



Scripta Scientifica Medica

Volume 46, 2014, supplement 1

ISSN 0582-3250

SSM

Scripta Scientifica Medica

An official publication of Medical University "Prof. Dr. Paraskev Stoyanov" of Varna

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ABSTRACTS

OF THE 20TH ANNUAL MEETING
OF THE ASSOCIATION “HEART – LUNG”
AND 2ND „VARNA – AUGSBURG”
CONFERENCE
30-31 MAY 2014

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НА XX-ТА ЮБИЛЕЙНА СЕСИЯ
НА АСОЦИАЦИЯ „СЪРЦЕ – БЯЛ ДРОБ”,
ВТОРА НАУЧНА СРЕЩА
„ВАРНА – АУГСБУРГ”
30-31.05.2014

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**20th Annual meeting of the Association “Heart – Lung”
and 2nd “Varna – Augsburg” conference 30-31 May 2014**

**XX-та юбилейна сесия на Асоциация „Сърце – Бял дроб”,
Втора научна среща „Варна – Аугсбург”, 30-31.05.2014**

Петък, 30 Май 2014

13.00-13.15 Откриване / **Opening remarks**

Сесия 1 Модератори: доц. Ганчев, доц. Йотов, доц. Петкова

13.15-13.25 **Tumors and cysts of the heart - Manoilov P., Panayotov Pl., Panayotova D.**

Тумори и кисти на сърцето - Маноилов П., Панайотов Пл., Панайотова Д.

13.25-13.35 **Lung cancer - King of all cancers - Yankov K.**

Проблема белодробен рак - Янков К.

13.35-13.45 **Personalized medication therapy in patients with a advanced lung adenocarcinoma - Dimitrova E., Kalem D.**

Персонализирана лекарствена терапия при авансирал белодробен аденокарцином - Димитрова Е., Калев Д.

13.45-13.55 **Primary malignant Tumors of the heart - surgical treatment and experience of the Department of Cardiac Surgery „Sveta Marina” University Hospital Varna - Krasnaliev Y., Panayotov P., Mogan S., Panayotova D., Peychev Y., Todorov D.**

Малигнени тумори на сърцето - хирургично лечение и опита на Отделението по Кардиохирургия УМБАЛ „Св. Марина“ гр. Варна - Красналиев Й., Панайотов П., Мокан С., Панайотова Д., Пейчев Я., Тодоров Д.

13.55-14.15 **Uncommon findings: Cardiac tumors - an overview - Fran Dziewior**

Рядко срещани открития: Сърдечни тумори - обзор

14.15-14.25 **The Role of 18F-FDG PET/CT in Lung Cancer - Chaushev B., Georgiev R.**

Роля на 18F-FDG PET/CT при карцином на белия дроб - Чаушев Б., Георгиев Р.

14.25-14.45 **Current standarts in therapy of infectious endocarditis - Buechner S.**

Съвременни стандарти в терапията на инфекциозния ендокардит

14.45-14.55 Дискусия / **Discussion**

14.55-15.30 *Кафе Пауза / Coffee brake*

Сесия 2 Модератори: проф. Пенков, доц. Георгиев, доц. Радков

- 15.30-15.40 **Ischemic mitral regurgitation - Penkov N.**
Исхемична митрална регургитация - Пенков Н.
- 15.40-15.50 **Degenerative mitral valve disease - Mircheva L.**
Дегенеративна митрална клапна болест - Мирчева Л.
- 15.50-16.00 **Interventional treatment of mitral valve diseases - indications and methods – Tzvetkov T., Georgiev Sv.**
Интервенционално лечение на митрални клапни пороци - индикации и методи - Цветков Т., Георгиев Св.
- 16.00-16.20 **The Mitroflix prosthesis - a new way of mitral valve repair - Frank Oertel**
Протезата „Mitroflix” - нов начин за поправяне на митрална клапа
- 16.20-16.30 **Mitral blood flow and insufficiency in patients with atrial fibrillation and restored sinus rhythm - Kischeva A.**
Митрален кръвоток и митрална инсуфициенция при болни с предсърдно мъждене и възстановен синусов ритъм - Кишева А.
- 16.30-16.40 **Mitral stenosis and atrial fibrillation - Negreva M.**
Митрална стеноза и предсърдно мъждене - Негрева М.
- 16.40-17.00 **Surgical treatment of atrial fibrillation in high-risk patients with mitral valve disease - Nemchenko E.**
Хирургично лечение на предсърдното мъждене при високорискови пациенти с митрална клапна болест - Немченко Е.
- 17.00-17.10 Дискусия / **Discussion**
- 17.10-17.20 *Пауза / Coffee brake*
- 17.20-17.30 **Adults with congenital heart diseases: our experience with diagnosis and surgical treatment - Panayotova D., Panayotov P., Bachvarov. G, Radulova. Y, Chilikova S., Peychev Y., Boshnakov V.**
Възрастни с вродени сърдечни аномалии: нашият опит с диагностика и хирургично лечение - Панайотова Д., Панайотов П., Бъчваров Г., Радулова Я., Чиликова Св., Пейчев Я., Бошнаков В.
- 17.40-17.50 **Indications for electrocardiostimulation in patients after cardiac surgery - Petrov P.**
Индикации за електрокардио-стимулация при сърдечно оперирани болни - Петров П.
- 17.50-18.00 **Surgical remodelling of the left ventricle - theory and practice in the Department of Cardiac Surgery in „Sveta Marina” University Hospital, Varna, Bulgaria - Slavov M., Panayotov P., Panayotova D., Peychev Y., Kornovski V., Bogdanov B.**
Хирургично ремоделиране на лява камера - теория и практика на Отделението по Кардиохирургия в УМБАЛ „Св. Марина“ гр. Варна - Славов М., Панайотов П., Панайотова Д., Пейчев Я., Корновски В., Богданов Б.
- 18.00-18.10 Дискусия / **Discussion**
-

Събота, 31 Май 2014

Сесия 3 Модератори: Prof. Beyer, доц. К. Янков, доц. Пенев, д-р Панайотов

08.45-09.05 **OPCAB procedure in patient over 75 years-old experience in the Department of Cardiac Surgery in „Sveta Marina” University Hospital, Varna, Bulgaria - Kornovski V., Panayotov P., Georgiev S., Grkovski M., Gradinarov C., Slavov M., Krasnaliev Y., Mavrodieva K.**

ОРСАВ операция при пациенти над 75 години - опита на Отделението по Кардиохирургия в УМБАЛ „Св. Марина“ гр. Варна - Корновски В., Панайотов П., Георгиев Св., Гърковски М., Градинаров Ц., Славов М., Красналиев Й., Мавродиева К.

