Hungarian - Croatian - Slovenian Radiological Symposium

13-14 November, 2009

Kehida Termál Hotel**** & Spa
Kehidakustány, Hungary

President of the Symposium

Dr. István Battyány
President of the Hungarian Society of Radiology

Organizers

Hungarian Society of Radiology
Section of Young Hungarian Radiologist
Zala County Teaching Hospital, Radiology Department

With help and support from

Croatian Society of Radiology
Slovenian Society of Radiology

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Dear Colleagues and Friends,

It is my great pleasure and honour to organize the **9th Hungarian-Croatian-Slovenian** Radiological Symposium in a beautiful, small village famous for its thermal water and bath: Kehidakustány in Zala County.

This meeting has become tradition since 1999. The 1st symposium in Kőszeg, was organized excellently by notable leaders of the radiological society, as Dr. Béla Fornet, Dr. Nada Bešenski, Dr. Ivan Lovasič and Dr. László Horváth. This memorable event defined the atmosphere and the high level of these friendly meetings, which continued in Opatija, Pécs, Maribor, Koprivnica, Hévíz and Vukovar.

Hopefully, our symposium will meet these expectations. For this reason we have carefully chosen the place, where we will be able to exchange knowledge, discuss on actual radiological themes and enjoy the services of the spa.

We are expecting your lectures, papers and wish you a very successful meeting and a pleasant stay for you all on our symposium.

Dr. Gyöngyi Nagy

Chief Organizer

GENERAL INFORMATIONS

Venue of the Symposium
*"Ferenc Deák" Conference room, Kehida Termál Hotel**** & Spa*

Badges *have to be worn at the congress venue, access to all programme and the dining room.*
*The final program will be given at the registration desk and will be on the web site from 6th of November, 2009. (*www.lelekimre.hu/hcsrs*)*
The best three posters, the first three winners of the quizes will be awarded!

Please pay attention to the followings:
The lectures will be 20 minutes long.
The papers of young radiologists will be 8 minutes with 2 minutes discussion.
Light and music will indicate the end and interrupt the lectures!
Poster size can be max. 130x160 cm.

The Spa of the Hotel will be free for registered participants til Saturday night.
Minibar and the telephone must be paid by own.
The parking place before the hotel is free of charge.

Thursday, 12 November

17:00 -	**ARRIVAL, REGISTRATION** at Kehida Termál Hotel**** & Spa
18:00 - 21:00	**DINNER** for the registered participants
19:00 -	**BOARD MEETING AND DINNER** for the chief radiologists of the three countries

Everybody can enjoy the outdoor Spa til the midnight.

Friday, 13 November

08.30 **OPENING CEREMONY**

Chairmans:

Dr. István Battyány	President of the Hungarian Society of Radiology
Dr. Gábor Kecskés	Medical Director of Zala County Teaching Hospital
Dr. Gyöngyi Nagy	Member of the Board of the Hungarian Society of Radiology, Chief Organizer
Prof.Dr. Boris Brkljacic	President of the Croatian Society of Radiology
Prof.Dr. Dimitrij Kuhelj	President of the Slovenian Society of Radiology

SCIENTIFIC SESSION

Chairmans: Dr. Béla Fornet, Dr. Damir Stimac, Prof. Dr. Dimitrij Kuhelj

09.00 - 09.20	**Six year experience of the dedicated emergency radiology division in a large teaching hospital**		
	Dr. Gyula Horváth (Kaposvár)	20'	Hungary
09.20 - 09.40	**CT in emergency radiology**		
	Dr. Mario Lusic (Zagreb)	20'	Croatia
09.40 - 09.50	**Tomosynthesis in emergency radiology**		
	Dr. Maja Prutki (Zagreb)	8'	Croatia
09.50 - 10.00	**MDCT supports plain abdominal radiography at detection extraluminal free air**		
	Dr. Erzsébet Botos (Budapest)	8'	Hungary
10.00 - 10.10	**Imaging in hepatic trauma**		
	Dr. Ksenija Vukovic (Maribor)	8'	Slovenia
10.10 - 10.20	**Emergency: X-rays tips and pitfalls**		
	Dr. Ana Sverko (Zagreb)	8'	Croatia

Friday, 13 November

10.20 - 10.30	**Supine x-rays - tips and pitfalls** Dr. Tamara Kadezabek (Zagreb)	8'	Croatia
10.30 - 11.00	**COFFEE BREAK**		
	Chairmans: Prof.Dr. András Palkó, Prof.Dr. Imre Repa, Prof.Dr. Boris Brkljacic		
11.00 - 11.20	**MDCT of acute abdominal conditions 20'** Prof. Dr. András Palkó (Szeged)	20'	Hungary
11.20 - 11.30	**Ultrasound in blunt abdominal trauma** Dr. Ivana Zupetic (Zagreb)	8'	Croatia
11.30 - 11.40	**Spontaneous esophageal perforation** Dr. Ales Agatonovic (Ljubljana)	8'	Slovenia
11.40 - 11.50	**Imaging of uncommon cases of acute abdomen** Dr. Péter Zádori (Kaposvár)	8'	Hungary
11.50 - 12.00	**Perforating appendicitis caused by large appendicolith** Dr. Stipe Rados (Zagreb)	8'	Croatia
12.00 - 12.10	**Scrotal and femoral abscess in a young male** Dr. Ilona Mátéka (Szeged)	8'	Hungary
12.10 - 12.40	**QUIZ 30'** **Moderator:** Prof. Dr. András Palkó		
12.40 - 14.00	**LUNCH**		
	Chairmans: Dr. Mirjana Brvar, Dr. Zita Morvay, Prof. Dr. Ratimira Klaric Custovic		
14.00 - 14.20	**Dual source CT in emergency radiology 20'** Dr. István Battyány (Pécs)	20'	Hungary
14.20 - 14.30	**A rare case of gallstone ileus** Dr. Nikola Ivan Leder (Zagreb)	8'	Croatia
14.30 - 14.40	**Radiation protection in emergency radiology** Dr. Domagoj Kretic (Osijek)	8'	Croatia

