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24-26 September 2021

Sovata, Romania

BOOK OF ABSTRACTS

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KIDNEY PELVIS FORMATION WAYS

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Introduction: The purpose of the present study is to determine the number of greater calyces which contribute to the formation of the renal pelvis, the level where they converge in relation to the renal hilum, and the shapes of renal pelvis formed by them.

Material and method: The renal pelvis was studied on 146 cases using as work method dissection, plastic injection (Technovit 7143), contrast substance injection, simple or CT urography.

Results: We found that a number of 2 to 5 major calyces participate in the formation of the renal pelvis: 2 calyces in 42.55% of the cases (43,93% on the right and 40,74% on the left), 3 calyces in 44,68% din cases (43,21% on the right and 45,79% on the left), 4 calyces in 10,64% (13,58% on the right and 8,41% on the left); 5 calyces in just 2,13% of the cases (2,47% on the right and 1,87% on the left). In 8,82% cases the renal pelvis is formed by convergence of the calyces in the renal sinus (entirely intrarenal pelvis), the calyces having a reduced dimension, and in 6,86% cases, the convergence of the calyces happens extrarenal (entirely extrarenal pelvis), where the major calyces are more voluminous. In 62,39% cases the pelvis was ampullary, with an oval shape (36,99% cases), rectangular (13,70% cases), square (7,53% cases), or in the shape of a bagpipe (2,05% cases). In 36,30% cases, the renal pelvis was branched with two shapes: triangular (30,82% cases) and half funnel (2,05% cases). In 1,37% cases, the renal pelvis was absent.

Conclusions: There is a great difference between left and right concerning the number of calyces which form the renal pelvis, the plane where the greater calyces converge and the shape they form.

Keywords: renal pelvis-formation

APPLICATIONS OF ANATOMY IN THE ABDOMINO-PELVIN SURGERY

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Introduction: One of the great challenges of our century is the treatment with curative visa of advanced cancers. With conventional treatments, the 5-year survival of patients diagnosed with peritoneal carcinomatosis following colorectal cancer is zero, taking in account the rest of the digestive pathologies these data decrees drastically. In the recent years, tumor cytoreduction (CR) followed by hyperthermic intraperitoneal chemotherapy (HIPEC) has entered the therapeutic arsenal, this procedure offering a 5-year survival between 19 and 51%. Regarding the neoplastic gynecological pathology, ovarian cancer has the highest mortality, the 5-year survival in stage IV is of only 17%; if CR plus HIPEC is performed it increases to 90%. The prognosis after HIPEC is influenced by several factors, among which the most important being the excision of all macroscopically visible tumor formations, excision that requires a strict dissection, guided mandatory by the anatomical planes, otherwise the oncological accuracy cannot be achieved. Regarding the hepato-bilio-pancreatic surgery, this is high grade surgery that requires an increased accuracy regarding the parenchymal anatomical resection, "tissue spearing" and a good knowledge of the possible vascular and ductal anatomical variants; its purpose being the oncological accuracy but at the same time the maximum preservation of the healthy visceral parenchyma.

Material and method: The objectives of this paper are to highlight through our own casuistry the importance of knowing a thorough anatomy, knowledge that especially in major abdomino-pelvic surgery comes with a much lower mortality and morbidity.

Results: In our service, starting with January 2015, patients diagnosed with peritoneal carcinomatosis benefit from CR and HIPEC. In this paper, we communicate the results obtained from the application of this oncological surgical technique through a standardized intervention. We also aim to present the benefits of a surgery based on anatomical dissections in hepato-bilio-pancreatic neoplastic pathology.

Conclusions: CR and HIPEC together with hepato-pancreatic resections are feasible surgical techniques, with an acceptable rate of perioperative complications and deaths, bringing a real chance of survival for patients with pathologies requiring such interventions as long as complete and correct excision of the observed tumor formations is done according to anatomical planes.

Keywords: anatomical dissections, oncological surgery, abdominal-pelvic cancers

MORPHOMETRY OF POLICE PHALANGES

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Introduction: The aim of the work is to establish the morphometry of the phalanxes of the thumb and the length of its bony portion.

Material and method: The study was performed on a number of 200 radiographs of the hand, 98 in males (49 cases in each hand) and 102 radiographs in females (51 cases in each hand). The measurements were made using a RadiAnt DICOM Viewer program, version 2020. The morphometry of the thumb phalanges and the length of the thumb were analyzed compared to the two fingers, right and left and in relation to sex.

Results: In males, we found the length of the proximal phalanx of the right thumb between 21-35 mm, and at the level of the left thumb between 22-33 mm. At the level of the right thumb for females I found it between 19-35 mm, and at the level of the left thumb between 19-33 mm. The length of the distal phalanx in males at the level of the right thumb I found it between 16-32 mm, and at the level of the left thumb between 16-25 mm. In females, we found the length of the distal phalanx at the level of the right thumb between 12-27 mm, and at the level of the left thumb between 14-24 mm. The total length of the right thumb in males was between 41-63 mm, and in the left thumbs between 39-57 mm. The total length of the right thumb for females was between 31-57 mm, and for the left thumb between 40-57 mm.

Conclusion: The length of the proximal phalanx of the thumb, compared right/left, was equal in both hands in 44% of cases, in 38% of cases the length of the proximal phalanx was longer than the left by 0,5-4 mm case, the length of the left proximal phalanx was longer than the right by 1-11 mm.

Keywords: thumb phalanges - morphometry

ANATOMICAL AND IMAGISTIC STUDIES OF THE PARANASAL SINUSES

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It is well known the, not only complicated, but also extremely particular architecture of the paranasal sinus anatomy. The majority of pathologies which affect it need radical approach using the well-known technique of FESS. These being hidden cavities, the surgical strategies need to be based on careful preoperative evaluation. This is why an especially important step was taken by developing imagistic studies, with great benefits for medicine in general and particularly for sinusal pathologies. Apart from the classic radiological evaluations, the use on a larger scale in day to day practice of the CT (Computed Tomography) scans, ultrasound, MRI (Magnetic Resonance Imaging) have contributed immensely not only to the therapeutical application, but also to wider approach. Thus, the mastery of descriptive, comparative, radiological, imagistical, topographical, and not least, surgical anatomy, is an elementary obligation for achieving competency in the practice of endonasal and cranio-basal endoscopy.

In the present study, authors wish to select, based on accumulated experience and individual comparative studies, the most adequate exploratory methods and diagnostics in the field of rhinology. Their value reside not only in their evident utility, but also in providing the best solution of these complex cases.

Keywords: rhinological anatomy, imagistics, FESS, notions of rhino-sinusal pathology

INTRAHILUM REPORTS OF THE RENAL PEDICLE'S ELEMENTS

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Introduction: The purpose of this paper is to establish the intrahilum reports of the renal pedicle's elements by following their diameters and their position in report to each other: artery, vein and renal pelvis.

Material and method: Our study was conducted on a number of 48 renal pieces by injecting plastic material (Technovit 7143) followed by corrosion with sodium hydroxide. The results were analyzed by comparison, between the two kidneys, left and right.

Results: Right renal artery diameter in the renal hilum was between 4 and 7 mm, and that of the left renal artery was 4 to 8 mm. Right renal vein diameter was found to be 7 to 10 m while left renal's vein caliber was 7-12 mm. Right renal pelvis's was 8 to 23 mm, left renal pelvis diameter was 9.5-22.5 mm.The report between renal artery caliber and renal vein caliber was 60 to 92.86% on the right side and 33.33-85.71% on the left side.Right renal artery diameter divided to the right renal pelvis diameter was between 30-70% and for the left side was 24.44-76.19%. The report between right renal vein diameter and right renal pelvis was 12.5-81.82%. On the left side the report between renal vein and pelvis's diameter highlighted two aspects: most frequently, in 95.83% of cases the vein was 40 to 80% of the renal pelvis's diameter and in only two cases (4.17%) the renal vein's diameter was more voluminous than the corresponding renal pelvis diameter by 10.95%, respectively by 12 %.

Conclusions: There was no case found were the renal vein's diameter was larger or at least equal to the corresponding renal artery.This situation was found only between left renal vein and left renal pelvis' diameters. The value of report between renal artery and corresponding renal veinwas proportional with the extrarenal length of the pelvis.

Keywords: renal pedicle's elements- hilum reports

EVALUATION OF ANATOMICAL VARIANTS OF THE SPHENOIDIAL SINUS AND ETHOIDAL CELLS USING CONE BEAM COMPUTER TOMOGRAPHY - CBCT

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Introduction: The identification of different anatomical variants of the sphenoid sinus, its deviation as well as the presence of accessory septa bring major diagnostic and therapeutic benefits. CBCT through low doses of radiation, high affinity for bone structures and the possibility of extracting individualized sections per patient and case is an ideal method for assessing and evaluating the anatomical structures of the paranasal sinuses.

Material and method: The present study is a retrospective one, it includes a cohort of 80 patients on whom a sinus CBCT was performed in the Maxillofacial Imaging Center in Cluj-Napoca; the study extends on a 2-year period. The patients included in the cohort had an CBCT indication because of a clinical suspicion of maxillary sinusitis or maxillofacial trauma. The existence of anatomical variants was quantified by a statistical calculation, this was correlated with the diameter of the sphenoid sinus using various statistical parameters.

Results: The most frequent anatomical variants examined were: the origin of the internal carotid artery, the optic canal and the vidian canal; the asymmetrical shape of the sphenoid sinus was identified in all cases, the most common shape being the saddle one.

Conclusions: Variations in regard the shape of the sphenoid sinus associated with the measurement of its size, in the sagittal and coronary planes, confirm that in symmetrical shapes of the sinus, the differences between the dimensions on the right from those on the left side do not exceed 1.5 mm., while when taking about asymmetrical shape differences of up to 7 mm appear when comparing the left side with the right one in both planes.

Keywords: anatomical variants, sphenoid sinus, ethmoidal cells, CBCT

MORPHOLOGICAL ASPECTS OF POSTERIOR CEREBRAL PERFORATING ARTERIES.

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Introduction: The occlusion of posterior cerebral arterial branches give different ischemic patterns, in our study we describe the origin and number of central braches from posterior cerebral arteries and some other morphological particularities, that could explain the variations

Material and method: our results have been obtained by dissection of formalin preserved and fresh brains injectate with polymers, and also though cerebral angio-CT, or aogio-MRI each feature was obtained by analysing a representative number of cases.

Results: The central branches from posterior communicating artery: usually gives rise to 2 to 10 branches at about 2-3 mm from the origin. enter the posterior perforated space. The number is relatively constant, regardless of its caliber, even in some cases the caliber of the thalamo-perforating arteries can exceed that of the communicating artery from which they originate.

The central branches from posterior cerebral artery can be separated into 3 groups:

- postero-medial, most arise from the P1;

- postero-lateral, arise mainly from the P2 segment and are represented by the thalamo-geniculate arteries;

- posterior choroidal arteries: Most commonly, these arteries arise from each right or left P1 segment as small individual branches

Another variant of emergence of the central arteries is through a common trunk of the perforating, bilateral thalamic arteries, as a single artery, also called Percheron's artery, which can arise from either the right or left P1 segment. It feeds the thalamus in the paramedian region as well as the upper part of the midbrain (29). Thus, the occlusion of the Percheron's artery produces bilateral thalamic and mesencephalic ischemic lesions. We found this anatomical variant in 3%

Conclusion: We identified 2 major types of central branches distribution, one with separate branches from each posterior cerebral artery and one grouped that could explain the bithalamic ischemia, different ischemic patterns.

Keywords: posterior cerebral artery – branches

COMPARATIVE STUDY OF THE IMMEDIATE POSTOPERATIVE PAIN FOR THE CLASSIC VERSUS LAPAROSCOPIC TYPES OF SURGERY WITHIN THE TREATEMENT OF INGUINAL HERNIAS

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Introduction: The inguinal hernia represents the protrusion of the intra-abdominal contents through a defect of the abdominal wall. There are two types of surgical treatment: the classic ("open") procedure and the laparoscopic procedure. The purpose of this study is to compare the effectiveness of the two surgery types, considering the immediate postoperative pain.

