an operative technique in the management of morbid obesity was created as an alternative to BPD (Scopinaro's operation), because of BPD-DS's fewer malabsorbtive side effects, better restrictive effect to the stomach remnant, fewer peptic ulcers and dumping syndromes, as well as a lower morbidity and mortality rate. The goal of this study is to analyze the long-term result of weight loss in patients with morbid obesity underwent BPD. Material and Methods: Between January 2003 and June 2012 in the University Hospital Center of Albacete 141 patients with morbid obesity underwent BPD-DS. The patients were separated in groups by four factors: length of the common channel, age, gender and initial Body Mass Index. Results: On the 6th postoperative year in our study the %Excessive Body Weight Loss (%EWL) was 67.6% and the %Excessive BMI Loss (%EBMIL) was 73%.

Conclusion: 1. The Biliopancreatic derivation with duodenal switch is a bariatric intervention, which leads to a significant weight loss, well preserved in time.

2. In our experience only patients with initially higher BMI lost slower and less weight. As a whole, BPD-DS turned out to be an excellent choice in the complex treatment of the obese patient.

- 5. Corral-Fernandez E., T. Stoyanov,** P. Sarduy-Fernandez, P. Casado-Santamaria, P. Tonchev, E. Garcia-Grimaldo. *Портална и интестинална пневматоза съчетана с паралитичен илеус при пациент с тежка форма на остър панкреатит. Случай от практиката*. XV Национален Конгрес по Хирургия с международно участие, 2016, pp. 232-237; ISSN: 1314-2097

## РЕЗЮМЕ

Порталната пневматоза или така нареченият Hepatic Portal Venous Gas (HPVG), е зловещ радиологичен признак, който обикновено се асоциира с тежка коремна патология, която в повечето случаи изисква спешна хирургична интервенция. Понастоящем HPVG се докладва все по-често в литературара и обикновено съпътства тежки и летални състояния на организма.

HPVG може да бъде рентгенова находка представена при възпалителни заболявания на червата, остър панкреатит, паралитичен илеус, а също така и при по-тежки състояния като

остра чревна исхемия. Наличието на този признак определя и с прогнозата за преживяемостта на пациентите, като тя достига до 69% при по-лека патология, и до 25% при острата чревна исхемия.

Представяме случай от практиката на пациент с портална и интестинална пневматоза и паралитичен илеус вследствие на остър тежък панкреатит, с благоприятен изход разрешен с медикаментозно лечение.

Ключови думи: Портална пневматоза, остър панкреатит, паралитичен илеус, чревна исхемия, КАТ

- 6. Stoyanov T**, Cascales-Sanchez P., Martinez-Moreno A., Garcia-Blazquez E, Sarduy-Fernandez P., Casado-Santamaria P., Garcia-Grimaldo E, Corral-Fernandez E., Melero-Abellan A., Ivanov K., Bogdanov Sl., Tonchev P. *Лапароскопска фундопликация по НИСЕИ при лечението на хиаталните хернии и гастроезофагеалният рефлукс. Грешки, опасности и усложнения. УСЛОЖНЕНИЯ* на конвенционалната, лапароскопската и роботизираната хирургия. Експертиза при хирургични случаи, достигащи до съдебната практика: доклади от национална конференция по хирургия с международно участие, 31 май - 2 юни 2017 г., Плевен., стр. 227-231; ISBN: 978-954-756-209-3

### **РЕЗЮМЕ**

Хиаталната херния е често срещано разстройство. Тя се характеризира с протрузия на която и да е коремна структура, различна от хранопровода в гръдната кухина през hiatus esophageus. От ноември 2009 до януари 2017 в отделението по обща и дигестивна хирургия на многопрофилната болница на Villarobledo при 46 пациенти е извършена лапароскопска фундопликация по Nissen. От тях 36 пациента са били с хиатална херния, 7 болни с гастроезофагеален рефлукс и 3 пациенти с хранопровод на Barrett. Средното оперативно време е било  $90 \pm 31$  минути. Средното време за проследяване на пациентите е било 3 години. Наблюдавани са следните усложнения: Дистална перфорация на хранопровода – 1 пациент. Следоперативна хеморагия от далака, изискваща спешна лапаротомия – 1 болен. Дисфагия в ранния и късния следоперативен период – неизискваща хирургична корекция, третирана медикаментозно

Лапароскопската фундопликация по Nissen все повече се налага като златен стандарт в лечението на хиаталните хернии и гастроезофагеалния рефлукс. Въпреки добрите следоперативни резултати в контрола на гастроезофагеалния рефлукс и малкия процент рецидиви, поради специфичните умения, изисквани от хирурга, следоперативно трябва да бъдат наблюдавани животозастрашаващи усложнения. Поради което считаме, че извън етапа на кривата на обучение, процедурата трябва да бъде под ръководството на опитен хирург в този вид патология.

- 7. Stovanov T**, Cascales-Sanchez P. , Martinez-Moreno A., Garcia-Blazquez E, Sarduy-Fernandez P., Casado-Santamaria P., Garcia-Grimaldo E, Corral-Fernandez E., Melero-Abellan A., Ivanov K., Bogdanov Sl., Tonchev P. *Чревна непроходимост при пациенти с болестно затлъстяване след билиопанкреатична деривация с дуоденално превключване. УСЛОЖНЕНИЯ* на конвенционалната, лапароскопската и роботизираната хирургия. Експертиза при хирургични случаи, достигащи до съдебната практика: доклади от национална конференция по хирургия с международно участие, 31 май - 2 юни 2017 г., Плевен., стр. 255-260; ISBN: 978-954-756-209-3

**РЕЗЮМЕ.** Билиопанкреатичната деривация с дуоденално превключване (БПД-ДП) е комплексна бариатрична хирургична техника, която води до значителна загуба на телесно тегло, но могат да бъдат наблюдавани различни хирургични и малнутритивни усложнения следоперативно. При 141 пациента с болестно затлъстяване, третирани с хирургичната бариатрична техника БПД-ДП в Университетски Болничен Център на Албасете от януари 2003 до юни 2012 г., следоперативно чревна непроходимост е наблюдавана при 8 пациента, като при 7 от тях се е наложило хирургично лечение.