Friday, 13 November

14.40 - 14.50 **Artifacts in ultrasound**
Dr. Metka Verovnik Pavse (Slovenj Gradec) 8' Slovenia

14.50 - 15.00 **MSCT in polytraumatic patient - a challenge for young radiologist**
Dr. Mirjana Flegaric-Bradic (Koprivnica) 8' Croatia

15.00 - 15.10 **Novel digital X-ray imaging methods and diagnostic**
Dr. Tünde Dévai GE Hungary Kft (Budapest) 8' Hungary

15.10 - 15.30 **CT of the thorax in critically ill patients**
Dr. Igor Kocijancic (Ljubljana) 20' Slovenia

15.30 - 16.00 **COFFEE BREAK**

Chairmans: Prof. Dr. Zoltán Harkányi, Dr. Rita Somogyi, Dr. Daniel Cvetko

16.00 - 16.20 **Emergency US and CT imaging in childhood**
Prof. Dr. Zoltán Harkányi (Budapest) 20' Hungary

16.20 - 16.30 **Neurological manifestation of PTLD in children**
Dr. Viktor Petrovszki (Szeged) 8' Hungary

16.30 - 16.40 **Acute scrotum in children: torsion of testis and appendage**
Dr. Josip Marjanovic (Zagreb) 8' Croatia

16.40 - 16.50 **Neck and chest emergency CT studies in the pediatric age**
Dr. Eszter Gersey (Budapest) 8' Hungary

16.50 - 17.00 **Abdominal emergency imaging in childhood**
Dr. Xenia Ivett Fabri (Budapest) 8' Hungary

17.00 - 17.10 **Behind the curtain**
Dr. Andrea Lakatos (Miskolc) 8' Hungary

17.10 - 17.40 **QUIZ 30'**
Moderator: Dr. Kinga Karlinger

19.00 - **GALA DINNER**
Music and dance : Lajos Wolf
21.00 Folk dance program: Ensemble „ Kinizsi „

Saturday, 14 November

Chairmans: Dr. Igor Kocijancic, Prof. Dr. Kálmán Hüttl, Prof. Dr. László Engloner

08.45 - 09.05	**The tasks of neuroimaging in emergency medicine** Dr. Péter Barsi (Budapest)	20'	Hungary
09.05 - 09.25	**Interventional neuroradiology in acute setting** Dr. István Lázár **(**Miskolc)	20'	Hungary
09.25 - 09.35	**Role of perfusion CT in early diagnosis of acute ischemic stroke** Dr. Kresimir Dolic (Split)	8'	Croatia
09.35 -0 9.45	**Corpus alienum cranii** Dr. Milán Makra (Budapest)	8'	Hungary
09.45 - 09.55	**Imaging of acute spinal cord compression syndrome** Dr. Ronald Antulov (Rijeka)	8'	Croatia
09.55 - 10.05	**Neurovascular emergencies** Dr. David Ozretic (Zagreb)	8'	Croatia
10.05 - 10.15	**Embolisation of pseudoaneurysm of SMA in patient with short bowel syndrome** Dr. Darko Blašković (Zagreb)	8'	Croatia
10.15 - 10.25	**Percutaneous transcatheter arterial embolisation in haemodynamically stable patients with blunt splenic injury** Dr. Barbara Rus Gadžijev (Ljubljana)	8'	Slovenia
10.25 - 10.35	**Successful embolization of pseudoaneurysms of the gastroduodenal and superior pancreaticoduodenal arteries associated with pancreatic pseudocyst in two patients** Dr. László Szidonya (Budapest)	8'	Hungary
10.35 - 11.00	**COFFEE BREAK**		

Saturday, 14 November

Chairman: Dr. István Battyány, Prof. Dr. László Horváth, Dr. Dragan Dragicevic

11.00 - 11.20 **Our experience with TEVAR for managment of thoracic aortic dissection**
Dr. Dragan Dragicevic (Split) 20' Croatia

11.20 - 11.40 **Interventional Radiology in Emergency Conditions**
Prof. Dr. Dimitrij Kuhelj (Ljubljana) 20' Slovenia

11.40 - 11.50 **The role of helical multidetector CT in diagnosis an follow-up of aortic dissection**
Dr. Danijela Veljkovic Vujaklija (Rijeka) 8' Croatia