Material and method: The current study is a prospective study conducted between September 2019 and February 2020, including a number of 80 patients. In the study were included patients with uncomplicated inguinal hernia for which a classic or laparoscopic procedure was performed. For the study group were taken into consideration: demographic data (age, gender), type of surgery and the pain assessment using the VAS scale.

Results: Following the study, it was statistically confirmed the preponderance of elderly patients to the detriment of young patients both in the classic and the laparoscopic study group. The statistics showed in the classic study group, the presence of less pain in elderly patients on the second postoperative day compared to young patients. Regarding the pain in both postoperative days, it was statistically proved that the pain tends to decrease in intensity on the second postoperative day compared to the first postoperative day.

Conclusions: As seen from this paper, taking into consideration the pain aspect, the two surgeries are very similar. In the end, the type of treatment should be chosen by the surgeon after taking into consideration the type of hernia, the age and the patient's comorbidities.

Keywords: inguinal hernia, classic procedure, laparoscopic procedure

IMPLEMENTATION OF LIVE MULTIPLE CHOICE QUESTIONS IN THE ONLINE EXAMINATION ENVIRONMENT FOR ANATOMY USING MICROSOFT TEAMS PLATFORM AND GOOGLE FORMS WEB APLICATION

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Introduction: Because of Covid-19 pandemic, during the last year, the didactic activity in our university followed a hybrid pathway, with lectures held on Microsoft Teams Platform, and laboratory practical classes (LPs) being performed onsite. This scenario created new challenges, especially for the examination methods.

Material and method: Traditionally, at the Anatomy Discipline during the lecture hours, students sit two tests per semester based on multiple choice questions (MCQs). In order to keep this evaluation, tests can be held during the LPs time, ensuring simultaneity. Nevertheless, we designed another solution for this challenge, based on live and timed MCQ tests delivered through Microsoft Teams. At home, students were entering a simply designed website using a second device connected to internet (mobile phone). They accessed a link to a Google Form they filled in with personal data and the answers to the MCQs, which kept unrolling on their computer screen. In the end, students had 40 seconds to submit their answers, otherwise the application stopped accepting them.

Results: During last year, we processed 3137 tests for both first and second study year programs (61.6% Romanian and 38.4% English). This method was implemented only at the Anatomy Discipline and on designated student series. It had several strongpoints being fully online, with test slides strictly paced and non-scrollable, and with automated results processing. Overall feedback from students was very positive. In contrast, online testing can be affected by connection problems and creates room for cheating, since some students can gather and share the same answers.

Conclusions: Our method is an assessment tool aiming to leave the LPs activity undisturbed, and to provide students with MCQs answering training for the future exams of this type, like graduation or residency ones.

Keywords: online, examination, anatomy, MCQs, Microsoft Teams, Google Forms

PREVENTING POSTTRAUMATIC KNEE OSTEOARTHRITIS AND THE IMPLICATIONS OF THE JOINT ANATOMY IN THE REHABILITATION PROCESS

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Introduction: Knee osteoarthritis is a degenerative disease that affects mainly the elderly population. However, it can also occur in adults which experienced an injury, or as a result of repeated microtrauma at knee level. Anatomical particularities and the acquired surgical changes influence the healing outcome.

Material and method: A group of 14 patients with knee trauma was analyzed from the point of view of the imagistic anatomical changes and their implication in the postoperative rehabilitation procedures. Patients have been followed up after initial surgery, after removal of the osteosynthesis hardware in the indicated cases, during, and at the end of the rehabilitation program.

Results: The knee comprises of two articulations, actively involved in flexion-extension: patellofemoral and tibiofemoral. The proximal tibiofibular joint has a stabilizing role and reduces the rotational stress. Stabilization is realized by extracapsular and intracapsular ligaments, joint capsule and muscular forces. Between the two femoral condyles and the superior articular surface of tibia there are the lateral and the medial menisci. The diminished space between the articular surfaces on the X-ray images was an indicative for meniscal degeneration and future osteoarticular complications. These patients required prolonged physical therapy and intraarticular injections with corticosteroids, hyaluronic acid or platelet-rich plasma.

Conclusions: Imagistic exams after knee trauma and surgery reveal several anatomical changes and guide the future therapeutic approach. A comprehensive rehabilitation program can prevent posttraumatic osteoarthritis. Intraarticular injections with hyaluronic acid and platelet-rich plasma proved to be beneficial on mid- and long-term management.

Keywords: knee trauma, osteoarthritis, rehabilitation, cartilage, joint structures

CLINICAL AND MORPHOLOGICAL STUDY OF LARYNGEAL SQUAMOUS CELL CARCINOMA

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Introduction: Head and neck carcinomas are common malignant pathology and it's laryngeal localization is present in about 30-40% of cases. Diagnosis in the early stages is associated with survival rate of up to 82.4%. Most cases are diagnosed in advanced stages being accompanied by increased mortality and morbidity with a survival rate between 10-40%.

Material and method: The present study included 142 cases of laryngeal squamous cell carcinomas, from patients admitted to the ENT Clinic of the Craiova County Emergency Clinical Hospital, as well as dissected pieces within the Department of Anatomy of UMF Craiova.

Results: The results showed an increase in the incidence of laryngeal squamous cell carcinomas from the 5th to the 7th decade of life, especially affecting males. The glottic compartment was the main site of origin in 64.7% of cases. We found that all cases of laryngeal cancer corresponded to squamous cell carcinoma and as a variety, the most common form corresponded to the non-keratinized form. Regarding the degree of differentiation, moderately differentiated carcinomas were diagnosed in about half of the cases. The advanced stages, respectively stages III and IV, represented the most frequently diagnosed stage.

Conclusions: The analysis of the obtained results showed a predominance of laryngeal squamous cell carcinomas cases in elderly male patients. These tumors are frequently diagnosed in advanced stages of the disease.

Keywords: carcinoma, larynx, advanced stage.

CORRELATIONS BETWEEN SCAPULO-HUMERAL JOINT SURFACES

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Introduction: The aim of the paper was to establish a comparison between the right and left joint surfaces and between the humeral joint surfaces and those of the scapula.

Material and method: The study was performed on 52 dry bones in the humerus (16 straight and 26 left) and 31 for the scapula (15 straight and 16 left). The measurements were performed in centimeters, using the metric ribbon for the circumference of the humeral head and the caliper for the diameters of the joint surfaces.

Results: The circumference of the right femoral head was found between 12,4-16,3 mm, and of the left humeral head between 13,2-15,9 cm. The right transverse diameter of the femoral head had the size between 6,3-7,5 cm, and of the left humeral head between 6,5-8,0 cm. The vertical diameter at the level of the humeral head was 6,7-8,3 cm, and at the level of the left femoral head between 6,5-8,0 cm. At the scapula, the upper transverse diameter of the glenoid cavity was found on the right side between 1,4-1,9 cm, and on the left between 1,4-2,0 cm. The middle diameter on the right was 2,0-2,9 cm, and on the left between 1,9-3,9 cm. The lower transverse diameter was between 1,7-2,2 cm on the right, and between 1,6-2,5 cm on the left. We found the vertical diameter of the glenoid cavity on the right side between 2,7-3,7 cm, and on the left between 2,8-3,9 cm.

Conclusion: We found right/left differences in both joint surfaces. At the circumference of the humeral head, the left one was 0,4-0,8 mm smaller than the right one. In the case of diameters, the transverse one was 0,2-0,5 cm larger than the left one, and the right vertical one was larger than the left one by 0,2-0,3 cm. At the level of the glenoid cavity, the left one had a middle transverse diameter larger by 0,6 cm, and the vertical diameter was also larger on the left by 0,1-0,2 cm.

Keywords: morphology of scapulo-humeral joint surfaces

CORRELATION BETWEEN CLINICAL ASPECTS WITH THE ATHEROSCLEROTIC PLATE MORPHOLOGY IN PERIPHERAL ARTERIAL DISEASE

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Introduction: Atherosclerosis is the most common form of arteriosclerosis, being a chronic inflammatory disease of the large or medium muscular arteries with dystrophic character, which primarily affects the intima of the elastic arteries, by the deposition of lipids and minerals.

Material and methods: We started from the hypothesis that peripheral arterial disease manifests differently histomorphologically depending on location, sex, risk factors and comorbidities, so we proposed the complex characterization of the cohort, based on data from the clinical examination, performed surgeries, laboratory data and imagistic explorations.

Results: Our patients undergoing carotid and femoral endarterectomy were a selected risk group with high-grade arterial stenosis, with a large proportion of atherosclerotic plaques being classified on the morphological basis in types VII and VIII in three quarters of them with intra-plaque calcification. Preliminary histological studies have shown considerable differences between plaques with identical degrees of stenosis, and the fact that certain features of the plaque are associated with an increased risk of ischemic events.

Conclusions: In our study we demonstrated that calcification affects usually arteries with a small caliber. Risk factors as high blood pressure, diabetes and cronic renal disease have a big contribution in the process of calcification of the small arteries.

FACIAL RECONSTRUCTION: ANTHROPOMETRIC STUDIES REGARDING THE MORPHOLOGY OF THE NOSE FOR ROMANIAN ADULT POPULATION II: HEIGHT, LENGTH, AND DEPTH OF THE NOSE

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Introduction: Craniofacial reconstruction represents a final step in medico-legal identification procedures and may facilitate forensic identification. The study aim is to create a reliable and readily reproductible method of predicting the nasal morphology, in this case the length, height and the depth of the nose based on the three distances between four craniometric landmarks of the nose.

Material and methods: A sample of 35 CT scans consisting of Romanian adult subjects was selected from a database of a Neurosurgical hospital. The craniometrics measurement consisted of a first measure of craniometric distances on skull and second measure of the height, length and depth on soft tissue using 3D systems Freeform Modelling Plus Software.

Results and discussion: Correlational analysis indicated a significant moderate link between craniometric measurements of the skull and the height, length and depth of the soft tissue. Regression analysis shows that the height, length and depth of the nose form a statistically significant regression pattern with the distances between the craniometric landmarks of the nose on the skull. In this regard, seven regression formulas were created, three for height and length and one for nose depth. The obtained results are impressive and offer a good applicability in the reconstruction of the face for the adult population in Romania.

Keywords: facial reconstruction, nasal morphology, nose width, aperture width

MORPHOLOGICAL FEATURES REGARDING THE FEMORAL ARTERIES

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Introduction: The purpose of this paper is to follow the origin of the common and deep femoral arteries in relation to the osteoligamentary landmarks, by gender and comparatively left and right.

Material and method: Our study was executed on a number of 188 cases, among which 36 by dissection, 27 of them by injecting plastic material (Technovit 7143) followed by dissection, 60 Doppler ultrasound explorations and 65 cases by CT scan angiographies. The results were noted by gender and comparative left and right.

Results: We found that the origin of the right common femoral artery was situated at the middle of the inguinal ligament in 45.16% of the male cases and only in 30% of the female cases. The origin was at 1-2 cm medial of the middle of inguinal ligament in 38.71% of male cases and in 20% of female cases. The origin was at 1-3 cm lateral of the middle of the inguinal ligament in 9.70% of masculine cases and in 40% of feminine cases. Right deep femoral artery originated only in the right common femoral artery. Most frequently emerged from the posterior and lateral face of the common femoral artery, 58.82% of the male cases and 50% of the female cases. The posterior face of common femoral artery was the origin for the deep femoral artery in 35.29% of the male cases and for the female cases in 50%. In just 2 cases (4.76%) right deep femoral artery originated in posterior-medial face of the corresponding common femoral artery, both cases belonging to the masculine gender. The distance between inguinal ligament and the origin of right deep femoral artery was 20.2 to 29.7 cm in 41.67% in male cases and only 16.4 to 18.9 cm in 40% of the female cases. Most frequently the origin of the right deep femoral artery corresponded to the anterior face of the ischial branch, an aspect found in 41.17% of the masculine cases and only in 25% of the feminine cases. In 5.26% of the cases left deep femoral artery emerged from the posterior and medial face of the corresponding external iliac artery, both cases belonging to the masculine cases (6.25% of them).

Conclusions: There are many differences between masculine and feminine genders, more frequently found in masculine gender, involving their report with the inguinal ligament and only in male cases finding the origin of the deep femoral artery from the external iliac artery.