Причините за чревната непроходимост са били: Тънкочревен брид – 2 болни, волвулус на тънко черво – 3 болни, вътрешна херния – 1 болен, заклепена следоперативна херния – 1 болен.

Средното време за проследяване на пациентите е било 6 години. Средната загуба на телесно тегло на шестата година е била 55 kg, а средната загуба на Body Mass Index (BMI) е била 20 kg/m<sup>2</sup>. Чревната непроходимост при BPD-DS протича атипично, поради факта, че билиопанкреатичната бримка завършва на сляпо в дуоденума. Алиментарната бримка остава отворена и липсва типичното за чревна непроходимост повръщане, което затруднява ранната диагноза. Поради този факт всички пациенти, претърпели BPD-DS с тежка коремна коликообразна болка, персистираща повече от няколко часа, трябва да бъдат подложени спешно на КАТ – това е единственият начин за коректна диагноза.

- 8. Т. Стоянов**, P. Cascales-Sanchez, A. Prat-Calero, A. Martinez-Moreno, E. Garcia-Blazquez, S. Usero-Rebollo, П. Тончев, К. Иванов, Д. Стойков. *Резолюция на големите придружаващи заболявания при пациенти с морбидно затлъстяване оперирани с хирургичната техника Билиопанкреатична деривация с дуоденално превключване.* Ендоурология и миниинвазивна хирургия том 3, бр. 2 Ноември 2015, 23-31; ISSN: 1314-846X

**РЕЗЮМЕ.** Цел: Процентът на населението с болестно затлъстяване показва тенденция за нарастване в световен мащаб през последните две десетилетия. Хирургичното лечение понастоящем се превръща в най-сигурния и надежден метод за лечение на затлъстяването, показвайки отлични резултати в загубата на телесно тегло, добре поддържана във времето,

и резолюцията на големите съпътстващи заболявания. Целта на това проучване е да се оцени резолюцията на големите съпътстващи заболявания: Захарен диабет, Артериална хипертония, Синдром на обструктивна сънна апнея (СОСА), Дислипидемия и Артропатия на големите стави на долните крайници, при пациенти с болестно затлъстяване третирани с хирургичната техника Билиопанкреатична девиация с Дуоденално Превключване.

Материали и методи: Ретро-проспективно проучване върху 141 пациенти с болестно затлъстяване, оперирани с хирургичната бариатрична техника Билиопанкреатична девиация с Дуоденално Превключване в периода между януари 2003 – юни 2012 в Университетски Болничен Център Албасете.

Резултати: Докладват се резолюция на захарния диабет при 81.2% от пациентите на втората година следоперативно и 71.9% при болните с артериална хипертония. 95% от пациентите със СОСА показват подобрене през първата година след операцията, без да имат нужда от поддържаща кислородна терапия в домашни условия, и тази тенденция остава стабилна до шестата следоперативна година. Резолюцията на хиперлипидемията и хипертриглицеридемията е наблюдавана при 100% и 93.6% респективно. Отчитат се лоши резултати следоперативно в еволюцията на артропатията на големите стави на долните крайници. На шестата следоперативна година се отчита резолюция или подобрене на симптомите само при 26% от пациентите.

**9. T. Stoyanov**, P. Cascales-Sanchez, A. Martinez-Moreno, E. Garcia-Blazquez, S. Usero-Rebollo, K. Ivanov, P. Tonchev. *Long Term Results and Protein Caloric Malnutrition in Morbid Obesity Patients Underwent Biliopancreatic Diversion with Duodenal Switch*. *EC Gastroenterology and Digestive System*, 2018, 5(9): 706-718; ISSN: 2276-1209

## **Abstract**

Keywords: Protein Caloric Malnutrition (PCM); Obesity; Biliopancreatic Diversion; Duodenal Switch

The aim of this study is to evaluate the body weight loss, malnutritional condition, and resolution of type 2 diabetes mellitus (T2DM), arterial hypertension (AH), obstructive sleep apnea syndrome (OSAS), dyslipidemia, and arthropathy among patients with morbid obesity who underwent Biliopancreatic Diversion with Duodenal Switch with different common channel lengths.. This retrospective study follows 141 patients who underwent BPD-DS between January 2003 and June 2012 in the University Hospital Center of Albacete.. We report an excessive weight loss (%EWL) of 67.6% in the 6th postoperative year, remaining stable until the ninth year. Resolution of T2DM occurred in 81.2% of patients and AH in 71.9%. A total of 95% of patients with OSAS improved after the first postoperative year, with stability maintained through year six. Resolution of hypercholesterolemia and hypertriglyceridemia was observed in 100% and 93.6% of patients, respectively.. Arthropathy of the major joints of the lower extremities did not show significant improvement after bariatric surgery.

## Група В.

**10.** Ninov, B., Popovska, S.A., **Stoianov, T.** *A report of an intrathoracic case of hibernoma.* Khirurgiia, 1994, 47(3): 41-44; ISSN: 0450-2167;

**РЕЗЮМЕ.** Авторите съобщават случай на успешно оперирана пациентка с интраторакална локализация на хиберном. Богатата библиографска справка показва, че се касае за изключително рядко заболяване — този вид тумор с подобна локализация е описан едва 7 пъти в световната литература. Чрез ретроспективно анализиране на наблюдаваните симптоми се разкрива необичайната клинична картина. Точно са отразени трудностите и грешките в предоперативната интерпретация относно локализацията на обемния процес. Представени са чрез подходящи рентгенови, от скенер и електронна микроскопия снимки резултатите от диагностиката, извършеното оперативно лечение и точното хистологично верифициране. Ключови думи: Хиберном, хистологични и клинични особености, интраторакално разположение, диагноза, лечение.