09.05-09.25 **Adjustable segmental annuloplasty in the correction of functional failure of the tricuspid valve on beating heart - Nemchenko E.**

Сегментна анулопластика в корекцията на функционално увредената трикуспидална клапа на биещо сърце

09.25-09.45 **Treatment of interventricular septum rupture as a complication of acute myocardial infarction - Novak M.**

Лечение на разкъсването на междукамерния септум като усложнение от ОМИ

09.45-10.05 **Spontaneous dissection of coronary arteries - Sitar J.**

Спонтанна дисекация на коронарните артерии

10.05-10.25 **New imaging methods of coronary arteries - Hlinomaz O.**

Нови образни методи за коронарните артерии

10.25-10.30 Дискусия / **Discussion**

10.30-10.50 *Кафе пауза / Coffee brake*

Сесия 4 Модератори: проф. Станкев, доц. Червенков, доц. Петров

10.50-11.10 **Transcatheter aortic valve implantation - state of art and Augsburg experiences - Herbert Quinz**

Транскатетърна аортна клапа имплантация - state of art и опитът на Аугсбург

11.10-11.20 **Prevalence of comorbidities in a cohort of patients with hemodynamically significant, pure aortic stenosis and sinus rhythm, admitted to cardiosurgery for a primary, isolated aortic valve replacement - Peychev Y., Georgiev S., Panayotov P., Krasnaliev Y., Bogdanov B., Kornovski V., Panayotova D., Boshnakova L.**

Коморбидност при пациентите с хемодинамично значима аортна клапа стеноза със синусов ритъм, постъпили за изолирано аортно клапно протезиране. Пейчев Я., Георгиев Св., Панайотов П., Красналиев Й., Богданов Б., Корновски В., Панайотова Д., Бошнакова Л.

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- 11.20-11.30 **Mitral stenosis and Percutaneous Balloon Mitral valvuloplasty - Stoyanov N., Karatancheva B., Velchev V., Kostov E., Postadjian A., Rifai N., Finkov B.**
Митрална стеноза и перкутанна балонна митрална валвулопластика - Стоянов Н., Велчев В., Костов Е., Постаджян А., Рифай Н., Финков Б.
- 11.30-11.50 **Diagnostics and treatment of acute myocarditis - Rezek M.**
Диагностика и лечение на острия миокардит - Резек М.
- 11.50-12.00 **Surgical strategy for invasive pulmonary and mediastinal tumors require reconstruction of superior vena cava - Minchev Ts, Manolov E., Marinchev V., Kelchev A., Georgiev V., Stoimenov I., Kirova G., Petkov R.**
Хирургична стратегия при инвазивни пулмонални и медиастинални тумори изискващи реконструкция на горна празна вена - Минчев Ц., Манолов Е., Маринчев В., Келчев А., Георгиев В., Стоименов И., Кирова Г., Петков Р.
- 12.00-12.10 **A case of ruptured abdominal aortic aneurysm with primary aorto-caval fistula - Markov D., Tsenov M., Daskalov A., Staneva M.**
Случай на руптурирала аневризма на абдоминала аорта с първична аорто-кавална фистула - Марков Д., Ценов М., Даскалов А., Станева М.
- 12.10-12.20 **PTA of the collateral vessels - Dragneva T., Yanchev O., Dragomirov P., Knyazhev V., Donchev N., Sapundjieva M., Tiutiundjiev K., Kostov P., Manolov N.**
ПТА на колатерални съдове - Драгнева Т., Янчев О., Драгомиров П., Княжев В., Дончев Н., Тютюнджиев К., Костов П., Манолов Н.
- 12.20-12.20 **Quality of life of patients with lower extremity peripheral arterial disease - Staneva M., Tzvetanov Tz., Minkova B., Antova P., Chervenkov V.**
Качество на живот при пациенти с периферна артериална болест на долните крайници - Станева М., Цветанов Ц., Минкова Б., Антова П., Червенков В
- 12.20-12.30 **Improved results after laser ablation treatment - Angelov A., Petkov D., Petrov V.,**
По-добри резултати след лазерно аблационно лечение - Ангелов А., Петков Д., Петров В.
- 12.30-12.40 Дискусия / **Discussion**
- 12.40-13.00 Симпозиум на Сервие / **Sponsored by Servier symposium**
- 13.00-13.50 Обяд / **Lunch**
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Сесия 5 Модератори: доц. Йотов, доц. Пенев, доц. Ганев

- 13.40-14.00 **Successful extraction of dialysis catheter from brachiocephalic trunk - Petrov V., Panayotov P., Cheshmedjiev M., Kornovski V.**
Успешно отстраняване на диализен катетър от truncus brachiocephalicus - Петров В., Панайотов П., Чешмеджиев М., Корновски В.
- 14.10-14.20 **Indications for cardiac stimulations implantation - what new? - Pancheva N.**
Индикации за имплантиране на сърдечни стимулатори - какво ново? - Панчева Н.
- 14.00-14.10 **Drug-drug interactions and adverse drug reactions with classic and new anticoagulants - Tzankova V., Petrov V.**
Лекарствени взаимодействия и странични ефекти на класическите и новите антикоагуланти - Цанкова В., Петров В.
- 14.20-14.30 **Sarcoidosis - expected diagnosis or a surprise? - Ivanova D.**
Саркоидоза - очаквана диагноза или изненада - Иванова Д.
- 14.30-14.40 **Ebstein anomaly with blood cyst - Docheva N., Radoslavova R., Panayotova D.**
Ебщайн аномалия с кръвна киста - Дочева Н., Радославова Р., Панайотова Д.
- 14.40-14.50 Дискусия / **Discussion**
- 14.50-15.00 *Закриване / Closure remarks*

TUMORS AND CYSTS OF THE HEART

Manoilov P., Panayotov Pl., Panayotova D.

Dept of Cardiac Surgery, Medical University, Varna, Bulgaria

Primary tumours of the heart are rare. Metastases are the most frequent tumours of the heart. Anyway, it is generally agreed that autopsy prevalence of primary cardiac tumors is 1 out of 2,000 and that of secondary cardiac tumors is 1 out of 100 autopsies, with a secondary/primary cardiac tumors ratio of 20:1. Cardiac tumors may occur in any cardiac tissue. They can cause valvular or inflow-outflow tract obstruction, thromboembolism, arrhythmias, or pericardial disorders. Symptoms are very variable and can be the result of either local or systemic effects. Surgery is successful for benign tumours when adequate resection margins are allowed. A number of imaging modalities are available for the assessment of cardiac tumours; each has advantages and limitations. This report presents our experience in the treatment of tumors of the heart for three years, considers the different aspects of this disease and the current indications for surgical treatment.