Keywords: femoral artery- morphological particularities

CLINICAL SIGNIFICANCE OF BILATERAL HYPERPLASIA OF THE POSTERIOR COMMUNICATING ARTERIES. AUTOPSIC STUDY

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Introduction: Occlusion, aplasia or hypoplasia of the posterior communicating artery (PCoA) can significantly compromise brain irrigation, causing migraines or strokes. There are only a few reports on hypoplastic PcoA and articles about bilateral PCoA hypoplasia and their clinical consequences, presented either as isolated cases or in a limited series of cases, are quite rare.

Material and method: Our retrospective study was performed on 98 arterial circles of Willis (CoW) identified at the time when the autopsy was performed in order to establish the diagnosis of death in the case of patients who died in the Emergency Clinical Hospital „Prof. dr. N. Oblu "Iasi, Romania, over a period of three years.

Results: Out of 98 deceased analyzed, 5 cases (5.12%) presented bilateral hypoplasia of PCoA. The ratio of Women: Men was 1: 4. The average age was 63.5 years. 40% of cases had atresic PCoA + hypoplastic PCoA. In 40% of cases both PCoA were found to be hypoplastic, having as cause of death the ischemic stroke.

Conclusions: Although the literature claims that PCoA hypoplasia becomes a risk factor for ischemic stroke only in the presence of ipsilateral internal carotid artery (ICA) occlusion, our study identified that atresia of one of the two PCoA associated with hypoplasia of the second one could cause ischemic stroke of the brainstem. It is, thus, revealed their role in ensuring posterior circulation in case of occlusion of the vertebro-basilar system.

Keywords: circle of Willis, posterior communicating artery, stroke, occlusion, hypoplasia.

RARE CAUSE OF ABDOMINAL PAIN SYNDROME – DURBAN SYNDROME

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Introduction. Durban syndrome is characterized by the hypertrophy of the median arcuate ligament that causes compression of the branches of the celiac trunk. From a clinical point of view, this syndrome is characterized by the appearance of pain in the upper abdominal floor.

Case report. We present the case of a male patient who has been suffering from postprandial abdominal pain for about 3 months. Abdominal angio-CT examination revealed the existence of the hypertrophy of the arcuat median ligament that compresses the arterial branches of the celiac trunk. The patient had no history of abdominal surgery. The surgery was performed by sectioning the median arcuate ligament. The postoperative outcome was favorable.

Conclusions. Although a particularly rare condition, Durban syndrome should be considered in the clinical evaluation of patients with abdominal pain syndrome.

Keywords : abdominal pain syndrome, Dunbar syndrome

THE ANATOMICAL CONCEPT OF “AGING LIVER”

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Introduction: Withage, morphological and physiological changes occur in the liver that lead stode gradation of liver function. Thus, topics such as surgery on this organ in the elderly are under research due to difficult recovery and poor regeneration of liver tissue.

Material and method: Our retrospective study is based on data found in international data bases searched using keywords such as: „aging liver” „liver at elderly” „vascularity of aging liver”. We excluded the „case report” studies or „letter to the editor” as well as those older than 10 years.

Results: Due to hepatic aging, morphological and functional change shave been observed, such as thickening (fibrosis) and endothelial defenestration, autophagyand ROS removal are deficient, and the number of inflammatory processes increases. Recent studies indicate a decrease in portal perfusion by over 25%, especially after 75 years.

Conclusions: Aging brings measurable changes in the architecture and proper functioning of the liver. Blood filtration and regeneration are affected, the immune system is deficient, and hepatic and systemic (cardiovascular) suffering may occur. Many of the disruptions that occur with senescence are due to damage of the vascular system directly, so the ultrastructural and functional anatomy of blood vessels that directly serve the portal triad is so important to be known.

Keywords: aging liver, liver at elderly, vascularity of aging liver, liver senescence

BLOOD-EYE BARRIER AND VITREOUS HUMOR: MORPHOLOGICAL NOTIONS WITH PRACTICAL APPLICABILITY IN THE POSTMORTEM DETERMINATION OF GLUCOSE

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Introduction: Similar to the blood-brain barrier, the two ocular fluids, the aqueous humor (AH) and the vitreous humor (VH), are separated from the bloodstream by the blood-eye barrier, which is responsible for the metabolites movements in and. from the eyeball. Glucose is one of the most important metabolites studied during life, being affected postmortem by the glycolysis process, which can lead to marked decreases in its value even up to zero. VH occupies about 80% of the volume of the eye and is considered the body fluid of choice in the postmortem determination of glucose.

Material and method: This study analized 90 cases of deaths with and without diabetes mellitus (DM), in which VH glucose was determined at a postmortem interval (PMI) between 24 and 72 hours, in order to assess blood glucose levels immediately before death.

Results: In 75 of the 90 cases (83.33%) the glucose values in VH were higher than zero, respectively in the remaining 15 cases (16.67%) its values were equal to zero. The average glucose values were significantly higher in patients with DM ($p < 0.0000001$). The glucose values did not vary significantly with the age or sex of the subjects included in the study.

Conclusions: These results show how the postmortem levels of VH glucose provides useful information regarding the level of antemortem

blood glucose, a phenomenon due to the particularities in the dynamics of ocular fluids but also due to a better protection of VH against degradation processes installed after death.

Keywords: vitreous humor, postmortem, glucose, blood-eye barrier

THE ROLE OF THE SPLEEN DERIVED IMMUNE CELLS IN ACUTE MYOCARDIAL ISCHEMIA

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The splenic inflammatory cells have an important role in the progression of the ischemic lesion in acute myocardial infarction. They contribute at the initiation of not only the systemic, but also the local inflammatory response, at the necrotic zone. The cardio-splenic axis was initially described in animal models without any vast extrapolation to the human spleen. Throughout the progression of acute ischemia, the spleen decreases in size and mass, presenting structural and cellular changes. Following the contraction of the splenic capsule, the splenic inflammatory cells are liberated into the bloodstream. Depending on their pro- or anti-inflammatory nature they can determine the progression of the necrotic lesion or its regression into a fibrotic zone. By considering current studies, it is hard to appreciate if the sterile inflammatory response initiated by the acute myocardial infarction has benefic effects on the ischemic lesion. Additional studies are necessary to determine the role of human splenic inflammatory cells in the immune response triggered by the acute ischemic event, which may introduce new therapeutic targets in the treatment of patients with acute myocardial infarction.

Keywords: myocardial infarction, spleen, cardio-splenic axis

WHY DO WE START FROM HERE? ADAPTATION, STRUGGLE OR AGONY

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Introduction: COVID-19 has led to a delay in the treatment of elective patients. This may have an impact on the proctological management of advanced anorectal pathology. Telemedicine can be a possible alternative in this situation. Traditional risk factors for anorectal pathology (constipation, obesity and sedentary lifestyle) increased during the COVID-19 pandemic, which is compounded by the physical and psychological problems of this population.

Material and methods: Our study took place between June 2020 and August 2021, on a group of 1437 patients of a specialized clinic in North-Eastern Romania.

Results: Our results indicate an increase of over 46% in the number of patients, starting with January and February 2021. At the same time, a percentage of 3-4% of postcovid patients presented complications of absolutely particular hemorrhoidal disease, such as: internal hemorrhoidal microthrombosis, particular vascular fragility, increased frequency of rare post-interventional complications - phlebitis or internal hemorrhoidal thrombophlebitis. We also recorded cases of internal hemorrhoidal thrombosis after an anti-COVID vaccine. **Discussions:** The literature does not provide us with enough data on the management of anorectal diseases during the pandemic. Anorectal diseases require emergency interventions, such as acute hemorrhoidal thrombosis, with or without prolapse, anorectal abscess, arterial fistula, occlusive cancers require transfer to a unit with adequate capacity.

Conclusions: Anyone who have gone through coronavirus infection for no more than 7-8 months may develop special forms of anorectal diseases with a difficult to predict response to conservative or interventional treatment.

Keywords: anorectal pathology, anorectal manifestations of COVID 2019, ideopathic hemorrhoidal thrombosis, post-vaccine thrombosis

PERSISTENCE OF THE TRIGEMINAL ARTERY – CASE REPORT

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Introduction: Persistence of the trigeminal artery is a rare malformation of the vascular system that is caused by the persistence of the trigeminal artery from the intrauterine life, representing a carotido-vretebrobasilar anastomosis. During the intrauterine life, the trigeminal artery replace the basilar artery before the formation of the vertebral arteries and of the posterior communicating artery. Usually, the trigeminal artery is found accidentally and it is associated with aneurysm, vascular malformations or stroke.

Case report: We present the case of a young patient with persistent headache, without other obvious neurological charges at the clinical

examination. MRI cerebral examination reveals the persistence of the left trigeminal artery with a path between the cavernous segment of the left internal carotid artery and the basilar artery. The basilar vertebral system has a hypoplastic appearance.

Conclusions: Although discovered incidentally, the persistence of the trigeminal artery must be known in clinical practice due to the complications that it can cause.

Keywords: persistent trigeminal artery

THE ROLE OF ANATOMY IN GASTRIC ONCOLOGICAL SURGERY

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Introduction: Gastric cancer is the third leading cause of cancer death in the world. Known risk factors are genetic load, Hp infection, age, diet, smoking. The diagnosis is made on the basis of upper digestive endoscopy and histopathological examination. Staging is performed by contrast enhanced thoraco-abdomino-pelvic computer tomography. This paper emphasizes the importance of anatomical dissection in obtaining optimal oncological results.

Material and method: The candidates for surgery (either per primam or after neoadjuvant therapy) operated within the Institute of Gastroenterology and Hepatology Cluj Napoca were analyzed.

Results: In addition to the benefit from the oncological point of view, the dissection done in anatomical plans has advantages in the immediate postoperative evolution of the patients (reduced blood losses, reduced operative time, diminished hospitalization time). Lymphadenectomy is an essential step in oncological surgery for gastric cancer.

Conclusions: The use of sharp dissection in embryological plans results in reduced blood loss, decreased operative time and also a reduced risk of recurrence due to the proper performance of lymphadenectomy and the obtaining of free resection margins of tumor tissue.

Keywords: gastric cancer, oncological surgery, anatomical dissection

PNEUMOSINUS DILATANS – ANATOMICAL AND PHYSIOLOGICAL CONSIDERATIONS

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The annex cavities of the nose, known as the paranasal sinuses, are practically spaces situated in the cephalic extremity. They are found inside the bones for which they were named. Their shape and dimension is reached after a long pneumatization process, which due to internal or external influence, leads to unlimited architectural variety, pathologies pretaining to these proving to be either asymptomatic, or with various complications. Past standard determinations and orientative evaluations, the exacerbation of their conformations, sometimes beyond the limits of the bone, or with the appearance of pathological pneumatisation, has the generic name of hypersinus. Based on a vast number of cases, and a professional activity of over 5 decades dedicated to this pathology, in the Clinic of Otolaryngology from The County Emergency Clinical Hospital of Targu Mures , the authors wish to discuss aspects of nomeclature and descriptive anatomy.

The problem consisting of the pathology known as Pneumosinus dilatans, which can affect one, more or all sinuses, shows increased importance in the light of interdisciplinary versatility.

Also, correlation between the entity and the functional anatomy, applicative anatomy, systemic or regional, respectively clinical picture represents a practical necessity. Paradoxically, pathology that is detected in incipient stages has simple radical therapeutical solutions, whil those that are unsuspected or unrecognized in time can lead to grave anatomo-functional modifications.

Keywords: paransal sinuses, pneumatization process, anatomical variations, pneumosinus dilatans

CUTANEOUS BASOSQUAMOS CARCINOMA, A RARE ENTITY OF NONMELANOMA SKIN CANCER: CLINICAL AND MORPHOLOGICAL CHARACTERISTICS

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Introduction: cutaneous basosquamos carcinoma is an uncommon variant of non-melanoma skin cancer, that has morphologic criteria for both of basal cell carcinoma and squamous cell carcinoma. It is considered to be an aggressive variant of basal cell carcinoma with high risk

of recurrence and potential risk of metastasis. The aim of this study was to identify all of the cases diagnosed as basosquamos carcinoma in our Institution and to describe the clinical and morphological caracteristics of this tumor entity.

Material and method: we collected all basosquamous skin carcinoma cases diagnosed in the Pathology Department from the Emergency County Hospital Miercurea Ciuc from 2015 to 2021. Both the clinical and the histological characteristics were analized: gender, age at diagnosis, primary tumor site and diameter, histopathological diagnosis, depth of tumor invasion, anatomic level of invasion, presence of perineural and lymphovascular invasion, excision margins.