**11. Stoyanov T.,** E. Corral-Fernandez, A. Melero-Abellan, P. Sarduy-Fernandez, P. Casado-Santamaria, E. Garcia-Grimaldo, J. Valer Corellano, K. Ivanov, N. Kolev, P. Tonchev. *Appendiceal recurrent colic due to Enterobius vermicularis infection in a 14-year-old female patient. Case report.* Journal of Biomedical and Clinical Research, 2016, 9(2): 159-162; ISSN: 1313-6917;

**Summary.** Acute appendicitis caused by *Enterobius vermicularis* (pinworm) is uncommon and occurs mainly in children. There is ongoing debate about whether the parasite truly causes appendiceal inflammation or only colicky pain. The report describes a 14-year-old girl who was hospitalized three times within one month for right lower abdominal pain and rebound tenderness, despite normal CT scans and laboratory tests. During her final admission, she underwent a laparoscopic appendectomy. Multiple pinworms were discovered inside the appendix, trapped behind a stercolith at the appendiceal base, although the appendix itself was not inflamed and appeared normal on histology. She received two postoperative doses of mebendazole and recovered without complications. Six-month follow-up showed complete resolution of symptoms.

The authors emphasize that—even though pinworm-related appendicitis is rare—it should be considered in young female patients with recurrent right lower abdominal pain and normal imaging and lab results. Key words: *Enterobius vermicularis*, acute appendicitis, laparoscopic appendectomy.

**12.** Kolev N., J. Atanasov, V. Dunev, B. Stoykov, R. Kotsev, A. Vanov, F. Al-Shargabi, P. Tonchev, S. Iliev, **T. Stoyanov**. *Open retropubic and robot-assisted radical Prostatectomy in prostate carcinoma: advantages of methods.* Journal of Biomedical and Clinical Research, 2016, 9(2): 145-148; ISSN: 1313-6917;

**Summary.** Prostate cancer is one of the most common cancers in men, and choosing the optimal surgical technique for radical prostatectomy remains challenging due to limited large-scale comparative studies. Over a three-year period (2011–2014), 244 patients with localized prostate cancer were operated on in the Urology Clinic of the University Hospital in Pleven.

Among them, 35 patients (14%) underwent robot-assisted radical prostatectomy (RARP), 199 patients (81%) had open retropubic radical prostatectomy (ORP), and 12 patients (5%) had laparoscopic RP. The study compared preoperative and postoperative outcomes between the RARP and ORP groups, with functional results evaluated over a 12-month follow-up. RARP showed several advantages: Longer operative time but less blood loss. Shorter catheterization period. No significant postoperative complications (0% vs. 3% in ORP). Better functional outcomes at 12 months: Continence: 91% (RARP) vs. 87% (ORP). Erectile function: 46% (RARP) vs. 40% (ORP). The findings suggest that RARP may offer improved recovery and functional results compared to the open technique.

**13.** Valero-Liñán A. S., **T. Stoyanov**, A. Sanchez- Gallego, E. Garcia-Grimaldo, J. A. Gonzalez-Masiá, J.I.Miota de Llama, B. Conde-Inarejos, O. Luengo-Ballester, B. Aguado-Rodríguez, K. Ivanov, P. Tonchev. *Double Cystic Duct as rare anatomic variant.* Journal of Biomedical and Clinical Research, 2019, 12(1): 69-71; ISSN: 1313-6917;

**Summary.** The variations of the cystic duct are so common that only 30% of all humans present the classical anatomical arrangement between the common bile duct (CBD), the cystic duct, and adjacent arteries. Thus, it could be considered that anomalies of the biliary tree are a rule rather than an exception. Duplication of the cystic duct, however, is a very uncommon anatomical finding. In the Department of General and Digestive Surgery of the University Hospital Complex Albacete, a 73-year-old patient was admitted with symptoms of cholangitis. He underwent emergency surgery that found exacerbated chronic cholecystitis and dilation of the CBD. Cholecystectomy was performed with identification of a double cystic duct that drained separately in the CBD and exploration of the last revealed cholangitis without choledocholithiasis. The postoperative period progressed favourably, proceeding to discharge from the hospital with Kehr drainage closed. In conclusion, we consider that the routine use of intraoperative cholangiography when there is suspicion of anatomical variations of the biliary tree is mandatory to rule out lesions or alterations thereof.

**Key words:** double cystic duct, common bile duct, cholangitis, cholangiography, cholecystectomy

- 14.** Valero-Liñán A. S., J. I. Miota de Llama, J. A. Gonzalez-Masiá, **T. Stoyanov**, B. Conde-Inarejos, O. Luengo-Ballester, C. Camacho-Dorado, A. Sanchez-Gallego, B. Aguado-Rodríguez, K. Ivanov, P. Tonchev. *A case report of duodenal gangliocytic paraganglioma – Is duodeno-pancreatectomy necessary?* Journal of Biomedical and Clinical Research, 2019, 12(1): 72-75; ISSN: 1313-6917

**Summary.** Gangliocytic paraganglioma (GP) is an uncommon finding in the periampullary region of the duodenum. In the Department of General and Digestive Surgery of the Albacete University Hospital Complex, a 45-years-old patient was diagnosed with a 17x13mm hypervascular nodular lesion in the descending part of the duodenum during an examination for hepatic hemangiomas. Ampullectomy was performed, followed by a favourable postoperative period. Histological analysis proved GP. There were no involvement of lymph nodes and a malignancy potential, so the clinical and radiological follow-up opted. In conclusion, because such tumours have unpredictable behavior, we recommend local resection of the tumour, except in cases in which local or ganglionic progression is suspected or confirmed, and thus cephalic pancreaticoduodenectomy (CPD) and lymphadenectomy are suggested.