Key words: *cardiac tumors, cardiac tissue, classification, cardiac surgery, treatment, disease*

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LUNG CANCER - KING OF ALL CANCERS

Yankov K.

Intensive Respiratory Unit, Pulmology Clinic, Medical University, Varna, Bulgaria

The significance of the lung cancer as a medical problem is determined by its unfavorable epidemiological characteristics. Lung cancer and prostate cancers are both most frequent neoplasms among men, whereas in women it takes third or fourth position. However this neoplasm is most lethal, with highest mortality rate, that exceeds mortality rate of prostate, breast and colon cancer in both sexes. The reason for that is its late diagnosis. The tendencies of the changes of lung cancer prevalence and mortality are strongly dependant on the main causative factor – smoking. Decrease in the prevalence of the disease in men, but not in women is the result of smoking restrictions worldwide. In conclusion, the importance of lung cancer is determined by its high prevalence and mortality rate. The only efficient tool for limitation of the disease is fighting smoking.

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PERSONALIZED MEDICATION THERAPY IN PATIENTS WITH AN ADVANCED LUNG ADENOCARCINOMA

Dimitrova E., Kalem D.

Dept. of Oncotherapy, Medical University, Varna, Bulgaria

State of the Art is a report on the contemporary models of drug treatment of advanced NSCLC and its major representative – the adenocarcinoma. This subcategory possesses individual metabolic enzyme activity, which could be a specific target of the antitumor therapy. Its histology is a potential predictor for the result of the chemotherapy. Adenocarcinoma has an intensive immunohistochemical expression of thymidylate synthetase (TS). The histologic subtypes have specific genetic profile, modifying the effect of the target therapy. The mutational status of the receptor for the epidermal growth factor (EGFR) determines the intracellular signal pathways, which regulate the proliferation, invasion, metastasis, angiogenesis and apoptosis. The rearrangement of the receptor of the tyrosine kinase of the anaplastic lymphoma (ALK) is relevant to the cellular cycle, metabolism and survival of the tumor cells. The tumor angiogenesis is defined by ligands of the growth factor of the vessel endothelium (VEGF) activating the signal pathways. The described molecular –pathologic and genetic features of NSCLC determine some of the treatment models: (1) administer agents, inhibitors of TS (antifolates); (2) necessity of testing the EGFR mutation status, as a predicting marker of the effect of the EGFR tyrosine kinase inhibitors and the changes of ALK gene, as a predicting marker of the ALK inhibitors; (3) first line target therapy in tumors with EGFR mutation (significantly prolongs progression free survival); (4) second line target therapy in NSCLC, which is positive for ALK rearrangement and has progression after one line of chemotherapy (significantly superior than the second line classic chemotherapy); (6) adding antiangiogenic treatment as a first line therapy or as a supportive therapy.

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PRIMARY MALIGNANT TUMORS OF THE HEART - SURGICAL TREATMENT AND EXPERIENCE OF THE DEPARTMENT OF CARDIAC SURGERY “SVETA MARINA” UNIVERSITY HOSPITAL VARNA

Krasnaliev Y., Panayotov P., Mogan S., Panayotova D., Peychev Y., Todorov D.

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Primary cardiac tumors are rare with an incidence of 0.0017 to 0.0019%. Approximately 25% of these tumors are malignant, represented primarily by sarcomas. Most common types of sarcoma are leyo-

miosarcoma and angiosarcoma. Other histologic subtypes of sarcoma are considerably less common. Since 2008 we have diagnosed and treated two cases of malignant heart tumors in our institution. Both tumors were of extremely rare morphologic subtype - liposarcoma and malignant histiocytoma. To our knowledge there are 18 cases of primary liposarcoma of the left ventricle and 20 cases of malignant histiocytoma described in specialized literature up to current date. We present both our cases of primary malignant heart tumors with diagnostic, surgical and postoperative details including long term follow-up.

Key words: *liposarcoma, histiocytoma, malignant, surgical treatment*

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UNCOMMON FINDINGS: CARDIAC TUMORS - AN OVERVIEW

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Cardiac tumors can imitate the symptoms of several cardiac diseases as e.g. valve diseases, endocarditis or even myocardial infarction. Not infrequently they are found by chance and at any rate rarely in the daily work of a cardiac surgeon. This is why there are only few and varying data about the frequency and the distribution of types of tumors as well as the operation techniques and the outcome. Nevertheless there is accordance that the majority of cardiac tumors are fortunately benign and patients can be completely cured by undergoing an operation.

We want to give an overview about the actual knowledge concerning cardiac tumors and operation techniques.

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THE ROLE OF 18F-FDG PET/CT IN LUNG CANCER

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Lung Cancer is a common disease and the leading cause of cancer-related death in many countries. Early detection of lung cancer is essential for early therapeutic interventions which can reduce mortality. Non-small cell lung cancer (NSCLC) accounts for approximately 80% of new pulmonary carcinoma diagnosis. Positron emission tomography (PET/CT), combining anatomic information of CT and metabolic information of PET. 18F-fluorodeoxyglucose (18F-FDG) is the most widely used radionuclide in oncology. PET/CT has been shown to be useful for evaluating an indeterminate pulmonary nodule, staging mediastinal lymph nodes, and evaluating local nodal and distant metastases.

Key words: *PET/CT, 18F-FDG, Lung Cancer*

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CURRENT STANDARTS IN THERAPY OF INFECTIOUS ENDOCARDITIS

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To use as well the right antimicrobial therapy as well as surgical treatment in right time and case of infectious endocarditis patients is part of a guideline-consented therapy. The clear indication for starting a define adequate therapy is based on an interdisciplinary collaboration with crucial key-findings AND an early decision-competence which should be present not only in the circle of the cardiac specialists when based e.g. on the duke criteria. Due to the fact that inattention or indecisiveness can lead to harmful delay in therapy sometimes followed by drastic complications like septic emboli a simplification of setting the diagnosis and the fitting therapy in a non-specialist's hand would be favorable. With look on preferentially single-case-studies of most differing agents of endocarditis in literature there is no clear experience-based knowledge besides the common therapy of staphylococci, streptococci, enterococci, HACEK or Bartonella. We here review results from current multi -centre -studies to cope the limitations by case-reports and find experience-based strategies besides the usage of current guidelines. Especially for the treatment of prosthesis endocarditis the data are rare to bring up crucial improvements. Until now there is no follow-up-strategy for endocarditis-patients in the face of bacterial agents' adaptiveness creating residual infections in inactive and resistant stadiums.