11.50 - 12.00 **Acute aortic occlusion**
Dr. Kristina Banic (Zadar) 8' Croatia

12.00 - 12.10 **Diagnosis and treatment of traumatic aortic lesions**
Dr. Zsuzsanna Takács-Szabó (Miskolc) 8' Hungary

12.10 - 12.20 **Pulmonary artery anomalies in emergency radiology**
Dr. Andrea Levai (Pécs) 8' Hungary

12.20 - 12.30 **Percutaneous mechanical thrombectomy in treatment of acute massive pulmonary embolism - a case report**
Dr. Manca Garbajs (Ljubljana) 8' Slovenia

12.30 - 12.40 **Imaging of vascular anomalies with 64 slice DSCT during coronary CT angiography examinations**
Dr. Edit Várady (Pécs) 8' Hungary

12.40 - 12.50 **Superior mesenteric artery embolysm treated with percutaneous mechanical thrombectomy**
Dr. Srecko Dobrecovic (Ljubljana) 8' Slovenia

12.50 - 13.20 **QUIZ 30'**
Moderator: Prof.Dr. Harkányi Zoltán, Prof. Dr. Boris Brkljacic

13.20 **CLOSING CEREMONY**

13.45 **LUNCH**

Saturday, 14 November

BOARD MEETING of the Hungarian Cardiovascular and Interventional Radiologists (MACIRT)

13.00	**LUNCH**
14.30	**Board meeting** in „Ferenc Deak" Conference Room **(MACIRT)**
18.30	**Board meeting** of the **Hungarian Advisory Board** of the Interventional Radiologists **(HAB)**

POSTER SESSIONS

Main coordinator chairman: Dr. Endre Nagy

Chairmans: Dr. Gábor Forrai, Dr. Kinga Karlinger, Dr. Ivana Zupetic, Dr. Mario Lusic, Dr. Andrea Lévai

POSTER SESSION 1 / COFFEE BREAK
10.30-11.00 Friday, 13 November

1. **Pancreatitis following blunt injury in 9 year old boy - case report**
   Dr. Kristina Situm (Split) Croatia

2. **Emergency embolization of deep femoral artery branches for bleeding after traffic accidents**
   Dr. Dijana Perica (Split) Croatia

3. **Magnetic resonance cholangiography in acute biliary obstruction**
   Dr. Marin Pusic (Rijeka) Croatia

4. **Talocrural joint fractures**
   Dr. Mislav Cavka (Zagreb) Croatia

5. **Correlation of tumor size using CT and CYFRA 21-1 level in NSCLC patients**
   Dr. Helena Sertic-Milic (Zagreb) Croatia

POSTER SESSION 2 / LUNCH
12.40-14.00 Friday, 13 November

6. **Mycobacterium xenopi**
   Dr. Ante Marusic (Zagreb) Croatia

7. **MR imaging of traumatic spine injury, a case report**
   Dr. Tibor Körmendy (Zagreb) Croatia

8. **Evaluation of temporal bone fractures**

Dr. Ana Tripalo Bratos (Zagreb) Croatia

9. **Complications of liver rupture - case report**
Dr. Jasminka Igrec (Cakovec) Croatia

POSTER SESSION 3/ COFFEE BREAK
15.30-16.00 Friday, 13 November

10. **SLE patient with opstructive jaundice and midle lobe atelectasis - case report**
Dr. Ivan Zokalj (Cakovec) Croatia

11. **Occipital condyle fracture**
Dr. Ivan Zokalj (Cakovec) Croatia

12. **Gastric incarceration and perforation following posttraumatic diaphragmatic hernia**
Dr. Amra Djerzić (Ljubljana) Slovenia

13. **Alveolar proteinosis without symptoms**
Dr. Ádám Perényi (Szeged) Hungary

14. **Value of multislice CT in emergency radiology**
Dr. Gergely Turóczy, Dr. Mária Bakos (Budapest) Hungary

POSTER SESSION 4 / COFFEE BREAK
10.35-11.00 Saturday, 14 November

15. **Congenital anomaly of the Caval vein**
Dr. Mónika Csete (Pécs) Hungary

16. **The role of Dual Source CT in the diagnosis of crystal arthropathies**
Dr. Sándor Szukits (Pécs) Hungary

17. **Case report aorta-caval fistula as a rare complication of abdominal aortic aneurysm**
Dr. István Gyuricza (Budapest) Hungary

18. **Aortic dissection presenting as**

acute neurological syndrome - CT findings
Dr. Danijel Cvetko (Varazdin) Croatia

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ABSTRACTS

Six year experience of the dedicated emergency radiology division in a large teaching hospital

Dr. Gyula Horváth

In november 2003. emergency department and emergency radiology division were established in the „Kaposi Mór" Teaching Hospital, Kaposvár.
Based ont the first 6 year experience and performed more than 25 000 urgent radiological examinations we discuss the organization, the work flow, the human resources as well as the financial burden of the emergency radiology practice operating in a over 1000 bed teaching hospital.
Of all patients seen in the emergency department (ED) 60% undergo radiographic evaluation.
Of one hospital's radiologic evaluations in ED patients, 70% were plain films, 30% were advanced studies (contrast study, US, CT, MRI). 35% of patients required multiple studies.
All imaging studies done in the radiology departement 29% are ordered through the ED or was performed in emergency settings.
Following discussion of the basic imaging protocols of the most frequent clinical emergency situations, we point out of the main conflicts of the emergency radiology division and try to find the solution of them.