**Key words:** gangliocytic paraganglioma, duodenum, periampullary region, ampullectomy, lymph nodes

- 15. Stoyanov T.**, P. Cascales-Sanchez, A. Prat-Calero, A. Martinez-Moreno, E. Garcia-Blazquez, S. Usero-Rebollo, P. Tonchev, K. Ivanov, D. Stoikov. *Хирургични и малнутритивни усложнения при пациенти с болестно затлъстяване лекувани с хирургичната бариатрична техника Билиопанкреатична деривация с дуоденално превключване според дължината на общата бримка.* Хирургия, 2015, vol. 81, стр. 164-175; ISSN: 0450-2167;

**РЕЗЮМЕ.** Цел: Целта на това проучване е да се сравнят хирургичните усложнения и малнутритивните състояния между три групи пациенти с болестно затлъстяване с различна дължина на общата бримка (50, 75, 100 cm), оперирани с хирургичната бариатрична техника Билиопанкреатична деривация с дуоденално превключване (БПД-ДП).

Материали и методи: Ретро-проспективно проучване върху 141 пациента с болестно затлъстяване, третирани с техниката БПД-ДП в Университетски Болничен Център на Албасете от януари 2003 до юни 2012 г. Пациентите са разделени на три групи според дължината на общата бримка: 34 пациенти с 50 cm, 51 пациенти с 75 cm, 56 пациенти със 100 cm. Следоперативно са проследени за хирургични усложнения, витаминни и нутритивни недостатъчности. Статистическият анализ е проведен с помощта на Pearson chi-squared и Fisher exact test за категориални променливи, както и ANOVA и Student test за

сравнение на непрекъснати променливи. Статистическа значимост е приета при  $p < 0.05$ . Целта е да се сравнят малнутритивните състояния между различните групи.

Резултати: Различни хирургични усложнения са били наблюдавани, като интраабдоминални тъканни абсцеси са били поразително най-честите усложнения, наблюдавани при трима болни (2.1%). Абсцес е отбелязан при 2 пациента (1.4%). Двама болни (1.4%) развиват хемоперитонеум в ранния следоперативен период, изискващ релапаротомия. Чревна непроходимост е била наблюдавана при 8 пациента (5.7%). При трима болни следоперативно е наблюдавана тежка форма на гастроезофагеален рефлукс, наложил хирургична реконструкция. Малнутритивни състояния са били наблюдавани при 7 пациента (4.9%) — четирима от групата със 75 см обща бримка и трима от групата със 100 см обща бримка. При 6 болни (4.26%) се е наложило хирургично лечение. При пациентите с 50 см обща бримка не са наблюдавани малнутритивни състояния. Това съответства на литературните данни, според които при пациенти с билиопанкреатична деривация с дуоденално превключване и 50 см обща бримка, въпреки значителната загуба на телесно тегло, не се наблюдават малнутритивни усложнения следоперативно.

Ключови думи: билиопанкреатична деривация с дуоденално превключване, хирургични усложнения, чревна непроходимост, малнутритивни състояния, гастроезофагеална рефлуксна болест, обща бримка.

**16.** Bhangu A., Nepogodiev D., Matthews J.H., Morley G.L., Naumann D.N. .... ( **T. Ivanov Stoyanov** )+1,705 authors. *Evaluation of appendicitis risk prediction models in adults with suspected appendicitis*. British Journal of Surgery, 2020, 107(1):73-86; ISSN: 0007-1323;

### **Summary.**

Background: Appendicitis is the most common general surgical emergency worldwide, but its diagnosis remains challenging. The aim of this study was to determine whether existing risk prediction models can reliably identify patients presenting to hospital in the UK with acute right iliac fossa (RIF) pain who are at low risk of appendicitis.

Methods: A systematic search was completed to identify all existing appendicitis risk prediction models. Models were validated using UK data from an international prospective cohort study that captured consecutive patients aged 16–45 years presenting to hospital with acute RIF in March to June 2017. The main outcome was best achievable model specificity (proportion of patients who did not have appendicitis correctly classified as low risk) whilst maintaining a failure rate below 5 per cent (proportion of patients identified as low risk who actually had appendicitis).

Results: Some 5345 patients across 154 UK hospitals were identified, of which two-thirds (3613 of 5345, 67.6 per cent) were women. Women were more than twice as likely to undergo surgery with removal of a histologically normal appendix (272 of 964, 28.2 per cent) than men (120 of

993, 12.1 per cent) (relative risk 2.33, 95 per cent c.i. 1.92 to 2.84;  $P < 0.001$ ). Of 15 validated risk prediction models, the Adult Appendicitis Score performed best (cut-off score 8 or less, specificity 63.1 per cent, failure rate 3.7 per cent). The Appendicitis Inflammatory Response Score performed best for men (cut-off score 2 or less, specificity 24.7 per cent, failure rate 2.4 per cent).

Conclusion: Women in the UK had a disproportionate risk of admission without surgical intervention and had high rates of normal appendicectomy. Risk prediction models to support shared decision-making by identifying adults in the UK at low risk of appendicitis were identified.