Results: we identified 4 cases, 3 females and 1 male, with the mean age at diagnosis of 77,25 years (range 67-86 years), all of them presenting clinically with ulcerated skin lesions localized at the head and neck region: nasal, frontal and lateronasal region. The mean diameter of the tumor was 15,75 mm (range from 8-20), that has infiltrated the skin in to the deep dermis with the mean depth of invasion of 3,125 mm (range 2-4 mm). None of the cases had perineural or lymphovascular invasion. 3 of the cases was completely excised and one had positive excision margins. The follow-up for three of this cases is still ongoing and none of our patiens presented local recurrence or metastatis.

Discussion: basosquamous carcinoma is considered a rare skin tumor, but data about the incidence and prognosis are still controversial. No specific guidelines exists for basosquamous carcinoma treatment, but a wide surgical excision is highly recommended.

Keywords: basosquamous carcinoma, non-melanoma skin cancer, skin cancer

THE BLOOD SUPPLY OF THE BONES IN THE UPPER LIMB

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The strongest connecting tissue in the human body is the osseous tissue which provides support and protection for the body and remodels throughout our lives. To sustain this activity the blood supply of the skeleton is extensive and various. On the upper limb the scaphoid is the single bone witch receives tenuous blood supply, the rest of the bones have a direct vascularization. This intricate network of arteries in the bones of the upper limb ensures the fracture healing in the majority of the cases. The knowledge of the course and location of the brachial, radial and ulnar arteries and their branches during surgery is crucial because injury to these arteries can lead to delayed fracture healing, pseuarthrosis (especially in the scaphoid), or osteonecrosis (humeral head). We've searched and reviewed the literature regarding the vascularization of the humerus, ulna, radius, scaphoid, os lunatum, triquetrum and pisiform to identify the risk points and danger zones encountered during the surgical treatments of these bones.

VARIANTS OF COMMON HEPATIC DUCT FORMATION AND VARIANTS OF TERMINATION OF CYSTIC DUCT INTO THE COMMON BILE DUCT

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Introduction: The aim of the study is to appreciate the way of formation of the common hepatic duct, as well as the confluence of the cystic duct with the common bile duct.

Material and method: Results of our study were obtained using as methods of study dissection, ultrasonography and computed tomographic cholangiography. The dissections were done on a number of 42 formalin preserved specimens. Ultrasonographic examinations were performed in the Gastroenterology Clinic using a Doppler ultrasound GE Logic S8 Premium color, with a C1-6 convex transducer, and for cholangiography was used a GE BrightSpeed Select 16 Slice CT.

Results: The common hepatic duct can be formed by the confluence of two or three hepatic ducts, the confluence of which is most frequently formed as an acute angle. Formation of the common hepatic duct from two hepatic ducts, modal formation, was found in 84.78% of cases. In 66.30% of cases, the angle formed at the confluence of the two hepatic ducts is an acute angle, most often the confluence taking place extrahepatic, at varying distances from the inferior surface of the liver.

In 15.22% of cases the common hepatic duct is formed by the confluence of three hepatic ducts (right, left and middle), amodal formation, the middle duct being usually situated posteriorly.

Termination of the cystic duct into the common hepatic duct is most commonly done on the right lateral surface of the duct, directly or along a parallel and attached downward trajectory with it, the so-called „gun barrel" trajectory, ending at different levels into the common hepatic duct. The parallel trajectory of the two ducts is achieved with the position of the cystic duct on the right side of the common hepatic duct or on its posterolateral, posterior surface or even on the left side, after the cystic duct crosses it anteriorly or posteriorly. The cystic duct can end in one of the two hepatic ducts, more frequently into the right one, above the confluence that form the common hepatic duct. Termination of the cystic duct into the right hepatic duct is done on its right side, above confluence with the left hepatic duct. When it terminates into the left hepatic duct, the cystic duct passes anteriorly or posteriorly to the right hepatic duct.

Conclusions: Recognition of storeyed biliary convergences can prevent unpleasant accidents, focusing at the same time on the most appropriate interventional behaviors [Duca]. The common hepatic and cystic ducts do not have numerical variants, but they show variants of trajectory, length and termination.

Keywords: hepatic duct- cystic- formation -termination variants

MORPHOMETRY OF THE SESAMOID BONES OF THE HAND

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Introduction: The aim of the paper was to follow the morphology of the bonessesamoids of the hand present in the metacarpals 1, 2 and 5,whose size was compared to the right / left and between the three metacarpals.

Material and method: The study was performed on radiographsperformed in the radiology service of the Emergency Clinical Hospital from-Constanța, the measurements being performed with the RadiAnt dICOM programViewer, version 2020.

Results: At the level of metacarpal 1, 198 bones were highlighted sesamoid. In males, the length on the right was 3-7 mm, and on left 3-6 mm. In females, I found the length between 3-6 mm, on the right being 3-6 mm, and on the left between 3-6 mm. Comparison the length of the right and left sesamoids at the level of the metacarpal 1: In 43.43% of cases the sesamoids had the same length; In 31.31% of In some cases, the right sesamoids were larger than the left ones, with differences of 1-3 mm; In 25.25% of cases the left sesamoids were larger than the straight ones by 1 mm.At the level of metacarpal 2, 88 sesamoid bones were highlighted, in males, the length being between 3-6 mm, on the right it was between 3-6 mm, and on the left between 3-5 mm. In females, the length of the sesamoids was between 3-5 mm, on the right between 3-5 mm, and on the left between 3-5 mm. Length comparison of right and left sesamoids at the level of the metacarpal 2: in 38.64% in some cases the sesamoids were the same length; In 9.09% of cases the straight sesamoids were 1 mm larger than the left ones; Not 25.25% in some cases the left sesamoids were 1 mm larger than the straight ones. At the level of metacarpal 5, 44 sesamoid bones were highlighted, in males, the length of the metacarpal sesamoids 5 was included between 3-4 mm, the length of the right and left sesamoids being included between 3-4 mm. In females, the length of the sesamoids was between 3-5 mm. on the right being 3-4 mm, and on the left between 3-5 mm. Comparison of the length of the right and left sesamoids at the level metacarpal 5: In 72.27% of cases the sesamoids had the same length; In 18.18% of the case, the straight sesamoids were larger than the left ones by 1 mm; In only one case (4.55 %% of cases) sesamoids straight ones were larger than the left ones, with a difference of 1 mm.

Conclusions: The sesamoid bones at the level of the metacarpal 1 are thosemore numerous and more voluminous.

Keywords: sesamoid bones hand, morphometry

PATHOLOGY AND MOLECULAR VIROLOGY OF COVID-19 VIROSIS IN THE OTORHINOLOGY REGION - STUDIES ON DECEASED PATIENTS

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Introduction: The upper respiratory tract mucosa is the site of the first step of infection with SARS-CoV-2 virus (ACE2 and TMPRSS2 receptors).

Material and method: Our studies included 44 deceased COVID-19 patients. Tissue samples were collected by curettage/craniotomy at 12 hours postmortem and were subjected to investigations of molecular virology, histopathology-immunohistochemistry and scanning-transmission electron microscopy (nasal and middle ear mucosa), respectively histopathology-immunohistochemistry (olfactory bulb and tract). The research were conducted after approval of Ethics Committees and Administrative Boards of involved institutions.

Results: Nasal mucosa (12 COVID-19 patients, 5 control patients). Positive qPCR for SARS-CoV-2 in 100% (n = 12/12) of cases. Histopathological, stromal edema (lymphocytic inflammatory infiltrate), thickening of the basal membrane and viral cytopathic effect in 25% (n = 3/12),

33.3% (n = 4/12), respectively 8.3% (n = 1/12) of cases. At electron microscopy - frequent microbial aggregates (75%, n = 9/12 versus control group - 20%, n = 1/5), immune cells (58.3%, n = 7/12), suggestive structures for SARS-CoV-2 virus, and the abundance of the Golgi apparatus in the epithelial cells. Olfactory system (24 COVID-19 patients). CD3+ lymphocytes on the surface and in the thickness of the olfactory epithelium (33%, n = 8/24). Frequent amylaceous bodies (66.6%, n = 16/24), focal cerebritis (37.5%, n = 9/24), CD3+ lymphocytes and softening in the olfactory bulb. Middle ear mucosa (8 COVID-19 patients). Positive qPCR for 50% (n = 4/8) of cases (line B.1.1.7); lower viral loads compared to the nasal mucosa. At electron microscopy - suggestive structures for SARS-CoV-2 virus; without histopathological changes.

Conclusions: Reduced inflammatory modifications in the otorhinology region, with secondary nasal dysbiosis and degenerative-inflammatory modifications in the olfactory bulb. SARS-CoV-2 could be present in the middle ear of an infected patient in the absence of acute otitis media.

Keywords: SARS-CoV-2, COVID-19, nasal mucosa, olfactory system, middle ear, histopathology, electron microscopy

MORPHOFUNCTIONAL CHARACTERISTICS OF LEFT VENTRICLE IN YOUNG MALES WITH EARLY REPOLARIZATION PATTERN

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Introduction: Early repolarization pattern (ERP) on the ECG is characterized by a J-wave or a J-point elevation, an abnormality at the terminal part of the QRS complex, of "notch" or "slur" type. Studies have demonstrated that individuals with ERP have a higher risk of developing malignant arrhythmias (early repolarization syndrome - ERS) than the general population. ERS alongside with the Brugada syndrome (BRS) are the two forms of J-wave syndromes. The pathogenesis of ERP and ERS is related probably to morphofunctional changes in the infero-lateral part of the left ventricle. The aim of our study was to investigate with echocardiographic examination the possible existence of cardiac morphofunctional changes associated with ERP.

Material and method: The study involved 241 male volunteers with ages between 16 and 27 years, free of medical conditions. The participants underwent a standard, 12-lead ECG registration, for diagnosing ERP. Based on the presence or absence of the ERP, left ventricular echocardiographic characteristics of the ERP+ (30 subjects) and an ERP- (32 subjects) subgroups were compared.

Results: We analyzed 24 morphological and functional parameters of the left ventricle, all of them being in the normal reference range in both groups. During the comparation of the morphological parameters we did not find any differences between the two groups, however, among the functional parameters we found that the ERP+ individuals had a smaller left ventricular end-diastolic volume (37.6 ± 15.2 mL vs. 45.5 ± 13.5 mL, $p = 0.037$), and had more frequently mild mitral regurgitation (41.4% vs. 6.5% , $p < 0.001$).

Conclusion: Left ventricular echocardiographic parameters were found to be in the normal range in young healthy men with ERP. Unlike other studies, no morphological changes associated with ERP were detected, however, certain functional parameters were found to be associated with the presence of ERP.

CONTRIBUTIONS TO THE STUDY OF FETAL STERNUM OSSIFICATION

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Background: It is widely-known that fetal sternum ossifies from the 6th month of intrauterine life, by means of four ossification centers (sternebrae), in a craniocaudal direction.

Purpose: In the present paper, authors performed a study regarding the morphologic features of sternum ossification centers, during ontogenetic dynamics. **Material and methods:** The study was conducted on a number of 5 fetuses (3 males and 2 females), with vertex - coccyx length (VCL) between 26 and 29 cm and gestational age between 25 and 32 weeks. None of them presented congenital malformations or any alterations of the skeleton. The bone samples necessary for our study were processed by cold or warm maceration and controlled corrosion procedures, by boiling in NaOH 1% solution.

Results and Discussions: In just one male sample, we noted the presence of 2 ossification centers, at the middle level of mesosternum; the rest of the sternebrae presented only one ossification centre. This may suggest that the sternebrae ossification centers do not always achieve craniocaudal fusion or that the supplementary ossification centers might appear at sternebrae levels. This latter hypothesis is also enforced by the morphologic aspect of the ossification centers found at the middle mesosternum level.

Keywords: sternum, ossification centers, craniocaudal direction

B16F10 MELANOMA HYPERPIGMENTATION BY IRON OXIDE/ SALICYLIC ACID NANOPARTICLE THERAPY

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Introduction: Melanoma has a high phenotypic heterogeneity that explains its ability to adapt to environmental conditions and to develop resistance to therapy. By phenotypic switching, melanoma cells can become invasive or progressive, and phenotypic modulation should become an important component of future melanoma treatment strategies. In this study we used a nanocomposite of iron oxide functionalized with salicylic acid (SalONPs) to analyze its effect on the cell phenotype of B16F10 melanoma.