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ISCHEMIC MITRAL REGURGITATION

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DEGENERATIVE MITRAL VALVE DISEASE

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Degenerative mitral valve disease is recognized as an important cause for cardiovascular morbidity and mortality. Degeneration of the mitral valve is a common disorder affecting around 2% of the population. The most common finding in patients is leaflet prolapse, resulting in varying degrees of mitral valve regurgitation. Mitral valve prolapse due to degenerative disease is defined by a spectrum of lesions, varying from simple chordal rupture involving prolapse of an isolated segment in otherwise normally shaped valve, to multi-segmental prolapse of one or both leaflets in a valve with significant excess tissue and large annular size. Barlow's disease and fibro-elastic deficiency are the two dominant forms of degenerative mitral valve disease and have unique differentiating characteristics on clinical and echocardiographic assessment. The prognosis of mitral valve prolapse is usually benign and is not different from that of the general population, but these with risk factors, such as age, left ventricular dysfunction, significant mitral regurgitation, enlarged left atrium/ventricle, and atrial fibrillation, are at increased risk of adverse cardiovascular events. The recommended treatment for degenerative mitral valve disease is mitral valve reconstruction, because valve repair is associated with improved event free survival as compared to valve replacement. Preoperative differentiation by both cardiologist and surgeons is important because the techniques, surgical skills and expertise required to achieve a repair vary among the different etiological subsets. The appropriate timing and type of intervention for patients with degenerative mitral valve regurgitation can improve the outcomes and quality of life.

Key words: *mitral valve, degenerative disease, mitral valve prolapse*

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INTERVENTIONAL TREATMENT OF MITRAL VALVE DISEASES - INDICATIONS AND METHODS

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THE MITROFIX PROSTHESIS - A NEW WAY OF MITRAL VALVE REPAIR

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In most cases of Mitral Valve Regurgitation (MVR) only the PML has a prolapse or restrictive alteration (fibrotic or ischemic). Secondary ring dilatation increase the MVR. Although many studies showed, that Mitral Valve Repair (MVR) should be possible in 80-90% of the patients, the truth is, that 30-40% of the diseased valves will be replaced. The cause of it is the sometimes very complex pathology of the mitral valve (MV) disease, especially if the underlying problem is a insufficient coaptation area of the posterior mitral leaflet (PML) with a so far normal anterior mitral leaflet (AML) due to severe restriction (ischemic, rheumatic), destruction (endocarditic) or hypoplasia of the PML. The repair of such diseased valves is very time-consuming, challenging and implies a great experience of the surgeon. Because of the increase of multimorbid patients with different organ function impairments and of combined surgical therapy cross clamp time and perfusion time has to be kept as short as possible to improve postop outcome. Therefore many MV are replaced.

The MitroFix device could be a new concept for repair of MVR, especially if only the PML is involved. Using the MitroFix device, a partially replacement of the PML with a D-shaped annuloplasty ring imitating the PML in closed position, and leaving the AML in place offers a new additional possibility of MVRepair. The patient could leave the hospital with his own mitral valve.

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MITRAL BLOOD FLOW AND INSUFFICIENCY IN PATIENTS WITH ATRIAL FIBRILLATION AND RESTORED SINUS RHYTHM

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Atrial fibrillation (AF) is the most common arrhythmia, affecting 1.5-2% of the general population. It is characterized by a loss of atrial contraction, which favors the formation of thrombi. Although thromboembolic events often occur immediately after cardioversion, such events have been described several days to weeks after it in patients who have apparently maintained sinus rhythm. Atrial mechanical contraction is reduced after cardioversion, despite normal atrial depolarization on ECG. Evaluation of mitral blood flow with pulse-Doppler echocardiography reflects the left atrial function. Several authors show that immediate peak A velocity and percent A-wave velocities are significantly lower in patients with AF of moderate (2-6 weeks) and prolonged (more than 6 weeks) duration compared to patients with AF of brief (less than 2 weeks) duration. Full recovery of atrial mechanical function is achieved within 24 hours for patients with brief duration, within 1 week for the moderate duration and within 1 month for prolonged duration AF. Transient depression and following improvement in atrial mechanical function are also demonstrated after ablation of pulmonary veins. Two months after maze procedure 40% of the patients have no transmitral A wave. It is found that the effective mechanical atrial function (EMAF) is likely to recover earlier in patients after pharmacological or spontaneous cardioversion than in those after electrical cardioversion (EC). The effect of the mode of cardioversion on recovery of EMAF is not statistically significant at 1 week after cardioversion, implying that the possible detrimental effect of electrical current on atrial function is an early phenomenon and wears off between 3 and 7 days after cardioversion. Cardiac stunning after EC is well known and could lead to the development of severe mitral regurgitation (MR), due to restrictive movement of leaflets. The transient character of the MR favors a functional origin with an alteration in the geometry of the mitral apparatus. Data on mitral flow and MR in 56 consecutive patients with restored sinus rhythm are presented.

Key words: *atrial fibrillation, cardioversion, mitral blood flow, mitral regurgitation*

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MITRAL STENOSIS AND ATRIAL FIBRILLATION

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Mitral stenosis was noted and described both as clinical picture and pathological finding for the first time by John Mayow in 1669. It took more than a century, when in 1827 Robert Adams recognized that “extremely irregular action of the heart is almost pathognomic of mitral stenosis”.

Nowadays, the incidence of atrial fibrillation in mitral stenosis has been estimated to be 40 percent. The ratio of women to men presenting with isolated mitral stenosis is 2:1. Patients who have both the rhythm disorder and valve disease are at 17.5-fold greater risk for stroke compared to those in sinus rhythm.

It is well known that as a result of the chronic atrial stretch, structural and electrophysiological changes appear. They directly correlate with the arrhythmia beginning and recurrences. Noteworthy, recent studies have shown that atrial fibrillation alters the miRNA expression profile of the left atrium of mitral stenosis patients which provide potential new therapeutic targets for atrial fibrillation.

Maintenance of sinus rhythm is essential for the exercise capacity and the reduction of mitral stenosis symptoms. Adequate anticoagulation is very important to reduce the risk of thromboembolic incidents. Stroke risk in paroxysmal atrial fibrillation is not different from that in persistent and permanent. The presence of some type arrhythmia categorizes patients with mitral stenosis as “high risk” which requires oral anticoagulant (vitamin K antagonist) unless contraindicated.