Co-authors of this study are listed in Appendix S1 (supporting information). Presented to the 13th Scientific and Annual Meeting of the European Society of Coloproctology, Nice, France, September 2018, and the 2018 International Surgical Conference of the Association of Surgeons in Training, Edinburgh, UK, April 2018; published in abstract form as *Colorectal Dis* 2018; 20(Suppl 4): 76. Paper accepted 29 October 2019. Published online in Wiley Online Library ([www.bjs.co.uk](http://www.bjs.co.uk)). DOI: 10.1002/bjs.1144

**17. T. Stoyanov**, P. Cascales-Sánchez, A. Martínez-Moreno. *Complications after Laparoscopic Sleeve Gastrectomy in a series of 186 patients*. *Journal of Biomedical and Clinical Research*, 2023, 16(1): 33-38; ISSN: 1313-6917

### Summary.

A retrospective study analyzed the complications in 186 patients who underwent laparoscopic sleeve gastrectomy (LSG). One hundred eighty-four patients were operated on at the University Hospital Centre of Albacete between May 2006 and September 2022. Two patients with early postoperative complications received surgical treatment in other centers. The overall postoperative complication rate (including GERD) was 13.9%. Ten patients (5.38%) had complications in the early postoperative period. In 4 cases (2.15%), there was stapler-line leakage. Abdominal bleeding associated with hemoperitoneum occurred in four patients (2.15%) immediately after the surgery due to bleeding from the suture line. In the long-term follow-up, two patients (1.08%) had gastric tube strictures requiring endoscopic pneumatic balloon dilation (EPBD). Fourteen patients (7.53%) presented with de novo Gastroesophageal Reflux, of whom 7 (3.76%) required revision surgery to Laparoscopic Roux-en-Y Gastric Bypass (LRYGB). Laparoscopic sleeve gastrectomy, in our experience, is a secure bariatric procedure with a low rate of morbidity and mortality, both post-surgical and long-term.

**Keywords:** laparoscopic sleeve gastrectomy, complications, leakage, bleeding, gastric stenosis.

**18.** Charco-Roca, L.M., Tortajada-Soler, J.J., **Stoyanov, T.I.** *Multidisciplinary management of massive bleeding from a ruptured splenic artery aneurysm during pregnancy*. *Emergencias*, 2023, 35(6): 477-478; ISSN: 1137-6821;

**Introduccion:** Rupture of a splenic artery aneurysm (SAA) during pregnancy is a rare but catastrophic complication, with a maternal mortality of 75% and fetal mortality of 95%.

**Case Details:** A case is presented of a 29-year-old woman, 27 weeks pregnant, who presented to the emergency department with epigastric pain radiating to the back. Hypotension, tachycardia, signs of hypoperfusion, and extreme fetal bradycardia were noted, leading to an emergency cesarean section. Upon opening the abdominal cavity, massive hemoperitoneum was found. The newborn died despite 20 minutes of advanced resuscitation.

**Management and Evolution:** After the cesarean, with no active genital bleeding found, the incision was extended to a midline laparotomy, revealing a contained retroperitoneal hematoma.

The patient suffered a cardiorespiratory arrest (CRA) in the ICU. Under advanced CPR maneuvers, clamping of the abdominal aorta was performed (total CRA time 32 minutes), successfully reversing the situation. An urgent angio-CT identified active bleeding from a vascular malformation of the splenic artery. A third laparotomy was performed to ligate the splenic artery and vein, followed by urgent arteriography with successful embolization of the bleeding dysplastic splenic branch. The patient progressed favorably, was discharged from the ICU after 9 days, and from the hospital after 18 days, with no sequelae.

**Conclusions:** Survival in these cases depends on early diagnosis and management. The success here is attributed to medical-surgical teamwork, optimal coordination of the massive transfusion protocol, rapid diagnosis with angio-CT, and intervention by interventional radiology. The need to treat such patients in tertiary care centers with a specialized ICU and available interventional radiology is emphasized.

**19.** C. Moratalla, A. Abellán, **T. Stoyanov.** *Enterobius vermicularis: The great pretender. Misdiagnosis of acute appendicitis leads to increased morbidity.* Biomedical and Clinical Research, 2026, 19(1): 1-9; ISSN: 1313-6917;

**Summary.** The role of *Enterobius vermicularis* in the pathogenesis of acute appendicitis remains controversial, as it may be associated with appendiceal colic in the absence of actual histological inflammation. A retrospective study was conducted in two hospitals in Spain between June 2016 and January 2021, including six patients with histologically confirmed *E. vermicularis* infection. 1 two males and four females with a median age of 20 years. All patients presented with right iliac fossa pain and underwent laparoscopic appendectomy. In all cases, the appendix appeared hyperemic without macroscopic signs of acute inflammation, and histological examination confirmed the absence of acute appendicitis. All patients received postoperative mebendazole. No postoperative complications occurred.

*Enterobius vermicularis* may mimic acute appendicitis by causing appendiceal colic, but it is rarely associated with true inflammatory appendicitis. Appendectomy should therefore be performed with caution when the appendix appears non-inflamed, given the possibility of *E. vermicularis* infection and the associated risk of intra-abdominal contamination.

**Key words:** Appendiceal oxyuriasis, appendicitis, *Enterobius vermicularis*

Група Г.

**20. T. Stoyanov.** *Laparoscopic Hernia Repair: TAPP versus TEP a single center experience.* Journal of Biomedical and Clinical Research, 2023, 16(1): 39-43; ISSN: 1313-6917