CT in emergency radiology

M Lusic, R Stern-Padovan, V Sunjara, M Hrabak

Today's modern multi-detector computer tomography (MDCT) represents "one stop shop" for variety of diseases and conditions in emergency department. Conventional radiography (CR) and ultrasound (US) are well-established methods and still represent the basic everyday diagnostic tools but in many ways they are inferior to MDCT's speed and accuracy needed for emergency patients. When time means life (like in polytraumatized and unstable patients) they are not match for MDCT ability to scan large body volumes with high temporal and spatial resolution.

The fast acquisition of data and use of multiphase protocols followed by multiplanar reconstruction further improve diagnostic accuracy. Fast and accurate analysis of huge amount of images generated by examination require experienced radiologist which is familiar with wide range of common and not-so-common condition s found in emergency department. Young radiologists are in the challenging position of having ultimate responsibility for emergency patients without having enough training in this area. This presentation will give cross section trough variety of conditions found in everyday work in emergency room of Clinical Hospital Centre Zagreb with analysis of examination protocols and procedures.

Tomosynthesis in emergency radiology

Potocki K, Stern-Padovan R, Prutki M

Learning Objectives: We report our preliminary results of usefulness of digital tomosynthesis in emergency care unit, and describe some advantages of tomosynthesis.
Background: The use of tomosynthesis in the emergency setting is evolving. Indications to perfom tomosynthesis in our emergency care unit include determinations of urolithiasis and fracture, when conventional radiography or ultrasound is negative and in pretransplantation procedures to define calcifications of blood vessel wall. Imaging Findings: Digital tomosynthesis has high sensitivity in patients with urolithiasis. It allows exact determination of position, number and size of calculi. Tomosynthesis is very useful in analysis of bone fracture, since it is possible to: detect the fracture line, number of fragments and position of bone fragments.
Conclusion: Tomosynthesis was effective in clearly showi ng the size, position, and distribution of calculi. It is possible to accurately detect calcification of blood vessel wall what is important part of pretransplanation process. Digital tomosynthesis provided useful information in making the radiologic diagnosis of bone fracture. Further investigations are needed to identify the diagnostic algorithms where tomosynthesis would be favorable to use, since it is to provide a low-dose, low-cost method of volumetric imaging that can be easily performed and the irradiation dose is 3-33 times lower in comparison to CT.

MDCT supports plain abdominal radiography at detection extraluminal free air

Erzsébet Botos, Péter Magyar, Pál Bata, Péter Lukovich, Attila Zsirka-Klein, Oszkár Hahn, Viktor Bérczi, Kinga Karlinger

Introduction Supine abdominal X-ray is first line examination at acute abdomen. Small amount or atypical localization of free abdominal air can cause diagnostic difficulties, thus CT examination would be indicated.
Case presentations A male patient (66) arrived with strong abdominal pain and hematemesis. Plain radiography found enormous amount of free air under both domes of diaphragm, so the intestinal perforation was beyond doubt. At the same duty an old lady (88) was admitted. Plain radiogram presented slight distension of colon, considerable free air could not be detected. Ultrasound described aneurysm of the abdominal aorta, which suggested failure of blood supply of intestine. On abdominal CT scans small amount of extraluminal free air was seen next the antrum. In both cases prepyloric perforaton was found during surgery. Third female (54) patient had colonoscopy and removal of a polyp from the coecum. Two days later acute abdomen developed. Plain radiography showed small amount of free air next the liver, small bubbles appeared next the coecum and ascending colon. After CT examination, which presented extraluminal air bubbles exactly where they could be seen on the plain radiogram, the patient was operated. Coecal perforation was found near the area of polypectomy.
Discussion Plain radiography is first line examination if bowel perforation is suspected. CT examination is highly sensitive to detect free extraluminal air, and benefitial to localize the perforation site

Imaging in hepatic trauma

Ksenija Vukovic, dr.med., asist. Mirjana Brvar, dr.med.

BACKGROUND
Liver injury resulting from blunt abdominal trauma still has very high mortality, 60 to 100%. Although hemodinamically stable patients are today mostly treated conservatively, clinical monitoring and careful follow-up imaging studies in these cases is obligatory.
PURPOSE
To present diagnostic algorithm in a case report of blunt liver trauma with the implementation of contrast-enhanced sonography in diagnostic procedure.
METHODS
Urgent CT examination was performed showing liver contusion of 6. segment. As she was hemodinamically stable the decision for conservative treatment was made. Control CT exam after 1 week showed no progress of liver injury. Follow-up with contrast-enhanced sonography in 2 weeks demonstrated partial reperfusion of contusion.
RESULTS
With our case we proved contrast-enhanced sonography to be an app ropriate method to be used in follow-up, especially in younger, hemodinamically stable patients.
CONCLUSION
The usage of contrast-enhanced sonography in blunt liver trauma has not yet been regularly approved, but it is recommended to be used in addition to FAST and US, and thus be able to more accurately asses patient to whether surgery, further imaging, such as CT or observation alone is indicated. In addition, it is a valuable diagnostic imaging in the follow-up of patients with conservatively treated liver trauma to avoid repeat CT with its risks.