Key words: *mitral stenosis, atrial fibrillation, arrhythmia*

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SURGICAL TREATMENT OF ATRIAL FIBRILLATION IN HIGH-RISK PATIENTS WITH MITRAL VALVE DEASISE

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Objective. To find out if the surgical treatment of atrial fibrillation in high-risk patients with EuroSCORE >6 can be safe and effective.

Methods and materials. We have conducted a retrospective analysis of 438 high-risk patients with EuroSCORE >6 who have undergone surgery at FSBI “FCSC” of Health Ministry of the Russian Federation (Penza) since 2009. The patients were divided into 2 groups: group 1 consists of 61 patients underwent a Cox-Maze

IV open-heart surgical procedure; group 2 consists of 61 patients who didn't undergo any surgical treatment of heart rhythm disorder and who had no history of atrial fibrillation. Propensity score matching method (PSM) was used to make the control group. The duration of anamnesis was 45.0 ± 27.8 months, the left atrial dimension was 71.1 ± 13.3 mm. The percentage of patients with the permanent form of atrial fibrillation was 100%. All patients from group 1 underwent a Cox-Maze IV procedure.

Results. The groups did not differ with regard to postoperative period, complications, mortality. The remote results at follow-up terms varying from 6 months to 3 years were assessed among 100% of patients. The average NYHA functional class in group 1 was 1.9 ± 0.6 , whereas it was 1.8 ± 0.5 in group 2. The key points of the research were 12, 24 and 36 months. The actuarial freedom from atrial fibrillations in group 1 was $75.9\% \pm 1.9\%$. The 3 -year survival rate was 100%.

Conclusions. The high EuroSCORE>6 should not be the determinative factor in the refusal of surgical treatment of atrial fibrillation in patients who are to undergo an open-heart surgery. A concomitant Cox-Maze IV procedure does not increase complications in the postoperative period; it also does not influence the mortality and the time of hospitalization. Main factors associated with recurrent AF in high-risk patients preserve long-term SR in 75% patients.

Key words: atrial fibrillation, radiofrequency ablation, mitral valve

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ADULTS WITH CONGENITAL HEART DISEASES: OUR EXPERIENCE WITH DIAGNOSIS AND SURGICAL TREATMENT

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Introduction: The population of adults with congenital heart disease (CHD) (commonly called grown-ups with congenital heart disease or GUCH) is increasing steadily, due to the remarkable improvement in survival of patients with CHD. In addition, some defects (e.g. ASD, CoA, Ebstein's anomaly, and ccTGA) may be diagnosed for the first time in adult life. In Europe (727 million inhabitants), the GUCH population is estimated between 1.2 and 2.7 million patients with prevalence of about 2800 adults per 1 million. In Bulgaria, there isn't confirmed statistical analysis, but the data from different health centers suggest of about 20 000 cases.

Methods: We made an overview of echocardiographic and surgical approach to GUCH patients operated on at the Department of Cardiac Surgery in St. Marina University Hospital, presenting examples of the most in-

interesting abnormalities observed. The surgical approach classifies them in 2 groups: (1) survival into adulthood of patients with known congenital heart disease and previous surgical procedures (2) patients with conditions not diagnosed or not considered severe enough to require surgery in childhood. The echocardiographic approach divides them in several categories: (1) stenotic lesions (2) regurgitant lesions (3) intracardiac shunts (4) abnormal connections (5) combinations or complex congenital diseases.

Aim: Our aim is to compare the prevalence of adult congenital heart disease in our department with European data.

Results and conclusion: No significant difference was found in the rate and approach between our practice and reported European sources.

Key words: *adult congenital heart diseases, prevalence, diagnosis, echocardiography, surgical treatment*

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INDICATIONS FOR ELECTROCARDIOSTIMULATION IN PATIENTS AFTER CARDIAC SURGERY

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SURGICAL REMODELLING OF THE LEFT VENTRICLE - THEORY AND PRACTICE IN THE DEPARTMENT OF CARDIAC SURGERY IN “SVETA MARINA” UNIVERSITY HOSPITAL, VARNA, BULGARIA

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Early and aggressive treatment of acute myocardial infarction (MI) results in a decrease of the incidence of late complications. Nowadays the evolution of about 7.6% of all cases of transmural MI of the left ventricle (LV) results in aneurysm formation. The aneurysm itself as well as other consequences of the myocardial loss is related to impaired systolic and diastolic LV function, risk of rupture of the LV wall or potentially embologenous thrombosis in the LV cavity.

These characteristics contribute to a constant trend towards timely and contemporary surgical treatment of this category of patients in terms of operative strategy and technique. It also stimulates the conduction of large and powerful trials in this field and the creation of databases including the early, midterm and late outcomes that further enhance the understanding of the most suitable treatment algorithm. Since the first surgical procedures in the 1950s the techniques have evolved offering an individualized approach as each procedure is distinguished for its surgical complexity and achieved results.

Along with the descriptive characteristics of the evolution of surgical techniques for correction of LV aneurysms the current text also presents the experience of the Department of Cardiac Surgery in “Sveta Marina” University Hospital in Varna, Bulgaria with the surgical remodeling of the LV and the early results in this patients category. During the period 01.01.2008 – 31.12.2013 a total of 22 patients underwent myocardial revascularization and repair of LV aneurysm, 8 with linear repair and 14 with Dor procedure. 87.5% (7/8) of the patients with linear repair and 85.7% (12/14) of these with Dor procedure survived the early postoperative period and presented with significantly reduced postoperative volumes and improved function of the LV. Despite the small number of cases this proves both techniques ensure acceptable surgical results for these severely ill patients.

Key words: *left ventricular aneurysm, surgical remodelling of the left ventricle*

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OPCAB PROCEDURE IN PATIENT OVER 75 YEARS- OLD- EXPERIENCE IN THE DEPARTMENT OF CARDIAC SURGERY IN “SVETA MARINA” UNIVERSITY HOSPITAL, VARNA, BULGARIA

Kornovski V., Panayotov P., Georgiev S., Grkovski M., Gradinarov C., Slavov M.,
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Being on the mainstream surgery techniques OPCAB continues to be hotly debated. Performing off-pump coronary bypass grafting has a number of purported advantages over conventional CABG. The main advantages claimed for OPCAB include: reduction in risk of death, stroke, myocardial infarction, arrhythmias, renal insufficiency, and neurocognitive dysfunction.

Age has been recognized as an independent predictor of mortality in patients undergoing CABG.