**Summary.** Surgery for inguinal hernia is currently the most common surgical procedure worldwide, and every year over 20 million patients undergo open or laparoscopic hernia repair. Two generally accepted endoscopic approaches are transabdominal preperitoneal procedure (TAPP) and total extraperitoneal procedure (TEP). For nine years (2010 – 2018), 48 patients with inguinal hernia had laparoscopic hernia repair (TAPP or TEP) at Villarobledo General Hospital. Forty-three patients (89.6%) were male, and five (10.4%) were female. Of these, ten had right inguinal hernia (RIH), 18 - left inguinal hernia (LIH), 12 - bilateral inguinal hernia (BIH), 6 had recurrent unilateral inguinal hernia (RUIH), and 2 had recurrent bilateral inguinal hernia (RBIH). In 33 patients (68.7%), transabdominal preperitoneal laparoscopic hernia repair (TAPP) was performed. Total extraperitoneal laparoscopic hernia repair (TEP) was performed on 15 patients (12%). In 8 patients (16.6%), simultaneous surgical procedures were performed: umbilical hernioplasty in 4 (8.3%) patients and laparoscopic cholecystectomy in 4 (8.3%) patients. There were no conversions in any of the surgical procedures. The average operative time was 77 minutes. Twenty-six patients underwent one-day surgery, 18 were in the hospital for one day, and four patients were discharged on the second postoperative day following surgery. In 7 patients (14%), recurrences occurred: in the first postoperative year - 1 patient; in the second year after surgery - 3 patients; in the third after surgery - 2 patients; and in the sixth year - 1 patient. The recurrence rate was 2 in 33 patients after TAPP (6%) versus 5 in 15 patients after TEP (33%), Chi-squared=5.91 (p=0.015). In one patient, perforation of the bladder occurred after TEP and was managed conservatively using a urethral catheter and preperitoneal drainage. TAPP and TEP had a considerable discrepancy in recurrence rates. Such discrepancy in recurrences is probably due to the higher complexity of the TEP technique and the required supervising of experienced surgeons during the learning curve. **Keywords:** inguinal hernia, TAPP, TEP, laparoscopic hernia repair, recurrence.

**21. T. Stoyanov.** *Nissen fundoplication in a series of 53 consecutive patients.* Journal of Biomedical and Clinical Research, 2024, 17(1): 107-114; ISSN: 1313-6917;

**Summary.** Hiatal hernia (HH) is often seen in surgery practice. The main feature of HH is the migration of abdominal viscera in the mediastinum via the esophageal hiatus. We performed - on 53 patients from November 2009 to June 2018 in the Department of General and Digestive Surgery of General Hospital of Villarobledo. Forty-one patients were diagnosed with hiatal hernia, 9 - with gastroesophageal reflux disease (GERD), and 3 - with Barrett's esophagus. The average operative time was  $89 \pm 33$  minutes, and the average follow-up was four years. The following complications

were recorded: perforation of the distal esophagus in 1 patient (1.9%), postoperative spleen hemorrhage requiring emergency laparotomy in 1 patient (1.9%), dysphagia in 6 patients (11.3%) in the early postoperative period (treated conservatively), one patient had small bowel obstruction in the fourth postoperative year, three patients (5.6%) had radiological signs of HH recurrence and GERD despite the fundoplication. One patient (1.9%) was reoperated for stenosis of the distal esophagus and recurrent paraesophageal hiatal hernia one year after the first intervention. Postoperative ventral hernia (POVH) was seen in 2 patients (3.8%). All recurrence rate was 7.5%, recorded in 4 patients.

**Key words:** Hiatal hernia, gastroesophageal reflux, laparoscopic Nissen fundoplication, esophageal hiatus, Recurrences

**22.** K. Tonev, Z. Dimitrov, **T. Stoyanov**. *Venous congestion in pedicled flaps for reconstruction of complex soft-tissue defects..* Journal of Biomedical and Clinical Research, 2026, in press, ISSN: 1313-6917;

**Summary.** We present three cases of reconstruction of complex skin defects using pedicled flaps (gracilis, pectoralis major, and TRAM), all of which postoperatively exhibited venous congestion, characterized by cyanosis, edema, and dark bleeding on pinprick. While cumulative comorbidities increased the overall risk, potential mechanical causes included pedicle torsion or compression, hematoma, and skin–muscle island mismatch. Empirical treatment included therapeutic anticoagulation, decompression (partial suture removal and punctures), and operative revision when indicated. We compared these measures against existing literature. Because venous congestion led to partial flap loss in our series, we propose prevention and management strategies, including meticulous planning, gentle surgical technique, and early intervention, all of which are crucial for successful flap salvage.

**Key words:** venous congestion, pedicled flap, reconstructive surgery, partial necrosis, gracilis, pectoral flap, TRAM.

**23.** Нинов Б., **Т. Стоянов**, К. Христов. *Рак на панкреаса диагноза и лечение.* Заболявания на панкреаса под редкацията на проф. Д. Дамянов 2004 г., стр. 323-329; ISSN: 954-8329-60-3

**РЕЗЮМЕ. Цели.** Да се представи опита на един хирургичен център (Плевен, 1999-2004 г.) в лечението на рака на панкреаса. Да се анализират факторите, влияещи на избора между радикални и палиативни хирургични интервенции.

**Материали и методи.** Ретроспективен анализ на 115 пациента, оперирани по повод карцином на панкреаса. Диагностиката се основава на клинично изследване, лабораторни тестове, ултрасонография и компютърна томография. Оперативните процедури са категоризирани като радикални (панкреатикодуоденална резекция - на Уипъл или на Фортнер) или палиативни (билиарен и гастродуоденален байпас).

**Резултати.** Седемнадесет пациента (14.7%) са претърпели радикална операция, докато 98 пациенти (83.3%) са претърпели палиативни процедури. Следоперативната смъртност след големи панкреатични резекции в специализирани центрове е под 5%, като някои центрове съобщават за 20-40% 5-годишна преживяемост. Ранната диагноза в изследваната популация често е забавена, като туморалната инвазия често надхвърля границите на панкреаса към момента на установяване.

**Заключения.** Панкреатикодуоденалната резекция остава трудна, но незаменима процедура с куративна цел. Съществува настоятелна необходимост от ранна диагноза и централизация на хирургията на рака на панкреаса в специализирани, високоспециализирани центрове за повишаване на процента радикални резекции и подобряване на резултатите. Решението за операция е многофакторно и зависи от стадия на тумора, общото състояние на пациента и опита на хирургичния екип.