Emergency X rays tips and pitfalls

Sverko Ana, Kadezabek Tamara, Mustapic Matej, Pedisic Ivo, Tripalo Batos Ana, Krolo Ivan, Marotti Miljenko

INTRODUCTION: Emergency radiology demands accuracy and speed. To accomplish mentioned and to avoid missing of important pathology radiologists usually use a systematic approach to X-ray analysis. In selected cases we would like to present the importance of systematic X-ray analysis and some of the most important tips and pitfalls.
PATIENTS: In a time period of 8 months we collected instructive X-rays from patient's referred to our emergency department. Examination included X-rays of skull, face, spine, pelvis, extremities, abdomen or/and chest.
X-rays were taken according to the standard protocol used at our institution or, when the patient\'s condition could not allow use of the standard protocol, we made modification in positioning of the patient. Radiology trainee and radiology specialist analyzed X-ray images.
RESULTS: Selected illustrative cases present im portant tips and pitfalls in the analysis of emergency X-rays, value of proper positioning and proper clinical assessment of the patient, as well as relevance of evaluation of every structure that is seen on the X-ray.
CONCLUSION: The most appropriate way to avoid overlook of pathological X-ray imaging finding is adoption of systematic X-ray analysis. It is also of exceptional significance to evaluate X-rays in accordance with the exact history, clinical picture and laboratory results of a specific patient and to closely collaborate with radiology technologist to obtain the best possible picture quality.

Supine x-rays - tips and pitfalls

Kadežabek T, Tripalo Batoš A, Šverko A, Kalousek V,Marotti M, Krolo I

SUPINE CHEST X RAY- TIPS AND PITFALLS

Kadezabek T, Tripalo Batos¡ A, A verko A, Kalousek V, Marotti M, Krolo I
Department of Diagnostic Radiology, OB Bjelovar, Bjelovar, Croatia

The interpretation of supine chest X-ray is often difficult due to limitations such as: inability to apply the optimal radiographic technique, uncooperative patients who are often in poor condition, presence of different medical devices either in or out of patient's body that might obscure portions of the chest, as well as anatomical differences in supine films due to physiological changes in heart, pulmonary vasculature and mediastinum under gravity. However, supine chest X-ray actually presents appreciable help and relatively fast source of information in critically ill patients, as in patients in the intensive care unit.

Some hints are going to be presented on how to differentiate cardial from noncardial pulmonary oedema, pleurall effusion from parenchymal process and how sometimes pathological changes like pneumothorax, various inthrathoracic fluid collections and lung processes can be a challenge to detect on supine films. We would also like to emphasise the importance of comparation with prior X-ray films to determine whether the patient condition is improving or deteriorating and to refer when is chest X-ray daily indicated.

The aim of this presentation is repetition of hints and signs which can help us to determine and create our diagnosis, as well as improvement of our reading skills.

MDCT of acute abdominal conditions

András Palkó

In a general hospital acute abdomen accounts for 30% to 40% of all emergency surgical admissions, and the abdomen is involved in approximately 25% of multi-trauma patients.
Recent technological advancements have brought to the forefront the importance of imaging in the initial assessment and subsequent management of patients admitted with acute abdominal conditions. Thus, the role of clinical examination, laboratory data and imaging is constantly redefined in new management algorithms, in the strive to achieve the highest level of efficiency and to spare medical resources. Acute abdominal conditions require immediate and reliable imaging evaluation after stabilization of the patient's condition in order to make fast therapeutic decision to reduce mortality to a minimal level. In both traumatic and non traumatic acute abdominal conditions, the routine diagnostic work -up scheme (plain abdominal X-ray + ultrasound) is more and more frequently replaced by abdominal multidetector CT examination extended to other regions if necessary. It is of utmost importance for an emergency radiologist to get familiar with the classical signs and pitfalls encountered in common traumatic and non-traumatic acute situations, as well as to understand the current role and diagnostic efficacy of the different imaging modalities

US in blunt abdominal trauma

Zupetic Ivana, Miklic Dina

Abdominal injury from significant blunt trauma can include injury to bowel, kidneys, liver, and spleen. Clinical assessment of the abdomen for possible intra-abdominal injury
following blunt abdominal trauma is often unreliable, due to decreased patient consciousness, neurological deficits, medications, or other associated injuries.
Focused abdominal sonography for trauma (FAST) is rapidly gaining acceptance as an effective and accurate way to determine significant abdominal injury.
The primary objective of FAST is to identify the presenceof haemoperitoneum in a patient with suspected intraabdominal injury. The indications of FAST are

haemodynamically unstable patients with suspected abdominal injury and those with significant extraabdominal injuries (orthopaedic, spinal, chest) requiring a non-abdominal emergency surgery. The sensitivity of the FAST sc an has been quoted as 78% with a specificity of 99% in the evaluation of intraabdominal injuries and it is a highly specific tool to “rule in” presence of intra-abdominal injury during the initial assessment of trauma patients.