With increasing patient’s age, a number of comorbidities also increasingly manifests in elderly patient’s population (diabetes, renal insufficiency, pulmonary disease, cerebrovascular disease, atheromatous aorta), each of witch may also be independently associated with mortality in CABG.

Other benefits reported to be implicated with off-pump coronary artery grafting is reducton in resource utilization (intensive care unit stay, postoperative hospital stay) in high-risk patinets.

We report our experience in OPCAB surgery in patients older than 75 years, comparing the early results with a cohort of patients performed with the conventional CABG technique. We reviwed 107 patients between 2011 and 2013. The patients were divided in to two groups. Forty-five patients managed with OPCAB technique and 62 patients managed with the conventional CABG technique. There were no in hospital deaths in the OPCAB group and five deaths in the CABG group.

Key words: OPCAB, CABG, age, mortality

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ADJUSTABLE SEGMENTAL ANNULOPLASTY IN THE CORRECTION OF FUNCTIONAL FAILURE OF THE TRICUSPID VALVE ON BEATING HEART

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The research purpose. The comparison of the results of TV functional failure correction by the method of adjustable segmental annuloplasty and implantation of the support ring Carpentier, and the identification of predictors of relapse of tricuspid failure after surgery.

Methods. 331 patients (163 men and 168 women) were included in the research and were operated from 2008 to 2012 in FCCS “Federal Center of Cardiovascular Surgery of the Ministry of Health of Russia” in Penza. The average age of the patients was $61,1 \pm 9,6$ years (from 32 to 79 years). The correction of functional failure of TV was made to all the patients as a part of the main surgery. The patients were divided into 2 groups: the first group includes 250 (75%) patients who were completed adjustable seam annuloplasty; the second group had 81 (26%) patients, who were implanted the support ring Carpentier in the tricuspid position. All the patients had the significant failure on TV, whose average value was more than 3+. All the patients had dilation of the fibrous ring of TV, which average diameter was $43 \pm 3,2$ mm. 181 (55%) patients were examined in the post period from 2 to 60 months, on average $39,6 \pm 5,7$ months. The degree of regurgitation on TV in the pre and postoperative period was evaluated by the method of echocardiography. The regurgitation on TV 2+ and more was considered significant. The survival and the development of recurrent regurgitation were evaluated by the method of Kaplan- Meier.

Results. The reliably significant differences in mortality ($p=0,7$) and complications in the early postoperative period ($p=0,34$) in groups weren't identified. The freedom from regurgitation on TV more than 2+ was $71 \pm 1,2\%$ in the 1st group and $75 \pm 1,2\%$ in the 2d group ($p=0,4$) in the long-term periods of observation. Re-operation was not required in any of the cases. The survival period of up to 5 years was $92 \pm 1,2\%$ in the 1st group and $91 \pm 1,3\%$ in the 2dt group ($p=0,7$).

Conclusions. Adjustable segmental annuloplasty in the correction of functional failure of the tricuspid valve is not inferior to other kinds of plastic on the degree of the freedom from regurgitation and survival, allowing to save the competence of TV in the period up to 5 years among more than 70% of patients. The efficiency of the method in the long-term period does not depend on the majority of risk factors of progress of relapse failure which were before the operation.

Key words: *annuloplasty, tricuspid valve*

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**TREATMENT OF INTERVENTRICULAR SEPTUM
RUPTURE AS A COMPLICATION OF ACUTE MYOCARDIAL
INFARCTION**

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SPONTANEUS DISSECTION OF CORONARY ARTERIES

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NEW IMAGING METHODS OF CORONARY ARTERIES

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TRANSCATHETER AORTIC VALVE IMPLANTATION - STATE OF ART AND AUGSBURG EXPERIENCES

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Introduction: In terms of a gentle, minimally invasive form of treatment Alain Cribier performed the first human transcatheter aortic valve implantation in 2002, followed by the group of Prof. Mohr in Leipzig with the transapical technique. TAVI has nowadays become a valid alternative in treatment of inoperable or high risk patients with severe aortic stenosis. 1,2,3

The broad “Augsburg experience” of 5 years (2008-2013), with 232(n) cases treated with a transapical approach, has been analyzed closely in terms of results and clinical benefits (life expectancy, quality of life).

Methods: As first step we performed a systematic review of available sources concerning techniques, outcomes and costs of transcatheter valve implantation.

Then we performed a retrospective analysis of all our transapical cases (n:232) from 2008 to 2014. We also performed a cost-utility and an overall cost-effectiveness ratio evaluation comparing transcatheter valve implantation with standard therapy in high risk patients ineligible for conventional surgery.

Conclusion: The introduction of catheter-based aortic valve implantation for high-risk patients provided very good clinical results in terms of outcomes and quality of life for our patients and additionally demonstrated a favourable cost-effectiveness ratio compared to non surgical standard in our clinical experience.

The implementation of a TAVI-Program can imply clinical and economic advantages at several levels (health insurance, political economy) and should therefore be supported from our view.

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PREVALENCE OF COMORBIDITIES IN A COHORT OF PATIENTS WITH HEMODYNAMICALLY SIGNIFICANT, PURE AORTIC STENOSIS AND SINUS RHYTHM, ADMITTED TO CARDIOSURGERY FOR A PRIMARY, ISOLATED AORTIC VALVE REPLACEMENT

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Once judged a degenerative disease, aortic valve stenosis is now believed to be very similar in terms of pathogenesis to atherosclerosis. This initial plaque of aortic stenosis is alike that of coronary artery disease. Risk factors associated with coronary artery disease - including age, male sex, hyperlipidaemia, and evidence of active inflammation - are held in common by the two disorders. Over the past decade a new hypothesis was coined, that comorbidities such as overweight/obesity, diabetes mellitus, chronic obstructive pulmonary disease, and salt-sensitive hypertension induce a systemic proinflammatory state which, in turn, favours hypertrophy development. The latter contributes to high diastolic left ventricular stiffness and heart failure development. Comorbidities, along with other important biological markers, are proposed to be included in diagnostic algorithms. It is expected that comorbidities may have an important impact on the prognosis after aortic valve replacement in patients with calcific aortic valve stenosis. In the current paper, we analyse the comorbidity profile among patients with hemodynamically significant, pure aortic stenosis and sinus rhythm, admitted to cardiosurgery clinic for primary, isolated aortic valve replacement.