**24.** Средкова М., Д. Стойков, **Т. Стоянов**, К. Христов, В. Григорова, К. Драгоев. *Остри холецистити – бактериална флора и чувствителност.* Заболявания на панкреаса под редакцията на проф. Д. Дамянов 2004 г., стр. 140-146; ISSN: 954-8329-60-3

**Резюме.** Цел. Да се проучи структурата на бактериалната микрофлора при пациенти с остър холецистит. Да се анализират моделите на антибиотична резистентност при изолираните микроорганизми и реалната практика на антимикробно лечение.

**Материали и методи.** Ретроспективен анализ на 153 клинични материала (рани, дренажи, жлъчно съдържание, кръв) от 95 пациенти с остър холецистит. Микробиологично изследване чрез конвенционални и автоматизирани методи (miniAPI) за идентификация и определяне на чувствителност към антибиотици.

**Резултати.** Грам-отрицателните бактерии съставляват 68.3% от всички изолати, с най-честа *E. coli* (26.0%). Грам-положителните са 30.1%, най-често *E. faecalis* (15.4%). Установена е висока резистентност при ентеробактериите (особено *Klebsiella* и *Enterobacter*) към цефалоспорини и пеницилини, свързана с продукция на ESBL. НФГБ (като *A. baumannii*) също показват висока резистентност.

**Заключения.** Изборът на емпирична антибиотична терапия при остър холецистит трябва да отчита местната бактериална флора и високата честота на антибиотикорезистентност. Пациентите в интензивните отделения (КАРИЛ) имат значително по-висок дял на резистентни анаеробни Грам-отрицателни бактерии, което усложнява лечението.

**25. Т. Стоянов**, Б. Нинов, Н. Хинков, К. Христов, Я. Първанов. *Диафрагмални хернии при новородени деца и възрастни.* Национален Конгрес по Хирургия с Международно участие. 6-8 октомври 2006, стр. 477-481; ISBN: 954-8329-85-9

**Резюме.** Цел. Да се анализира и сподели опитът от 10-годишен период в диагностиката и лечението на пациенти с диафрагмални хернии. Да се представят характеристиките и терапевтичните подходи за различните видове хернии в различните възрастови групи.

**Материали и методи.** Ретроспективен анализ на 37 пациенти, оперирани за диафрагмална херния в 10-годишен период (1996-2005). Пациентите са разделени в три групи: новородени (10), деца (4) и възрастни (23). Приложени са различни диагностични методи (рентген, ехография, КТ, ЯМР) и хирургични техники (кореман и торакален достъп, лапароскопия, пластики с собствена тъкан или платно).

## **Резултати**

**Новородени:** Висок леталитет (50%), основно поради асоциирана белодробна хипоплазия и дихателна недостатъчност.

**Деца:** Нулева смъртност. Късно изявяващите се вродени хернии често симулират стомашно-чревни или респираторни проблеми.

**Възрастни:** Най-чест вид е хиаталната херния (15 от 23 случая). Приложени са както конвенционални (Nissen, Lortat-Jacob), така и лапароскопски техники с добри резултати.

**Заклучения.** Отлагането на операцията при новородени за предоперативна стабилизация е полезен подход. Вродената диафрагмална херния трябва да се включва в диференциалната диагноза при деца с персистиращи стомашно-чревни или дихателни симптоми. При възрастните лапароскопският подход към хиаталните хернии намалява болката и болничния престой.

**26. T. Stoyanov,** E. Corral-Fernandez, K. Ivanov, P. Sarduy-Fernandez, A. Melero-Abelan, P. Casado- Santamaria, A. Sanchez-Mozol, P. Tonchev, E. Garcia -Grimaldo. *Laparoscopic hernia repair: tapp vs. tep. results, complications, and recurrences. Eight years of experiece.* СБОРНИК доклади от национален конгрес по хирургия – София: Бълг. хирург. д-во, 2018, стр. 325-328; ISSN: 2603-4034

**Summary. Background:** An inguinal hernia is a weakness of the abdominal wall, which is large enough to allow escape of abdominal contents, especially a part of the intestine or great omentum. Surgical repair procedure is currently the most frequent general operation worldwide. Only in Europe and North America the number of inguinal hernia repairs exceeds 1.5 million per year. There are two widely accepted endoscopic approaches: transabdominal preperitoneal procedure (TAPP) and total extraperitoneal procedure (TEP).

**Patients, Methods and Results:** For a period of 8 years between 2010 and 2017, in 47 patients (pts) diagnosed with inguinal hernia, laparoscopic hernia repair (TAPP or TEP) was performed in General Hospital of Villarobledo. Forty two (42) pts (89%) were male and 5 pts (11%), were female. Nine (9) pts had right inguinal hernia (RIH), 18 pts - left inguinal hernia (LIH); 12 pts had bilateral inguinal hernia (BIH), 6 pts had recurrent unilateral inguinal hernia, and 2 pts had recurrent BIH. In 32 patients (68%) transabdominal preperitoneal (TAPP) repair was done, in 15 pts (12%) totally extraperitoneal (TEP) repair was performed. In 7 pts simultaneous surgical

procedures were done: in 4 pts umbilical hernioplasty and laparoscopic cholecystectomy in 3 pts respectively. There was no conversion in any surgical procedure.

The average operative time was 77 minutes. Twenty six pts had a one day surgery, 18 had 1 day hospital stay, and 3 pts were discharged in 2 days after the surgery. In 7 patients (14%) recurrence was observed: on first postoperative year - 1 patient, on second year - 3 pts, 3rd year - 2 pts and on 6th postoperative year - 1 patient. The recurrence rate was 2 out of 32 pts after TAPP (6%), versus 5 out of 15 pts after TEP (33%) Chi-squared=5.91, p=0.015). In one patient perforation of the bladder was seen after TEP which was managed conservatively by urethral catheter and preperitoneal drainage.

**Conclusion:** In our series we observed a considerable difference in recurrence rates between the two techniques, contrary to reported by many authors similar rates of recurrence after TAPP and TEP. This may be a results of the longer learning curve required by TEP.