Material and methods: for the study we used the syngeneic model of B16F10 melanoma developed on C57BL/6 mice. Melanomas were treated by oral administration and/or by intratumoral injection of SalONPs. The treated tumors were harvested, processed by histological and immunohistochemical techniques and analyzed by microscopy to highlight the phenotypic traits of melanoma cells.

Results: The SalONPs had the property of inducing the hyperpigmentation of the treated tumors by the cytotoxic action on weakly pigmented melanomic cells and the stimulation of melanogenesis by intratumorally accumulated iron, resulting in the formation of hyperpigmented melanoma cells.

Conclusions: This study highlighted the possibility of using nanotherapy to modulate the phenotypic switching of B16F10 melanoma cells.

Keywords: B16F10 melanoma cells, phenotypic switching, hyperpigmentation, nanotherapy

SURGICAL ANATOMY OF THE CARPAL TUNNEL SYNDROME

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Introduction: Carpal tunnel syndrome represent the most frequent compression neuropathy of the median nerv at the upper limb.

Methods and Material: This lecture highlights the anatomical aspects of the carpal tunnel, the possible anatomical variations important for the surgical treatment, potential complications of the carpal tunnel release and techniques to avoid or reduce an unsatisfactory result for the patient.

Results: The surgeon who treats this pathology should be aware of the normal topographical relationships of the anatomical components and their anatomical variantions.

Conclusion: In order to avoid complications during surgical treatment knowing the surgical anatomy is mandatory as well as understanding the role of the anatomical variations in the pathogenesis of the carpal tunnel syndrome.

Keywords: surgical anatomy, median nerve, carpal tunnel syndrome, anatomical variations

SURGICAL ANATOMY OF THE AORTIC ROOT

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Introduction: The aortic root is a very complex anatomical zone containing different structures and being a complicated connection in between the left ventricle outflow tract and the incipient part of aortic arterial system.

Methods and Material: This lecture emphasizes the surgical anatomy of the main components of the aortic root (the aortic valve, the origin of the coronary arteries and the mitro-aortic continuity) wich is placed as a "center-piece" in the heart and has anatomical topographical relationships with all the cardiac chambers.

Results: The cardiac surgeon who is involved in the treatment of the pathology at this level has to know all these anatomical details and also should be aware that aortic root is extremely pretentious technically to operate and that the correct function of the aortic valve depends on correct interactions in between all the components of the aortic root.

Conclusion: Understanding the difficult surgical anatomy of this heterogenous part of the heart is absolutely necessary in order to obtain good results and to avoid complications during the surgical procedures of the aortic valve and in the surgery of the aortic root.

Keywords: surgical anatomy, aortic root, aortic valve

EFFICIENCY AND LIMITATIONS OF PRENATAL DIAGNOSTIC IMAGING METHODS IN BILATERAL RENAL AGENESIS - CASE PRESENTATION

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Introduction: Bilateral renal agenesis is a rare entity in medical practice. The Potter sequence (Potter syndrome) consists of the association of oligoamnios with renal development abnormalities and pulmonary hypoplasia. The condition, of multifactorial etiology, is complex, severe and incompatible with life, and its detection during pregnancy is difficult and delicate for both phisician and pregnant woman. We present a case of a 21-year-old patient with a pathological obstetric history, monitored during pregnancy and hospitalized for recurrent abortion. Early detected oligohydramnios requires imaging investigation of the fetal renal apparatus, both ultrasonographically and by nuclear magnetic resonance. The Potter sequence diagnosis is established based on the data provided. The patient chooses to maintain the course of the pregnancy until term, and the postpartum necropsy examination of the newborn confirms the diagnosis and brings additional, macro- and microscopic data.

Conclusions: The particularity of the case consists in the recurrence of this developmental anomaly in the same patient, without being able to objectify a genetic determinism. In this case, the most effective and early method of prenatal screening was ultrasonography.

Keywords: Potter syndrome, oligohydramnios, bilateral renal agenesis

THE NEXT GENERATION OF HEART VALVE SUBSTITUTES ARE THE TISSUE ENGINEERED HEART VALVES

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Introduction: The surgical or interventional therapies represent the only feasible approaches to the treatment of increasing number of heart valve diseases. Although with the valvular repair patients have more benefits, studies point that complete replacement procedures are preferred. Replacement options are mechanical and biological prostheses characterized by well-known shortcomings that represent the grounds for the next generation of heart valves replacements using tissue engineering, composed of scaffolds, cells and stimuli.

Methods and Material: For the temporary mechanical support for the cells, scaffolds are used, classified by their nature in biological and synthetic. Regarding the cells, various types of cells were used in different states of differentiation, including stem cells. Therefore, in order to increase their adherence and propagation towards the scaffold, systems that dynamically stimulates them are used – bioreactors completed by in vivo evaluation on their performance in a living organism. In our study, we used biological valvular scaffolds obtained through decellularization of ovine pulmonary valves seeded with endothelial and fibroblastic cells differentiated from autologous adipose derived stem cells. The new valvular structures were placed in a bioreactor and preconditioned to the pulmonary hemodynamic conditions followed by surgical implantation in sheep (n=6) that were periodically evaluated by trans-thoracic echocardiography over a six months extended follow-up.

Results: All valve preparation procedures underwent without major complications. The surgical procedures were successful and valves presented good hemodynamic performances, two animals presenting important valvular regurgitation impacting the dimension and function of the right heart cavities.

Conclusion: Using tissue engineering, new valvular substitutes can be manufactured, characterized by non-thrombogenicity, non-immunogenicity and capacity to grow with the host. Our research work revealed functional valves obtained by tissue manipulation in a preclinical scenario.

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THE PROBLEMATICS OF MASTOID SINUSES

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The chosen subject, apart from presenting as an ordinary topic from an anatomical point of view, represents a novel theme for the author, as seen with the eyes of an otologist. It is therefore not only natural, but also mandatory that the primordial importance of anatomy is highlighted.

Thus, starting from theoretical notions, we must head towards the more practical aspects, and especially towards verified ones. Practice shows us that a tendency towards theorization still exists today.

Considering the development of the enginery and imaging programs, we witness a great increase in the preoperative diagnostic possibilities. This is why lately scientific literature presents more frequently the problematics of these imaging techniques and the numerous anatomical

variations discernable through them. This study represents an example of variability of mastoid bone structure, for in the evaluation of scientific activity, case reports are not so appreciated anymore.

The main imaging technique was represented by the CT scan, because apart from it representing the gold standard regarding the head region, it permits a good processing using the RadiAnt software. In special cases, an MRI was employed.

What represents the quintessence of the processed material is an ever growing tendency to regard the mastoid cells as part of the normal physiology of the annex cavities linked to the upper respiratory system, proven by a growing usage of the mastoid sinus expression.

In case of rhinological architecture we are practically limitless, thus being able to describe it from several points of views – countless variations, pathologies and strategies.

Keywords: mastoid apophysis, mastoid cells, anatomical variations, hyperpneumatization

THE PREVALENCE OF DENTAL ROTATION IN A LOCAL COMUNITY FROM MURES COUNTY

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Introduction: To evaluate the prevalence of rotated teeth on Mures county patients.

Methods and Material: This cross-sectional study comprised of 936 patients who attended at three dental clinics from Mures county. Patients' dental records and panoramic radiographs were reviewed retrospectively. After applying the exclusion criteria, there remained 74 patients age 11-37 years, with rotated teeth (35 males and 39 females).

Results: All individuals had rotated at least one tooth. The most frecquent rotated teeth were premolars (54 patients), followed by canines (12 patients), incisives (5 patients) and molars (3 patients). There were more cases of patients with maxillary rotated teeth (48) than mandibular rotated teeth (26).

Conclusions: the most frequently rotated teeth were the premolars and the incidence is higher on the maxillary arch than in the mandibular arch.

Keywords: rotation, premolars, incidence, maxillary arch

RADICAL CYSTECTOMY IN THE DEPARTMENT OF UROLOGY, MUREȘ COUNTY HOSPITAL: CLINICAL AND HISTOPATHOLOGICAL ASPECTS

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Introduction: Radical cystectomy (RC) with pelvic lymphadenectomy is the gold standard treatment for Muscle Invasive Urothelial Carcinoma (MIUC). Lymphatic node involvement (N stage) is a crucial parameter for prognosis, making lymphadenectomy essential both for therapeutical and prognostic purposes. The aim of our study was to assess the impact of the degree of lymph node involvement on overall survival (OS).

Methods and Material: We performed a retrospective observational study and analyzed all RC patients operated in the Department of Urology, Mureș County Hospital during November 2011 and October 2018. We included all patients had no previous chemotherapy performed before surgery and had complete follow-up data. Survival analysis was performed using the Kaplan-Meyer and Cox methods using lymph node status as co-factor.

Results: We included a series of 69 patients with lymphadenectomy performed in 46 cases. No lymph node involvement was found in 29 cases (63%). For the remainder, the majority were classified as N2 (n=12, 26.1%), N1 (n=3, 6.5%) and N3 (n=2, 4.3%). Survival analysis revealed the highest median when no lymph node involvement was present (52.3 months), followed by N3 (23.6 months), N1 (8 months) and N2 (7.5 months). Cox analysis found the highest risk for poor survival in N1 patients (HR 10.57, p=0.001) followed by N3 (HR 4.74, p=0.053) and N2 (HR 3.6, p=0.008).

Conclusion: We found that the presence of lymph node involvement itself, regardless of the extent, had the highest impact for poor OS. However, further studies involving a larger number of patients are required.

UNILATERAL AND PARTIAL AGENESIS OF PECTORALIS MUSCLE – CASE REPORT AND LITERATURE REVIEW

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Introduction: The absence of the pectoralis major muscle is considered a feature of the Poland syndrome, described as a complex disease, affecting not only muscular tissue, but also bones and various organs, both in the proximity and at distance from the muscular defect. Having no clear evidence-based etiology, partial agenesis of the pectoralis major muscle is a silent anomaly, discovered exclusively when symptomatic and during an early age.

Case presentation: The method used in this particular case was computed tomography (CT), in the circumstances of a respiratory tract complaint. However, similarities between our case and literature databases have been outlined only regarding the prevalence in gender, type of impairment and right side localization. No anatomical, genetic or hereditary links or associations have been observed in our patient's current condition or throughout his past medical history, nor other medically proven related syndromes or diseases were noted. **Conclusions:** Consequently, our aim is to draw attention to the fact that unilateral partial agenesis of pectoralis muscle alone has been scarcely reported in recent or former research papers, alongside with stating that this discovery may be as well portrayed in the near future as an individuality itself, included or not amongst the widespread accepted and standard characteristics of a possible Poland syndrome.

Keywords: incomplete agenesis, pectoralis major muscle, Poland syndrome

UNCOMMON PATTERN OF RECURRENT ARTERY OF HEUBNER – CASE REPORT

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Introduction: The recurrent artery of Heubner (RAH) is a medial lenticulostriate artery, whose variable features such as origin, number, course, collateral and terminal branches give rise to many studies which reveal its anatomical variations.

Case presentation: During the dissection of a formalin-fixed human brain, focused on circle of Willis, we discover a unique vascular pattern of the RAH. We identified the presence of two recurrent arteries on the right side and three on the left side. Moreover, the left recurrent artery has a rare course, they being located inferiorly by the first segment (A1) of the anterior cerebral artery (ACA). Another particular aspects are represent by the relationship with the other vascular structures: one left RAH has a similar course with the fronto-orbital artery, one left RAH has a terminal branch which surrounding the A1, and another one left RAH come out in the Sylvian fissure. On the right side it notices one of the RAHs with a long extra cerebral course.

Conclusions: This case shows a complex and rare vascular pattern with a major clinical importance because, even if the RAH is a small artery, its injury can cause important neurological deficits.