Key words: *aortic valve stenosis, aortic valve replacement, comorbidity*

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MITRAL STENOSIS AND PERCUTANEUS BALLOON MITRAL VALVULOPASTY

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Rheumatic fever, which is the predominant aetiology of mitral stenosis (MS), has greatly decreased in industrialized countries: nevertheless, MS still results in significant morbidity and mortality worldwide. Because MS is a mechanical obstruction to forward flow, the only definitive therapy is mechanical relief of this obstruction. Three procedures are effective in providing such therapy. These are Percutaneous Balloon Mitral Valvuloplasty(PBMV), open commissurotomy, and mitral valve replacement. Because clinical trials have found PBMV to be superior to closed surgical commissurotomy, the latter procedure has been largely abandoned except in areas where it is less expensive to perform closed commissurotomy than PBMV. Today, therefore, Inoue’s balloon technique has become the most popular method for performing PBMV in most parts of the world. The following is a review of the PBMV with Inoue’s balloon technique as a gold standart in treatment of mitral stenosis.

Key words: *Mitral stenosis, Inoue’s balloon technique*

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DIAGNOSTICS AND TREATMENT OF ACUTE MYOCARDITIS

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SURGICAL STRATEGY FOR INVASIVE PULMONARY AND MEDIASTINAL TUMORS REQUIRE RECONSTRUCTION OF SUPERIOR VENA CAVA

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Objective: We present Thoracic surgical strategy in patients with invasive pulmonary and mediastinal tumors which required partial or complete resection and reconstruction of the superior vena cava (SVC).

Material and Methods: For a period of 7 years, 15 operated patients aged 16 to 78 years. (Average 51.4 years). SVC syndrome was observed in 6 patients. Tumors of the anterior mediastinum were invasive thymoma - 5 patients; hemangiopericytoma in 1 patient, angiosarcoma in 1 patient. Pulmonary tumors were bronchogenic cancer, 7 and 1 in small cell carcinoma. In one patient was applied extracorporeal circulation because existing fixed thrombus in the right atrium. Total reconstruction of the SVC done in 6 patients, axial resection for 2 persons and 4 persons make reconstruction of just the right subclavian vein and SVC. For vascular reconstruction we use autologous pericardium and autologous spiral vein graft.

Results: The follow-up period of 6 years . up to 6 months. Early anoma vein thrombosis had 2 patients after reconstruction. One patient died 48 hours of total thrombosis of the cerebral veins. One patient with angiosarcoma died of meta 4 years after surgery. All patients with invasive thymoma are alive and present.

Conclusions: The matched lung resection and reconstruction of the SVC are effective in patients with lung cancer about their survival. Total reconstruction of the SVC with autologous pericardium resection of mediastinal tumors with good survival and does not require continuous anticoagulant therapy.

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A CASE OF RUPTURED ABDOMINAL AORTIC ANEURYSM WITH PRIMARY AORTO-CAVAL FISTULA

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The primary aortocaval fistula is a complication of the abdominal aortic aneurysm. Rarely, large aneurysm may erode and rupture in the surrounding anatomical structures and inferior vena cava. Literature review indicates that the rate worldwide is 2-7% of all ruptures. Sudden pain, hypotonia, oliguria and symptoms of acute venous hypertension are common findings. We present a case of a 58 y.o. male with a primary aorto-caval fistula, which was the first sign of a giant abdominal aortic aneurysm.

Key words: *Abdominal aortic aneurysm, rupture, aorto-caval fistula*

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PTA OF THE COLLATERAL VESSELS

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Patients with critical ischaemia sometimes present with multiple severe comorbidity. This compels surgeons and cardiologists to be creative and give way to untraditional solutions. A minimally invasive method like PTA in treating patients with critical ischaemia has proven to be a safe, low traumatic and highly effective choice. We would like to report three cases of patients, successfully treated with PTA of the collateral vessels.

Key words: *PTA, collateral vessels, critical ischaemia*

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QUALITY OF LIFE OF PATIENTS WITH LOWER EXTREMITY PERIPHERAL ARTERIAL DISEASE

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Introduction: Quality of life (QoL) is a broad term that refers to the degree of well-being and personal satisfaction felt by a person or group of people. The concepts depends on economic indicators as well as subjective assessment of personal well-being, formed in a wide variety of criteria of physical, mental and social well-being.

The aim of this study was to investigate the quality of life of patients with Lower Extremity Peripheral Arterial Disease (PAD) who have experienced surgical and / or endovascular revascularization (TEA, bypass, PTA, stent).

Material and methods: A clinical study was conducted among 90 participants diagnosed with PAD – 50 (55.6%) men and 40(44.4%) women, aged 50 to 82 years (mean age 65.8 years), hospitalized in the Department of vascular surgery and angiology of Tokuda Hospital – Sofia, who underwent revascularization. Study was done before and 6 months after hospitalization. During the study of patients with PAD we used: clinical examination, ankle-brachial index (ABI), conventional angiography or multidetected CT angiography. We used interviews to identify the underlying cardiovascular risk profile and comorbidity and determine gather clinical and social data of patients (by conducting interviews of 21 questions divided into three parts). Study of QoL, associated with the disease used EuroQol group 5 dimension questionnaire, (EQ-5D-5L) and visual analogue scale (VAS) - measuring health status, according to the self-assessment of the patient.

Results: This study clearly shows that the surgical and / or endovascular revascularization in patients with PAD significantly improves the patient's health, by increasing the level of mobility and usual physical activity, and while reducing the degree of pain and discomfort, anxiety and depression, which results in an increase in quality of life. After the revascularization, the quality of life has improved significantly more in women than in men. During their illness patients are supported by their families, friends and healthcare providers, but find little public support.

Conclusion After analyzing the results, it appeared that surgical and / or endovascular revascularization significantly improved the quality of life of patients with PAD. The study of quality of life can improve the care of patients with PAD

Key words: *quality of life, revascularization, lower extremity peripheral arterial disease*

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IMPROVED RESULTS AFTER LASER ABLATION TREATMENT

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In the presentation the possibilities for additional operative procedures concerning improvement of the radical implementation post laser ablation treatment of varicose veins are discussed.

Majority of patients are in stage C-4, C-5 and C-6 stages by CEAP, in which besides the great saphenous varicosities some varicose changes in many venous tributaries are also found. This leads to changes in clinical practice – introduction and routine performance of adequate additional procedures such as treatment with slim-laser fibres, miniphlebectomies by the method of Zoltan Varady, foamsclerotherapy by the method of Tessari, microsclerosation, etc.

The timing of this additional treatment when necessary is being discussed – whether on the operating table just after the operation or delayed after some time.

The authores are sharing their clinical experience during the last 5 years.