Spontaneous esophageal perforation

Ales Agatonovic, Primoz Caf

Spontaneous esophageal rupture (known as Boerhaave syndrome) is an emergency associated with a high level of mortality. Nonspecific clinical signs mimicking other serious diseases like myocardial infarction and various entities of acute abdomen are the reasons for frequently delayed diagnosis. The patient with a history of ethylism presented with hematemesis and epileptic seizure. Epigastric pain was accompanied by upper abdominal rigidity on palpation. There was right-sided pleural effusion on a plain chest film and a small amount of intraperitoneal fluid demonstrated by ultrasound.
No peptic ulcer perforation suspected initially was found at exploratory laparotomy.
Free mediastinal air was found on control plain chest films as well as on thoracic CT. Upper gastrointestinal tract radiologic examination provided evidence of a distal esop hageal perforation and the patient was immediately operated.
Our presentation emphasizes the importance of upper gastrointestinal tract radiologic examination in the early diagnosis of esophageal rupture. A glass of a contrast medium and an adequate communication between doctors (an adequate referring diagnosis!) would spare the patient the unnecessary operation and unnecessary investigations.

Imaging of uncommon cases of acute abdomen

dr. Zádori Péter, dr. Wolf Mátyás

The term acute abdomen indicates a heterogeneous group of potentially life threatening abdominal disorders, requiring immediate surgical intervention in most of the cases.
Among the commonly experienced, relatively frequent cases of acute abdomen, nowadays multislice spiral CT examinations (MSCT) have prominent role in the differential diagnosis of rarely occurring diseases.
With presenting three cases, we would like to emphasize the advantages of MSCT in the differential diagnosis in acute abdom inal cases.
The examinations were performed with a Siemens Somatom Emotion 6 multislice CT device, in the Radiology Department, Kaposi MÃ³r Teaching Hospital.

The MSCT presents fast, less demanding examination for the patient and substantial amount of data for the reading radiologist. The initially obtained axial images along with the reconstructed multiplanar images can easily be reviewed and consulted in equivocal, problematic cases.
Besides the obtained anamnestic data, the physical and laboratory findings, the conveniently chosen modern imaging techniques can significantly contribute to the prompt diagnosis, and appropriate therapy.

Perforating appendicitis caused by large appendicolith

Rados S, Ticinovic N, Petrovic J, Culo B, Erceg G, Brkljacic B

Clinical Summary
Pain in right lower abdominal quadrant
Clinical History and Imaging Procedures

A 55-year-old man presented to our emergency department complaining of chronic right lower abdominal pain (RLAP), which intensified after heavy weight lifting one day ago.
Except (RLAP) and tenderness, there were no other clinical or laboratory findings.
Plain films reviled few aero liquid levels in lower abdominal part, with no bowel loop distension. Further decision was to fallow up clinical condition and patient was admitted to surgical department for observation.
In a next two days there were worsening in clinical and radiological findings such as nausea, vomiting and increased distension of small bowel loops on plain films, which was clue to ileus of unknown history.
After that CT scan was performed, which showed fluid filed and dila ted jejunal bowel loops, in lower scans it depicted intraluminal, hyper dens, rounded stone (dimensions of 2.2x1.5 cm) and another smaller stone in Douglas cavity, with thickening of mesentery and peritoneum. Radiological diagnose was ileus, probably caused by perforating of chronic appendicitis with appendicoliths.
Medial laparatomy was performed, and it reviled diffuse peritonitis with fibrin adhesions on small bowel loops, large gangrenous and perforated appendices wi

Scrotal and femoral abscess in a young male

Mátéka Ilona

My case is about a 20-year-old male who became tetraplegic due to a motorcycle accident.
His left leg was swollen on admission.
The initial ultrasound examination showed only enlarged lymph nodes in the inguinal region, but some days later another ultrasound examination revealed a large abscess in the left upper leg and in the scrotal region.
A CT was also performed and showed the abscess and enlarged lymph nodes

in the paraaortic, parailiac and inguinal region.
He underwent surgery immediately and now he is in good clinical condition

Dual Source CT in Emergency Radiology

I. Battyány, S. Szukits,, M. Csete, Cs. Weninger, A. Lévai, Z. Harmat

In the emergency ambulatory service the MDCT has an important role to find the most accurate and quick diagnosis. It has a main role in the seriously injured (polytrauma) patients, in the differential diagnosis of acute chest pain and can be helpful in some acute abdominal symptoms like perforation of retroperitoneal bowel loops. The dual source CT working with quick acquisition time (short examination time), relatively low patient dose, high spatial resolution and providing new additional information about the diseases of the patients. The authors summarize the dual energy examinations which are improving the role of the CT in emergency cases. The perfusion imaging of the brain, lungs and heart, differentiation of bleeding, CT angiography with bone subtraction and virtual native imaging are discussed.