Keywords: the recurrent artery of Heubner, lenticulostriate arteries, anterior cerebral artery

LEARNING ANATOMY THROUGH COMBINED TEACHING TECHNIQUE AND CONCEPTUAL MAPS, FOR STUDENTS IN THE ROMANIAN SECTION OF GENERAL MEDICINE

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Introduction: This study investigates whether the method of learning by teaching using conceptual maps achieves its beneficial effects in anatomy. The teaching is done by students, and the conceptual maps involve making drawings, mentioning connections between the concepts.

Objectives: The main objective is to highlight learning performance differences and long-term memory, for students learning through the proposed method compared to the traditional one. The secondary objectives are mentioning results interactions by gender or age.

Material and methods: The study took place in the firts year's anatomy laboratories. 185 students of the Romanian section were included, with signed written agreement, divided into 2 groups, the experimental and control group, according to the learning method. 59.36% were

females and 40.64% males. The assessment of students' knowledge was done through 2 working tools, both being by written test: semesterial and at 6 months.

Results: The study's validity reveals a Cronbach alpha index of 0.803. The markses averages are in favor of the experimental group at each test (semesters I, II and at 6 months) with at least 0.5 points. There is a higher percentage of high marks and a lower percentage of low marks in the experimental group, without gender and group interactions.

Conclusions: Learning by teaching with conceptual maps would improve students' learning performance and long-term memory, regardless of gender or education level. Attendance would not influence the results. We recommend introducing of this method in other universities, for students, as well as for results validation.

Keywords: learning by teaching, conceptual maps, learning anatomy, learning performance.

LENGTH OF MYOCARDIAL BRIDGES IN ANTERIOR INTERVENTRICULAR ARTERY

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Introduction: Miocardial bridges (MB) can be found on both coronary arteries, most frequently in left coronary artery, and at this level more on the anterior interventricular artery (LAD). On LAD, they can be single or multiple (double or triple), being located in the upper third, medium (most frequently), and lower.

Methods and working material: The study was on 273 cases, of which 140 in male and 133 in female, angioCT came from the Radiology Center in the Emergency Clinical Hospital, on a GE LightSpeed VCT64 Slice CT scanner. The lenght and thickness of MB were recorded.

Results: The length of the single MB located at the level of the LAD artery, we found it between 4.25-43.1 mm, in males, on the 110 cases, we found the length between 4.25-43.1 mm, and in sex female, on the 125 cases, we found the length between 11.9-35.05 mm. On the 121 MB found at the upper 1/3 of the LAD artery, the length was between 5.31-43.1 mm, in males, on the 72 cases we found a length of MB in the upper 1/3 of the LAD artery between 5, 31-43.1 mm, and in females the 72 cases had a length between 23.0-35.0 mm. At the middle 1/3 level of the LAD artery, in males, on the 64 cases, the length was between 4.25-35.0 mm, and in females from 117 cases the length was between 11.9-35.0 mm. At the lower 1/3 level of the LAD artery, in the 10 cases the length was between 12.2-16.7 mm, on the 2 male cases the length was between 12.2-14.0 mm, and in females the 8 cases had a length between 14.2-16.7 mm. Double MB on LAD we found in 74 cases, 44 of them in males, with a length between 20.0-23.7 mm, and 30 in female, with a length between 18.7-25.6 mm. Triple MB we found in only 1 case. Superior MB, located in the upper 1/3 of LAD, with a length of 43.1 mm, middle MB, located in middle 1/3 of LAD with a length of 11.9 mm, and an inferior one, also on the middle 1/3 of LAD, with a length of 16.7 mm.

Conclusions: MB located at LAD level are the most numerous and the longest, the longest length we found in single MB.

Key words: miocardial bridge – morphometry

CT - MRI TECHIQUES IN CARDIAC ANATOMY EVALUATION

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Medical students of near future will be more and more exposed to anatomic images obtained from sectional (CT and MR) examinations.

Such images will show the structure of the various organs in anatomical orientation, this being represented by reviewing the individual into „anatomical position", in orthostatism and facing us.

From this anatomical position all the directions used to present the organs will be linked to the three (axial, coronal and sagittal) planes of the human body.

The heart, on the other hand, is not subject to such conventions, even if the students learn that the "left chambers" are positioned behind their right equivalents.

Analysis of the sectional images obtained through CT or MRI and comparison with dissected heart will be used to challenge the established status of describing the heart using its own axes so that the left chambers are positioned in the left side.

Even if appropriate in explaining functional disorders such as intracardiac shunts (e.g. left to right) such conventions will be suboptimal when describing coronary arteries branches supplying blood to the part of the heart laying on the diaphragm. The so-called "posterior descending artery" is located inferiorly, and its clogging will lead to inferior infarction.

Following literature review we will emphasize the need of describing cardiac structures with correct orientation and show how access to CT and MRI images explains many aspects of cardiac structures considered before difficult and mysterious. We subscribe to the idea that using anatomical position to describe the heart would represent a certain step forward, even if its application might take time to be properly applied.

CORRELATIONS BETWEEN FIST ANATOMY AND TENOSYNOVITIS

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Introduction: Tenosynovitis of the hand is a clinical syndrome characterized by mechanical pain located in the fist joint. This condition occurs due to lesions of the synovial sheaths and tendons of the muscles of the region. Although the location may include any of the synovial sheaths and tendons , the most common is De Quervain's disease.

Objective: To highlight the anatomical elements that undergoes inflammatory changes, which associated with the decrease in synovial fluid create a vicious circle.

Material and method: Has been clinically and paraclinically investigated the patients presenting in rheumatology ambulatory.

Discussions: In the fist posterior region , in the deep plane, there are six osteo-fibrous compartments, through which pass the tendons of the extensor muscles, wrapped in the synovial sheaths. In De Quervain syndrome there are three anatomical elements: the first compartment (lateral), the tendons of the abductor pollicis longus and extensor pollicis brevis, wrapped in a common synovial sheath. The synovial sheath begins above the retinaculum extensorum and ends below it. Clinically, patients presents: local pain, edema in first compartment , positive Finkestein test. Paraclinically, is used musculoskeletal ultrasound, MRI.

Conclusion: Symptomatology is correlated with damaged anatomical elements; ultrasound and MRI are the methods to assess the diagnosis and prognosis.

Keywords: osteo-fibrous compartments, tendons, synovial sheaths, police, ultrasound

ANATOMICAL AND EMBRIOLOGICAL CONSIDERATIONS ON PARANASAL SINUSES

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The paranasal sinuses are ethmoidal, frontal, maxillary and sphenoidal sinuses. The ethmoidal sinuses are formed by multiple cavities which are divided in anterior, middle and posterior groups. The ethmoidal sinuses are situated in the ethmoidal labyrinth and are completed by the frontal, maxillary, sphenoid, lacrimal and palatine bones.

Frontal sinus is paired. Each sinus underlies a triuangular area. They extend above the medial part of the eyebrow. Rarely, one or both sinuses may be absent. Sometimes one sinus may overlap in front of the other.

The paired sphenoidal sinuses are posterior to the superior part of the nasal cavities. One or both may approach to the optic canal. The sphemoidal sinuses are related above to the optic chiasma and hypophysis. Their main development occurs after puberty.

The maxillary sinuses are situated in the body of the maxilla and are the largest paranasal sinuses. They are pyramidal in shape and the lateral apex sometimes extends in the zygomatic bone. The floor of the sinus is related to the roots of the second premolar and first molar.

The functions of the paranasal sinuses remain speculative. They add some resonance to the voice and allow enlargment of local areas of the skull. All sinuses open on the lateral wall of the nasal cavities. Most sinuses are absent or rudimentary at birth but enlarge after puberty.

CORRELATIONS BETWEEN HISTOPATHOLOGICAL AND IMAGING EXAMINATION OF MALIGNANT BREAST LESIONS

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Introduction: Evaluation of the imaging characters - ultrasound, mammography of mammary lesions with a score BIRADS 3, 4, 5. Analysis of histopathological bulletins of biopsied patients and their classification in breast cancer subtypes.

Material and methods: The study was prospective for a period of 6 months, in a private hospital, on 83 selected patients. The following imaging devices were used: mammograms: Senographe Crystal - General Electric; ultrasound: Ultrasound RS 80 with Prestige- Samsung.

Results: Analyzing the distribution of breast cancer patients by subtype - histopathological, we found the highest incidence of the Luminal A - 54% of cases, most frequently evidenced in the age group 51-60 years. The Luminal B subtype was present in 22% of the cases, most

frequently evidenced in the age group 41-50 years. The subtype Triplu negative was present in 11% of the cases, frequently evidenced in the age group 61-70 years. The nonluminal HER2 + subtype were noted in 7% of cases and HER 2+ Luminal B subtype in 6% of cases.

Conclusions: Detection of the breast cancer subtype is important for evaluating the prognosis and for proper therapy. Correct evaluation of ultrasonography signs of breast lesions combined with immunohistochemical analysis and with the level of RE, PR, HER2, Ki67 receptors in breast cancer patients may improve the diagnosis and prognosis of the breast cancer.

Keywords: Brest cancer, ultrasound, mammography, RE, PR, HER2, Ki67.

INCIDENCE OF GLIOMAS AT THE PATHOLOGY DEPARTMENT OF THE SCJU TÂRGU MUREȘ

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Introduction: Diffuse gliomas are the most common types of brain tumors. Gliomas develop as a result of malignant proliferation of glial cells. Variants of diffuse gliomas include pilocytic astrocytoma, diffuse astrocytic and oligodendroglial gliomas and their anaplastic variants and glioblastomas. Glioblastoma is one of the most malignant brain tumors.

Materials and methods: This retrospective study has been realized at the Pathology Department of County Emergency Clinical Hospital of Târgu Mureș. We included 118 cases of gliomas in this study, diagnosed between 2017 and 2018. The centralization of the cases was followed by the statistical processing of the obtained data. The ethics commitee of SCJU Târgu Mureș approved this study

Result: Cases of gliomas are distributed almost equally between 2017 and 2018. The sex ratio was 1.22 in favor of female pacients. The most cases of glioamas were over 40 years old. Over 70% of patients had glioblastomas, followed by cases of anaplastic astrocytomas. The fewest cases were affected by oligodendrogliomas and oligoastrocytomas.

Conclusion: Between 2017 and 2018, most cases of glioma affected patients over 40 years, the most common variant of gliomas, in over 70% of patients, was glioblastoma.

THE IMPACT OF IMMUNOHISTOCHEMICAL MARKERS IN PROGNOSIS OF GLIOBLASTOMAS

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Introduction: Glioblastomas are the most common and the most aggressive primary brain tumor in adults, in majority cases with letal outcome. Despite a multidisciplinary therapy including neurosurgical removal of the tumor and radio-chemotherapy, the survival time is still only 1 year. Importantly for the diagnosis of glioblastomas, the determination of IDH mutation, subgrouped in glioblastoma, IDH–wild-type and glioblastoma, IDH-mutant. Glioblastomas with increased levels of Ki67 had poor prognosis.

Materials and methods: This retrospective study included 38 cases of glioblastomas diagnosed in 2018 at the Pathology Department of County Emergency Clinical Hospital of Târgu Mureș. We performed immunohistochemistry staining of glioblastoma sections using anti- IDH and anti- Ki67 antibodies. The centralization of the cases was followed by the statistical processing of the obtained data. The ethics commitee of SCJU Târgu Mureș approved this study.

Result: During 2018, 38 patients were diagnosed with glioblastomas, half of this patients was aged between 40 and 60 years. Approximately 60% of cases was females. Almost 25% of patiens had IDH-mutant type glioblastomas and over 90% of glioblastomas had high level of Ki67.

Conclusion: In 2018 most cases of diagnosed glioblastomas was IDH-wild-type, with increased level of Ki67, in patients aged between 40 and 60 years in our geographical area.

ANATOMIC AND IMAGISTIC MORPHOLOGICAL ASPECTS OF THE CARDIAC VALVES IN THE AORTIC CARDIOMIOPATHIES.

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Introduction: More and more field is gained in treatment of cardiovascular disease by interventional techniques such as PCI, TAVI or MitralClip compared to classic cardiac surgery which is why there is a great need to create criteria in order to sort patients in groups suitable for each technique so that best result is achieved.

Objective: The aim of this study is to analyze the existing publications on this theme, find out differences in outcomes and cost-efficacy and try to distinguish which of the two methods fits best a category of patients from anatomic and imagistic point of view.