**27.** E. Corral-Fernandez, **T. Stoyanov**, K. Ivanov, P. Sarduy-Fernandez, A. Melero-Abelan, P. Casado- Santamaria, A. Sanchez-Mozo, P. Tonchev, E. Garcia- Grimaldo. *Appendiceal tumours: our experience in the last 5 years*. СБОРНИК доклади от ... национален конгрес по хирургия – София: БЪЛГ. хирург. д-во, 2018, стр. 190-194; ISSN: 2603-4034

## **Abstract.**

**Introduction:** The tumors of the appendix are a heterogeneous group of neoplasms with variable prognosis and survival depending on the histology results, size of tumor, regional and distant metastasis. These tumors contribute to 0.5% of gastrointestinal neoplasms and are found in approximately 1% of appendectomies. Most patients are operated for acute appendicitis, and appendicular tumor is an incidental finding. Additional treatment depends on histopathology results and tumor staging.

**Methods:** We present a retrospective study of 71 appendectomy histopathology results obtained between 2012 and 2017 in patients operated for acute appendicitis. Treatment and follow-up of patients diagnosed with appendiceal tumors is described.

**Results:** For the above mentioned period 71 emergent appendectomies were carried out. Histopathology results showed 61.2% phlegmonous appendicitis, 29.7% gangrenous appendicitis with or without perforation, and 2 cases of catarrhal appendicitis. In 7 cases histology did not show acute appendicitis (appendix with no morphological changes). In 1 patient histology result was appendiceal tumor (signet ring cell adenocarcinoma of the appendix with invasion of the appendicular serosa, but with free of tumor cells resection margin). Independently of this case, in another patient mucinous appendicular cystadenoma was diagnosed after CT scan as a follow-up of endometrium neoplasm. A third patient with mucinous adenocarcinoma was diagnosed by colonoscopy after positive fecal occult blood test (FOBT).

In the first patient with signet ring cell adenocarcinoma of the appendix right hemicolectomy was performed on second stage. The histology result was foreign body granuloma of appendiceal stump with no signs of tumor. In the second case with mucinous tumor of the appendix diagnosed by CT scan, right hemicolectomy was done. The histology result showed mucinous cystadenoma (low grade) with no involvement of the regional lymph nodes.

Finally in the patient with mucinous appendiceal tumor diagnosed by colonoscopy, intraoperatively a large tumor formation was found in the caecum region with infiltration of small intestine, right fallopian tube, and retroperitoneal space in ileocecal region. Right hemicolectomy was done with resection of the infiltrated small intestine (~25cm proximally of the ileocecal valve) and right fallopian tube. Histology results showed mucinous adenocarcinoma of the appendix with infiltration of the small intestine with no data for metastasis in 25 isolated regional lymph nodes. Infiltration of small intestine by mucinous adenocarcinoma was reported as distant metastasis (pT4bN0M1).

**Conclusion:** Appendiceal tumors are rare; their most common clinic is acute appendicitis, but our experience shows that they can also present as incident finding. Prognosis and treatment depend on histology findings and stage of the tumor.

28. *Long term results after bariatric surgery.* Surgery, 2022, 86(3): 97-106; ISSN: 0450-2167

## SUMMARY

Bariatric surgery has proved its efficacy in the treatment of morbid obesity. The decrease of body weight is progressive, clinically significant, and sustainable in a relatively high percentage of patients. Most comorbidities resolve, thus the quality of life is improved and the life expectancy increases.

This literature review aimed to evaluate 10-year or longer follow-up of patients who underwent various bariatric surgical procedures, with a focus on long-term weight loss results and their clinical impact.

The percentage of Excessive Body Mass Index Loss (%EBMIL) and the percentage of Excessive Weight Loss (%EWL) are the basic indicators for evaluating the long-term results after surgery. These indicators are used for discussing the characteristics and advantages of different procedures such as Roux-en-Y Gastric Bypass, Biliopancreatic Diversion, Scopinaro type, Duodenal Switch, Adjustable Gastric Band, and Laparoscopic Sleeve Gastrectomy as a single procedure or augmented by a malabsorptive component Single Anastomosis Duodeno Ileal-with Sleeve, Vertical Band Gastroplasty. Results are analyzed in long-term aspects as well as indications and incidence rates of re-operations are presented and analyzed.

**29. T. Stoyanov.** *Impact of malabsorptive bariatric surgery on liver function and preoperative hepatic steatosis in morbidly obese patient.* *Surgery*, 2023, 87(3): 116-122; ISSN: 0450-2167

## **SUMMARY**

A retrospective and prospective study was conducted on preoperative hepatic steatosis and postoperative liver function in 141 morbidly obese patients treated with the surgical technique Biliopancreatic Derivation with Duodenal Switch (BPD DS) during the period from January 2003 to June 2013 in University Hospital Center Albacete (Centro Hospitalario Universitario de Albacete – CHUA). Mean age: 41.8 years (range: 21–60 years). Mean weight: 139.13 kg (range: 100–193 kg). Height: 164.22 cm (range: 141–192 cm). Mean BMI: 51.91 kg/m<sup>2</sup> (range: 41.62–75.06 kg/m<sup>2</sup>). A liver biopsy was performed intraoperatively in 126 patients. Nonalcoholic fatty liver disease (NAFLD) was found in 90.3% of patients with varying degrees of severity. Chronic hepatitis was detected in only 1.4% of cases. No statistically significant correlation was found between the severity of NAFLD and BMI. The elevation of liver enzymes GOT and GPT was most significant during the first 3 months postoperatively, typically ranging between 50–100 UI. Over time, transaminase levels gradually returned to normal. By the fifth year after surgery, 4.9% of patients still exhibited slightly elevated GOT and GPT levels, though these remained below 100 UI.