A Rare Case of Gallstone Ileus

Leder NI, Brajsa M, Blaskovic D

Abstract The gallstone ileus is a rare complication of cholelithiasis. It affects the elderly and women more commonly. A fistula is formed between the gallbladder and any part of the bowel. The large gallstone is expulsed through this fistula and may cause bowel obstruction (ileus). The most common sites of obstruction are the terminal ileum, jejunum and gastric pylorus. The classic triad of radiological symptoms are pneumobilia, ileus and ectopic gallstone. We will present a case of gallstone ileus caused by a very large gallstone impacted in the duodenum.

Radiation Protection in Emergency Radiology

Kretić D, Štimac D

Radiation protection is important, but frequently forgotten in emergency patients' imaging. Though vital functions of emergency patients are the most important, we mustn't forget that every unnecessary x-ray or CT scan adds to cumulative dose and might cause other chronic diseases after healing the basic injury. Proper algorithms in order to avoid unnecessary ionizing imaging methods are also useful to speed up the patient processing. Protecting the patient through using adequate radiology equipment with optimized radiation doses (with ALARA principle), as well as adequate shielding (led aprons, bismuth protection, led glass) is utterly important for the patient. Not to be forgotten is protecting the radiology staff - people who work with ionizing irradiation on everyday basis. At last, but not at least, high quality technician and radiology work is very much important to save the patient from repeated examinations. Therefore adequate radiology staff education as well as quality control and quality assurance (from calibrating the machines to internal and external audits) is of utter importance to radiation protection in emergency radiology.

Artifacts in ultrasound

Metka Verovnik Pavše,Saša Rainer

Sound can be reflected, scattered, refracted and absorbed.The velocity of ultrasound in soft tissue is 1540 m/s. As it is transmitted, the intensity of ultrasound beam is decreased by the above mentioned mechanisms (absorption, reflection and scatter). Tissue absorption increases with the increasing frequency of the ultrasound beam.Differential attenuation of sound causes shadowing and posterior enhancement. If there are highly attenuating soft tissue or the energy of transmitted sound is decreased by reflection or absorption, then shadowing occurs. If structure, as fluid, attenuate the sound much less than solid structure, then interfaces deep to cystic structures will appear brighter.
Mirror images are produced when there is a smooth flat surface, and the sound pulse will go the actual path between transducer and the lesion and the assumed path across the diaphragm, that serves as a mirrow.Refraction artifact results in a duplication artifact It is due to medial refraction of the beam when it passes the

border of the rectus abdominis muscle and fat.If the pulse goes assumed path, it is duplicated.
When sound reflects off of strong accoustic interfaces in the near field, the returning pulse may be strong enoughto reflect off the transducer itself and back into the body so that it can interact with the same nearfield interfaces multiple times - reverberation.Ring down artifact occurs due to gas, when the fluid between bubbles resonate.This results...

MSCT in polytraumatic patient- a chalenge for young radiologist

Flegarić - Bradić M, Mihailović G, Vitelić M, Genter I, Bradić T.

MSCT is the imaginig method of choice in polytraumatic patient. In this presentation we would like to present our center expirience. In these five patients that will be presented, we performed MSCT scan as the first line diagnostic modality. Although we usually perform FAST scan US as first line diagnostic modality in polytraumatic patient, MSCT with iv contrast media in the emergency setting of haemodynamicly stable polytraumatic patient prooved to be time saving, and offered clinicians more detailed informations that guided further therapy .
Performing the study with the oralcontrast doesnt't contribute to the accuracy of the study but can significantly delay diagnostics and cause further complications. If the patient is haemodynamicly unstable or has signs of peritonitis, emergency laparotomy is indicated, and in selected patients FAST ultrasound can be performed.

Novel digital X-ray imaging methods and diagnostic

Tünde Dévai, Bertalan Petrik

X-ray imaging is continuously evolving. The major goal of new technologies is to solve the drawback of 3D to 2D conversion inherited in conventional X-ray imaging. GE has developed new digital X-ray imaging methods during the recent years. Dual Energy imaging uses a high and a low energy exposure of the subject with 200ms interval. Using mathematical subtraction algorithms this method is able to separate soft tissue from calcified structures. Volume RAD uses multiple angle images to reconstruct any layers of the examined body part. These technologies give substantially more information for diagnosis solving the problems of overlapping structures while keeping the patient dose at the fraction of CT dose. Case studies will be presented to demonstrate the capabilities of Dual Energy and Volume RAD.

CT of the thorax in critically ill patients

Igor Kocijancic

A number of cases for CT of the thorax in emergency patients will be presented. Special points to indications for this imaging modality,
technical problems related to diagnostic procedures and clinicians' expectations will be discussed in this review.

Emergency US and CT imaging in childhood

Dr. Harkányi Zoltán

Sonography became the primary modality in the diagnosis of many acute pediatric conditions including abdominal, pelvic and MSK disorders.
US can be also used for interventions, intraoperative guidence of intraventricular catheters. May be contrast enhanced US will be applied more widely in the future.
Due to increasing concern using ionizing radiation CT should be limited for CNS injuries in acute phase, to detect VP shunt complications and for rare cases of pediatric sroke. In case of polytrauma patient CT can be extended for several regions at the time of admission (head, spine, abdomen and pelvis) based on the general condition of the patient. The most accurate evaluation of complicated abdominal and chest infections is performed by CT worldwide.
Follow up CT of patients with intracranial bleeding is controversial issue because of to risk of repeated radiation exposures.
Special aspect of emergency imaging in childhood is the need for good cooperation with anaesthesiologists and emergency physisians before and after the studies.
A brief overview will be presented about the status of emergency peditaric imaging in Hungary.