Material and methods: This is a bidirectional study in which we first intend to consult the findings of other centers and then to enroll all patients treated with transcatheter devices for aortic stenosis at IuBCvT Targu Mures since 2016 and on until the end of this project.

Results: Only 10 % of the patients under the age of 80 with severe symptomatic aortic stenosis, benefited from TAVI, as they had a higher initial risk compared to those undergoing SAVR, the decision to perform TAVI being determined by the presence of anatomical and clinical factors beyond surgical risk scores. Results of some studies suggest that in general population with severe aortic stenosis and low and intermediate risk, at 5 years, SAVR is associated with lower mortality and lower rates of cardiac and cerebrovascular events than TAVI, however, TAVI is associated with a lower risk at 30 days of myocardial infarction than SAVR . There was no significant difference in early left ventricular systolic function between the two techniques. On the other hand, both hospital and long-term costs are lower for SAVR with suture-less valves than for patients with TAVI, with similar results in terms of survival and quality of life. In contrast to a similar profitability revealed by other centers. However, there are studies that show a better quality of life after TAVI and a lower mortality in high-risk patients. Regarding the risks of complications, infectious endocarditis on the aortic valve occurs with a similar frequency in patients with TAVI and SAVR, but mortality is higher in patients who have benefited from TAVI, on the other hand, there were no differences in terms of cerebral embolism or stroke number.

Conclusions: All in all, studying the morphology of the heart and especially of the valves, defining the patient's profile and subsequently framing him in a curable group by a certain procedure, identifying the suitability of a curative intervention in a certain group of patients with similar morphology and monitoring the results in terms of survival and quality of life will clarify and objectify the concept of HeartTeam and improve the triage of patients with a finite result in improving the survival and quality of life of patients with cardiovascular disease.

ANATOMICAL VARIANTS OF THE HEPATIC PEDICLE AND THEIR SURGICAL IMPLICATIONS

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Introduction: The anatomical structures that make up the hepatic pedicle show numerous variants. Of these, the anatomical variants of the cystic duct union with the common hepatic duct as well as the anatomical variants of the hepatic artery and the anatomical variants of the cystic artery are most commonly encountered both in anatomical dissection and in surgical practice.

Material and method: We based our study on the analysis of imaging explorations used in surgical patients between 2000-2020, such as abdominal ultrasound, abdominal CT with contrast substance, MRI examination, and also on the analysis of the operating protocols. Our objectives were: the study of extrahepatic biliary ducts variability, including anatomical variants of the cystic duct and its confluence with the hepatic duct and the study of the individual variability of the hepatic artery including the origin and anatomical variants of the cystic artery.

Results: We found three main modalities of the union of the cystic duct with the common hepatic duct: low union, where a short coledoc is found posterior to the duodenum,, high union, where the coledoc starts near the hepatic hilum and the third variant, where the cystic duct spirals anterior to the common hepatic duct. These anatomical variants are important for the surgeon in this region. We have also found an accessory duct that joins the biliary system outside the liver. The accessory hepatic ducts have a high risk of injury during surgery. The arteries of the hepatic pedicle also show great variability. The normal variant of the hepatic artery with its origin at the celiac trunk, then ascends and it bifurcates immediately below the junction of the hepatic canals is encountered with a frequency of 55% (Gray). The anatomical variants of the relatively large vessels show a common frequency but the variability of the small caliber branches is much more common.

Conclusions: Embryogenesis of the bile ducts can explain the many anatomical variants of the biliary tree. There is high diversity of biliary ducts. The presence of an accessory biliary duct may be encountered. The most common variants of the cystic duct with the common hepatic duct are high, low and anteriorly spiraled. Anatomical variations are important and some may cause medical problems and may complicate the surgical treatment.

Keywords: anatomical variants of cystic duct, hepatic artery variants, intraoperatory lesions of biliary common duct

PLEOMORPHIC DERMAL SARCOMA OF THE GLUTEAL REGION – CASE REPORT

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Introduction. Pleomorphic dermal sarcomas are rare skin tumors that usually appear on the background of skin lesions due to sun exposure, usually occurring in the elderly.

Case report. We present the case of a 72-year-old male patient, who presented in the Surgery clinic no. 1 of the Tîrgu Mureș, presenting a tumor at the level of the gluteal region of 15x15 cm that progressively increased in approximately 2 months, as well as a diffuse lipomatosis in the right thigh and abdominal wall. Surgery was performed by excision of the tumor. Histopathological examination of the surgical resection revealed the existence of pleomorphic dermal sarcoma. The interesting fact about these case is that the tumor showed a very rapid increase in size, without presenting distant metastases.

Conclusions. Pleormorphic dermal sarcomas are rare tumors that can reach particularly large sizes, usually occurring on skin lesions due to sun exposure.

Keywords: cutaneous, pleomorphic dermal sarcoma

ANATOMICAL CHARACTERISTICS OF THE OPHTHALMIC ARTERY

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Introduction. The aim of the study is to present some anatomical characteristics of the ophthalmic artery concerning its origin from the internal carotid artery and the ratio between the caliber of the two arteries.

Material and method. The results were obtained using Computed tomographic angiography performed on a GE BrightSpeed Select 16 Slice CT, existing in the Radiology Clinic „Medimar Imagistic Services SRL" from "Sf. Andrei" County Clinical Emergency Hospital of Constanta. We analyzed a number of 189 cases, making over 1500 Computed tomographic angiography images. The morphometric results (diameter, length) were compared between the right and left ophthalmic arteries, in males and females.

Results. All the cases of ophthalmic arteries described originate from the internal carotid artery, at the level of the posterior part of carotid segment II, which angiographically, corresponds to segment VI (after the exit of the internal carotid artery from the cavernous sinus). In males, in 50% of cases, the origin of the ophthalmic artery was located 11.6-17.4 mm from the end of the internal carotid artery on the left side, and 10.2-21.9 mm on the right side. In females, the distance between the origin of the ophthalmic artery and the end of the internal carotid artery varies between 11.3 -15.2 mm on the left side, and between 11.1- 15.0 mm on the right side. In males, in 83.33% of cases, the right ophthalmic artery arises from the carotid artery closer to its end, being 0.5-1.5 mm closer than the origin of the left ophthalmic artery. In females, in 50.0% of cases, the right ophthalmic artery originates from the carotid artery closer to its end, being 0.2-1.0 mm closer than the origin of the left ophthalmic artery. The diameter of the right ophthalmic artery in males was between 1.01-2.21 mm, and in females between 1.01-1.83 mm. In females, the diameter of the left ophthalmic artery was between 1.01-1.83 mm, and in males between 1.03-2.21 mm. In males, the difference between the diameter the ophthalmic artery and internal carotid artery above the origin of the ophthalmic artery, was between 0.30-3.60 mm for the right arteries and between 0.49-3.10 mm for the left arteries.

Conclusions. The ophthalmic artery is an arterial element that is difficult to highlight because of its reduced caliber, the sinuous trajectory and the multiple branches it gives rise. Frequently, extreme morphometric values were present in one case, or were present in one of the two sexes, usually the minimum values being present in females, and the maximum values in males.

Keywords: ophthalmic artery - anatomical characteristics

ASSESSING THE KNOWLEDGE OF THE MEDICAL STUDENTS IN BRAȘOV, ROMÂNIA ABOUT THE INTIMATE PARTNER VIOLENCE

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Introduction: Intimate partner violence (IPV) is a widespread social phenomenon affecting all social groups. However, there are few studies to evaluate IPV training in medical schools. The aim of this study was to investigate medical students' knowledge and training on IPV.

Material and method: A total of 87 medical students (75 women and 12 men) of the Transilvania University of Brasov (Romania) responded

a diagnostic survey using the authors' original questionnaire. The questionnaire consisted of two parts: the first, containing 4 demographic questions, and the second, containing 12 open- and closed-ended questions.

Results: The responses of students suggested they had limited knowledge and stereotypical beliefs regarding IPV and who perpetrates it. The results indicated that they were unprepared to deal with IPV situations in clinical practice and may not understand the significance and implications of it at an individual and societal level. The results of this study indicate several important implications for undergraduate medical education curricula. Attitudes, knowledge, and training about IPV among respondents varied depending on the year of study. Students form the sixth year of study reported higher level of knowledge of IPV, were more likely to believe that IPV was a serious problem and were more likely to consider IPV to be a healthcare problem compared with the students from first and second year of study.

Conclusions: Education in medical school is necessary to improve the health of patients who have experienced IPV.

PHONATION AND ANTI-PHONATION

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Introduction: Our voice is the main form of interhuman communication, all of which is made possible by the significant number of sounds available when air passes through the glottis. There are several theories which try to explain the intricacies of vocal muscular contraction and the way in which it is controlled by the central nervous system. In the following presentation we will analyse the role of antagonist muscular contraction occurring during the main refractory period, when the air passes through the glottis.

Materials and methods: This is meant to be a literature review paper which will follow the different moments of neural stimulation in relation with the column of air and the muscular contraction of each individual muscle.

Results: The data obtained from literature will be presented comparatively using graphs and drawings of the glottis in different muscular contraction periods will be shown.

Discussion: The current theory of phonation is the theory of nonlinear sources which states that multiple factors related to the elastic and mechanical proprieties of the vocal folds, the movement in the larynx and the harmonics of the laryngeal space play a role in shaping the air column. We try to add to this an active neural control acting during the main refractory period. **Conclusion:** This paper highlights the role of antagonist contraction in finely tunning vocal expression.

Keywords: neurolaryngology, phonation, vocal muscles synapse

VASCULAR ANATOMICAL CONSIDERATIONS IN FLAP SURGERY

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Introduction: Flap surgery has developed as part of the plastic and reconstructive surgery speciality in order to achieve closure of complex wounds using tissue transfers.

Background: Initially, progress was significantly hindered by insufficient knowledge regarding cutaneous vascular supply. Due to advances achieved within the last century, understanding of the anatomical territories of individual perforators has played a crucial role in current flap design employed in clinical practice.

Method: We aim to detail the means by which anatomical studies have improved the knowledge of the vascular anatomy of the integument and the microcirculation of the skin as it pertains to flap design and survival. We will present an overview of flaps along with classification and nomenclature based on their anatomical vascular supplies as well as instructional models for dissection techniques, perioperative clinical and imaging considerations and examples of flaps currently used in clinical settings.

Conclusion: Classic anatomic studies alongside modern imaging techniques represent the bedrock for current and future expansion of reconstructive options using autologous tissue transfers.

ASCERTAINMENTS ON THE ORIGIN OF THE INTERNAL THORACIC ARTERY

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Introduction: The aim of the present work is to determine the place of origin internal thoracic artery in relation to the origin of the corresponding subclavian artery and with the branches of the neighboring subclavian artery, to determine its diameter at the origin, comparatively left/right, and to describe its initial course.

Material and method: Our study is the result of morphological characteristics research on the subclavian artery analyzing 151 cases of which 54 buy sections and only 14 cases by plastic injection (Technovit 7143) and 83 cases represented by CT angiography.

Results: The place of origin of the internal thoracic artery may be variable in relation with the other collateral branches of the subclavian archery, finding it in relation with the origin at a distance of 40,3-50,6mm on the left and 31,6-39,8mm on the right. In relation with the inferior thyroid artery, the internal thoracic artery might have its origin located medially or laterally from the former, with the origin of the left internal thoracic artery situated at the same level with the continuation of the intrathoracic part with the cervical part of the artery. Really, origin of the internal thoracic artery might be at the same level with the origin of the vertebral artery, situation which we found only on the right side. The diameter of the internal thoracic artery was between 1,9-3,3mm on the right, and between 2,1-2,8mm turn on the left. The direction of the internal thoracic artery depends on the level of its origin from the subclavian artery, inferomedial oblique or even vertically up to the 3rd or 4th intercostal space, after which it becomes vertically. Its pathway is usually in a straight line, sometimes it might describe a curve more or less pronounced. Rarely, the right thoracic artery might have a short(aprox.10mm) horizontal pathway. The greatest and the smallest diameters were encountered in the right thoracic artery. The lowest external diameter in counted in the left thoracic artery was 2,1 mm. Usually the two internal thoracic arteries have the origins at different planes from the subclavian artery.

Conclusions: The right internal thoracic artery is more voluminous on the right side with up to 0,5 mm, at the same place where origin and pathway variations are more frequent.