Key words: *varicose veins, laser ablation treatment, miniphlebectomy*

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SUCCESSFUL EXTRACTION OF DYALYSIS CATHETER FROM BRACHIOCEPHALIC TRUNK

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Following implantation of haemodialysis catheter an unusual complication developed - insertion of the catheter into brachiocephalic trunk. Fortunately the catheter was not extracted immediately, and the patient was transmitted to X-ray department. The wrong positioning was documented on CT scan and the patient moved to operating room, after adequate preparation. The operation was ministrenotomy, extraction of catheter under protection of carotids by means of intraluminal shunt and suture of the arteriotomy. The back wall of the trunk proved to be intact. The caliber of the trunk showed large diameter and there was no need for patchplasty. Postoperative period was normal, patient discharged in good condition on 3rd postoperative day.

Key words: *haemodialysis catheter, truncus brachiocephalicus*

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INDICATIONS FOR CARDIAC STIMULATIONS IMPLANTATION - WHAT NEW?

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DRUG-DRUG INTERACTIONS AND ADVERSE DRUG REACTIONS WITH CLASSIC AND NEW ANTICOAGULANTS

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Drug interactions and adverse drug effects (ADR) have received much attention because many patients are being hospitalized or remaining hospitalized longer than necessary. Use of multiple drugs (8–12 on average in hospitalized patients) is common in a number of therapeutic regimens.

Anticoagulant drugs are among the most commonly implicated medications that cause ADR in hospitalized patients and medication errors involving anticoagulant drugs remain common. Elderly and cardiac patients represent populations at particularly high risk for suffering anticoagulant – associated ADR and drug interactions.

In this study we review clinically significant pharmacokinetic and pharmacodynamic drug–drug interactions (DDIs) involving classic and new anticoagulants. A literature search was conducted via PubMed and the Cochrane database to identify drug-drug interaction studies, using the terms drug interactions, adverse drug reactions oral anticoagulants, including dabigatran, rivaroxaban, and apixaban. Articles reviewed focused on drugs affecting the permeability glycoprotein (P-gp) efflux transporter protein and/or cytochrome P (CYP) 450 3A4 enzymes, and pharmacodynamic DDIs when drugs are administered concomitantly.

Awareness of drugs that are involved in drug-drug interactions and especially those that alter the function of the P-gp efflux transporter protein and CYP3A4 enzymes and provide adverse effects should enable medical doctors to anticipate and avoid potential DDIs involving the anticoagulants.

Key words: *antocoagulant therapy, drug interactions, adverse drug reactions*

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SARCOIDOSIS - EXPECTED DIAGNOSIS OR A SURPRISE?

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Sarcoidosis is a multisystemic inflammatory disorder with unknown etiology. It's main characteristic is the formation of noncaseous epithelioid cell granulomas in the affected organs.

It is a systemic disease, but thoracic involvement is present in over 90% of cases. Although chest radiography is often the first method of choice in patients with pulmonary involvement, computed tomography (CT) and high resolution CT (HRCT) in particular, are more sensitive for the detection of thoracic adenopathy and subtle changes in lung parenchyma.

Pulmonary sarcoidosis may manifest with various radiologic patterns. To achieve a timely diagnosis and help reduce associated morbidity and mortality, it is essential to recognize both the typical and the atypical clinico- radiological manifestations of the disease .

The aim of this presentation is to analyse and demonstrate both the typical and atypical CT changes found in 20 patients with histologically proven sarcoidosis. The presented data will also be supported by a brief review of literature.

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EBSTEIN ANOMALY WITH BLOOD CYST

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Blood cysts are congenital, located on the endocardium, particularly along the lines of closure of heart valves.

The cysts are thin walled, lined by flattened, cobblestone shaped, endothelium and filled with non-organized blood. They are rarely found in adults and in some cases may be mistaken for malignancies.

Ebstein anomaly is a rare congenital malformation, the clinical presentation of which varies from her form and anatomical severity, and also with other associated heart diseases.

The association between EA and blood cyst is rare but reported in the medical literature.

We are presenting the case of 32 years old woman with Ebstein anomaly and new tumor formation adopted and considered to be malignant. There is discussion of the probability that the formation is associated with endothelial injury in the course of the preceding RFA in 2010

The patient was directed to cardiac surgery. The treatment included extirpation of the tumor formation from the right ventricle and tricuspid valve and tricuspid valve replacement in order to correct Ebstein anomaly. Morphological description fulfills criteria for Blood cyst: thin-walled cystic formation with myxoid stroma fiber upholstered in single-endothelium of small focuses of endothelial proliferation, filled with blood clot attached to the wall with 2-3 seats.

Key words: *Ebstein anomaly, blood cyst, congenital malformation*

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2. Iliev, E., T. Valkova. Acupuncture in the treatment of the diseases of the supporting and motor apparatus in the lumbosacral region and coxofemoral joints.- *Acupuncture*, 2004, No 1, 3-19 (in Bulgarian).

Monographs:

1. Youmans, G. P., A. N. Lewin. Tuberculosis. 3rd ed. Philadelphia, etc., W. W. Saunders, 1979.

Edited books:

1. Biderman, I., S. Somien, Z. Shimshoni.- In: Tissue nutrition and viability. A. R. Hargens, ed. New York, etc., Springer-Verlag, 1986, 121-134.

Papers published with doi-number only:

1. Louissaint, A., Jr., J. A. Ferry, C. P. Soupir, R. P. Hasserjian, N. L. Harris, L. R. Zukerberg. Infectious mononucleosis mimicking lymphoma: distinguishing morphological and immunophenotypic features.- *Mod. Pathol.*, 2012 May 25. doi: 10.1038/modpathol.2012.70.

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SCRIPTA SCIENTIFICA MEDICA, Volume 46, 2014, supplement 1

Editor-in-Chief: Prof. Krasimir Ivanov, MD, PhD, DSc

Co-Editors-in-Chief:

Prof. Rinaldo Shishkov, MD, PhD, DSc

Prof. Rossen Madjov, MD, PhD, DSc

Design and pre-print: Emilia Yordanova

Cover design: Hristina Hristova

Publ. Lit. group: III-3

Sent to printers: May, 2014

Print sheets: 11

Format: 8/60x84

Approved for printing: May, 2014

Publisher: Medical University of Varna

55 Marin Drinov Street, Varna 9002, Bulgaria

www.mu-varna.bg

ISSN 0582-3250 (Print)

ISSN 1314-6408 (Online)

Medical University "Professor Paraskev Stoyanov" of Varna