Keywords: Internal thoracic artery- origin

ANATOMY AND PLASTIC SURGERY

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Introduction: Plastic surgery is a complex specialty where each patient is unique and the results are obtained combining surgical principles with imagination, vision and important anatomical knowledge. Results are obtained remolding, reshaping and manipulating bone, cartilage and soft tissues. It is not focused on a specific organ, system or a region of the body. The goal is the reproduction or creation of the best function, form and structure of the body with a good aesthetic result.

Materials and methods: We discuss about some cases who underwent various plastic surgery interventions and the correlation between results and a very good anatomical knowledge. We included patients with superior and inferior limb trauma, with soft tissue defects and with aesthetic interventions. Are presented cases of revascularization/replantation at different limb area, reconstruction interventions using various flaps, aesthetic and cosmetic procedures.

Results: The results after all these interventions are directly corelated and influenced by the anatomical knowledge of the surgeon. The intervention on trauma cases usually shows good results, especially on patients who perform a good recovery after surgery. The results after aesthetic and cosmetic intervention are also in deep correlation with the anatomic knowledge.

Conclusion: Plastic surgery represent a combinations of other surgery specialties and the plastic surgeon must be a very good anatomist while is working in almost all areas of the body. In aesthetic and cosmetic intervention knowing anatomy plays a crucial role especially when facial structures are involved or having young patients and the results must be perfect.

PERCUTANEOUS NEEDLE FASCIOTOMY FOR DUPUYTREN DISEASE.

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Introduction: Dupuytren's disease represent a chronic progressive disorder characterized by the contractures in the palmar and/or digital fascia. The treatment for this situation is mainly surgical having open surgical or minimally invasive procedures. The principals of each treatment are: contracture release with no complication and no recurrence. To obtain this is very important to have good knowledge of the palmar area anatomy.

Materials and methods: We perform a study on 45 patients who underwent percutaneous needle fasciotomy for Dupuytren contracture. According to the contracture severity defined by Tubiana they were grouped in 3 lots. This study analyzes the results after a minimally invasive procedure including the grade of restant deformity, complications and recurrence at one year follow-up.

Results: From a total of 95 joints treated with this procedure we noticed satisfactory release (extension deficit≤10°) in 85%. Full contracture release was noticed in 70% of the joints. At one year follow-up from the 85% of joints with good release we noticed that on 15% the recurrent contracture is present. Important in our study is the fact that we have not observed any major complication such as: tendon, nerve or arterial laceration, permanent sensory disturbance, hematoma, infection, pulley rupture, or complex regional pain syndrome. We observed in 6 patient small skin lacerations (<1.5 cm), two of them needed sutures and all healed in 5-7 days.

Conclusion: This minimally invasive technique is safe and effective, simple and cost effective, useful in patients who wants to return faster to daily activities or refuse open surgery.

HETEROTAXY SYNDROME IN ADULT – A RARE COMPLEX ANATOMIC MALFORMATION ASSOCIATED WITH PULMONARY ARTERIAL HYPERTENSION

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Background: Heterotaxy syndrome encompasses various abnormalities of position and morphology of the thoracoabdominal organs. The affected organs do not fit the habitual positioning order (situs solitus) or its mirror position (situs inversus). Complex structural cardiac abnormalities are recognized in 50-100% of cases and predetermine the severity of this complex congenital malformation. In this syndrome described cardiac abnormalities are: dextrocardia, single atrium or other atrial septal defects, ventricular septal defects, transposition of the great vessels, common atrioventricular valve, anomalous pulmonary venous return, multiple sinus nodes, endocardial cushion defect, aortic coarctation, pulmonary atresia, pulmonary stenosis, and double outlet right ventricle. Extracardiac abnormalities are represented by polysplenia or asplenia, abnormalities of renal tract. In heterotaxy patients with polysplenia a common condition is represented by pulmonary arterial hypertension (PAH). In literature only few cases are described, due to an increased mortality in childhood.

Material and method: we present a case of an 34 year-old female, with neonate diagnosis of heterotaxis, dextrocardia and complex congenital heart defects (CHD), admitted in an university based hospital for multimodal evaluation of disease and the presence of PAH-CHD. Clinical and routine imaging tests confirm the initial diagnosis. Enhanced computed tomography with non-ionic contrast media showed bilobed lungs, liver centrally positioned, polysplenia (5 nodules of 15-45 mm), right renal vein with retroaortic passage, left position of inferior cava vein with absence of adrenal segment with continuation in the form of azygos vein and left upper cava vein drainage. Physiological assessment of pulmonary circulation exposed severe precapillary pulmonary hypertension (80/37/60 mmHg). The heart team decision was a conservative approach; supportive and PAH-specific therapies were prescribed. At 5 year follow-up the patient's clinical and functional status is slightly diminished, in NYHA II functional class.

Conclusions: Occurrence and progression of PAH in heterotaxy syndrome is multifactorial, may be secondary to CHD with the presence of intracardiac shunts, coexisting vascular abnormalities or may be linked by the presence of visceral malformations. Specific treatment is advised and may be effective in treatment of PAH patients with heterotaxy and polysplenia.

VARIATIONS OF THE BRACHIAL ARTERY BRANCH

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Introduction: The aim of the paper was to establish the level of terminal branching of the brachial artery in its terminal branches.

Material and method: The study of the terminal branching of the brachial artery was performed on 54 cases, using as working methods the dissection (on adult and fetal human corpses, fresh and formalized, the injection of plastic mass followed by the dissection (as plastic mass using Technovite 7143) and the study CT angiographies (performed on a 64-slice Lightspeed VCT installation).

Results: The terminal bifurcation of the brachial artery was found at very different levels, between the upper arm and the lower part of the elbow fold: at the level of the upper third of the arm, at the middle part of the brachial region, at the level of the lower third of the arm, above and below the interpicondylar line. At the brachial level, the two arteries resulting from the bifurcation of the brachial artery, radial and ulnar, can be arranged from the beginning according to their normal anatomical position, or can be located inversely, the radial being initially arranged medially, after which the two arteries intersect reaching end in their normal position, usually the radial artery passing anterior to the ulnar artery. In the case of the superficial brachial artery, the same levels of terminal branching are found.

Conclusion. Of the 54 cases followed, we found that the brachial artery ended below the elbow in 75,93% of cases, and in 24,07% of cases there was a high termination. Of the cases with high termination, in 11,11% of cases the brachial artery ends at the level of the brachial region: in 7,41% of cases ending at the upper 1/3 of the arm, and in 1,85% of cases in the middle 1/3 and lower 1/3 of the arm. In relation to the interepicondylar line, the brachial artery ends in 3,70% of cases above and at the level of the interepicondylar line and 5,56% of cases below the interepicondylar line.

Keywords: brachial artery terminal branch – variants

THE IMPORTANCE OF SYSTEMIC INFLAMMATORY SYNDROME AS A PROGNOSTIC FACTOR IN PATIENTS WITH SPLENIC TRAUMA

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Aim: The purpose of this article is to explore possible associations between inflammatory indicators and prognostic variables in patients with spleen trauma. Recent investigations indicate that the spleen is the most often injured solid organ in trauma

Materials and method: We included 117 patients with traumatic splenic pain from the last five years in this study by using the records of the Mures County Emergency Clinical Hospital. We were interested in inflammatory markers such as neutrophils, lymphocytes, and platelets from the perspective of systemic inflammatory syndrome and estimated the NLR (neutrophil to lymphocyte ratio) and PLR (platelet to lymphocyte ratio) (platelet to lymphocyte ratio).The severity of the trauma was quantified as the Injury severity score (ISS). Statistical analysis was performed using MedCalc and SPSS.

Results: Using Spearmans correlation test we obtained a p=0.0007 (r=0.386) for the association of NLR-ISS which indicates a moderate positive correlation and a value p=0.65 for the association of PLR-ISS. We also computed the ROC for the NLR-ISS association and found cut-off value of 8.923.

Conclusions: Elevated NLR in trauma patients at admittance has a highly predictive power for the severity of the trauma. Patients with a NLR value higher than cut-off value of 8.923 have a high probability of severe trauma.

There is a statistically significant correlation between the NLR and the severity of splenic trauma with a cut-off value of 8.923. Thus we can conclude that patients with systemic inflammatory syndrome with NLR values higher 8.923 have a high probability of severe trauma.

Keywords: Trauma, Inflammation, Spleen, Prognosis

IMMUNOTHERAPY IN BREAST CANCER. THE SPATIAL ORGANIZATION OF INFLAMMATORY INFILTRATE

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Introduction: Breast cancer progression is associated with robust neovascularization. The tumour-associated 'normal' cells, such as immune/inflammatory cells, endothelial cells and stromal cells, conspire with cancer cells in promoting this process. Immunotherapy works through stimulation of the immune system by active immunization with cancer vaccines, or passive immunization through tumor-specific antibodies and immune modulators.

Our **aim** is to highlight the importance of immunotherapy .This therapy gives patients (with breast cancer) a better quality of life even at advanced stages of cancer. Immunotherapy may replace chemotherapy as the standard treatment for cancer in the fore coming future.

Material and results: We examined the patients:

• L.P.(aged 56 years):- Resection piece - multiple nodular formations.The examined pleural fragments show carcinoma infiltration with predominantly solid architecture and reduced tubular differentiation as well as reduced associated sclerohyaline stroma.The aspects described support the diagnosis of pleural carcinoma metastasis with a mammary gland starting point.

• T.G.B.(aged 44 years): MRI report:Pelvic tumor block, with predominantly mucinous cystic structure, polycyclic contour, nonhomogeneous gadolinium, with right postero-lateral parauterine development, with invasion of the left uterine appendage..Pelvic tumor block, most likely belonging to the uterine appendages, with mesorectal invasion and mobile sigmoid colon invasion. Secondary disseminations. The patient is not suitable for immunotherapy.

Discussions: Clinical trials of immune checkpoint inhibitors in breast cancer patients have demonstrated promising results and brought a light of hope for patients with metastatic advanced stage . Immunotherapy works through stimulation of the immune system by active immunization with cancer vaccines, or passive immunization through tumor-specific antibodies and immune modulators, like immune-checkpoint inhibitors.. The molecular therapy, interleukin–2 (IL-2), immune checkpoint inhibitors, agonists of costimulatory receptors; inhibitors of immunosuppressive factors; agonists of T-cells metabolism having beneficial effects towards curing the cancer and meantime it has minimal side effects

Conclusions: Immunotherapy is an advanced method of treatment around developing nations where our immune system fights against cancer cells naturally.. It is a cancer healer therapy with precise target, long lasting response, highest success rates and lesser side effects compare to available treatments. It gives cancer patients a better quality of life even at advanced stages of cancer.

Keywords: breast cancer, immunotherapy, estrogen, chemotherapy, interleukin, monoclonal antibodies

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STUDY OF THE PINEAL GLAND MICROARHITECTURE FROM THE EPIPHYSIS CIRCULATORY SYSTEM

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Introduction: Epihisis is an endocrine neurotransductor. First objective was that pineal gland has an extremely developed vascular supply. This study -particulare aspects of the kind of vascularisation .

Material and method: Epiphysis - gathered with the habenular comissure. Fixation - in formol 10% for 2-3 days and then: 1. Dehydration 2. Clearing 3. Paraffin treatment 4. Including 5. Sectioning 6. Pasting the sections 7. Colorating the sections

Results: The epiphysis –between 2,1-8 mm / 3-3,9 mm. Between the epiphysis and the diencephalon → induce a "palisade" look. Pinealocytes- in curled cordons –less vascularisated then the one with cells "dumps" → granular incomplete "lobs"

Disscusions:
• the formation of the follicles-central lumen
• there are present acidophil cells ,laid in "thimble" → seems like the "photoreceptors"
• Exist other types of cells
• Conjunctive tissue –reduced
• Vessels of all the types pass:
• After the age of 3-4 years ,the central areas degenerate progressively → necrobiosis
• The degenerescence → digitale epiphysis and for isolated islands.

Conclusions: The pinealocytes are glial cells, neurons, lymphocytes, macrofages; pinealocytes - ¼ from them persists; restante pinealocytes - source of melatonin; secretion is photochemical regulated.

Keywords: palisade, dumps, photoreceptors, remained pinealocytes, melatonin

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