Neurological manifestation of PTLD in children

dr. Petrovszki Viktor

This case report is about the manifestation in nervous system of posttransplant lymphoprolipherative disease (PTLD).
A 16-year-old patient experienced end-state renal failure due to neurogenic bladder and vesicoureteral reflux.
Years after kidney transplantation and immunosuppressive therapy symptoms of nervous system have developed. After undergoing MR examination T2-weighted images showed high intensity areas in the brain, but their tumorous or ineffective origin was difficult to distinguish. Diagnosis was set up by stereoataxic brain biopsy.
Interesting in this case are firstly the relatively rare manifestation in the nervous system of PTLD, and secondly the differential diagnostic problems according to the imaging examinations.

Acute scrotum in children, torsion of testis and appendage

G.Roic, J.Marjanovic, N.Dukaric

The role of sonography in diagnostic workup of the most often cause of acute scrotum in children with special review of torsion testis and appendage.
Acute testicular torsion is an emergency and has to be diagnosed urgently.

Neck and chest emergency CT studies in the pediatric age

Gersey Eszter, Kovács Éva, Katona Gábor, Fábri Xénia, Harkányi Zoltán, Polovitzer Mária

Our hospital is a regional centre of Hungary for emergency pediatric cases including many diseases may require emergency imaging.
Neck and chest MSCT is relatively infrequent indication in childhood, e.g. suspected congenital malformations of the respiratory and the upper GI tract, trauma of the cervical spine, sudden onset soft tissue swelling of the para- and retropharyngeal area, and seldom vascular lesions. In case of very young or uncooperative patients adequate sedation is required.
The follow up of the clinical cases is sometimes difficult as patients arrive to our department 'only' for imaging examinations and therapy often takes place in a different hospital. Our illustrative cases will demonstrate neck abscesses, cervical spine luxation and a complicated case of thoracic infection.

Abdominal emergency imaging in childhood

Fábri Xénia, Harkányi Zoltán, Gersey Eszter, Polovitzer Mária

Diagnostic techniques and indications of pediatric abdominal emergency will be briefly overviewed. The most common acute abdominal symptoms are abdominal / pelvic pain, vomiting and fever. The most common disorders in childhood related with these signs are ileus, invagination, pyloric stenosis, volvulus, various inflammatory diseases, „stone disease", ovarian torsion, haemorrhagic ovarian cysts, extrauterin gravidity and abdominal trauma.
Blunt abdominal trauma can cause parenchymal injuries of the liver, spleen, kidney and the pancreas. The primary modality of choice is US in order to detect intraperitoneal bleeding. In most cases with abdominal injuries US follow up is sufficient. In case of polytrauma, with the suspicion of head or retroperitoneal bleeding MSCT should be performed after admission.
X-ray is used for bone injuries based on physical signs.
Two illustrative cases will be presented when contrast enhanced ultrasound sonography (CEUS) was applied for follow up of extensive liver and spleen injuries. In the 3rd case CT diagnosed the rupture of a cross-fused kidney, the patient was treated surgically.
In the vast majority of the pediatric abdominal trauma US is the first and final examination of choice. CT should be restricted in polytrauma or in case of extensive parenchymal injuries. CEUS may play some diagnostic role in the future.

Behind the curtain

Andrea Lakatos, Maria Deak, Katalin Hunyadi, Rozalia Hajnal-Papp

Introduction
In children the most common cause of large unilateral pleural effusion is bacterial pneumonia. Hemothorax due to trauma, congenital or posttraumatic chylothorax, pancreatitis and mediastinal or abdominal tumors can also appear in the form of hemithoracal opacification.
Patient and methods
An 11 years old boy presented to the emergency department with two weeks history of worsening hacking cough, wheezing, fatigue and two kilograms of weight loss. At first inspection he was skinny and anemic. Physical examination revealed rare percussion sound on the left side of the thorax. Chest radiographs were obtained. Almost complete opacification of the left hemithorax could be seen. Slight shift of the mediastinum to the right side indicated large pleural fluid collection. Right paraspinal stripe thickening was discernible, which on the basis of computer tomograp hy findings suggested mediastinal tumor extending into the retroperitoneal space. Open biopsy was performed. The histological findings of two independent pathologist groups showed ambiguous results.
Conclusion
To find out the correct diagnosis, adequate collaboration between clinicians, pathologists and radiologists is crucial. When histology is unable to call forth a proper diagnosis, then the role of an experienced clinician gains great importance. Radiologist's opinion is essential to assess the efficacy of the treatment and to follow-up the remission.

The tasks of neuroimaging in emergency medicine

Péter Barsi

Semmelweis University, MR Research Centre, Budapest

Fast multislice and multidetector CTs and ultrafast MRI methods have transformed emergency medicine.
Trauma setting: CT detects the most important features of neurotrauma: brain contusion, intracranial haemorrhage, fractures, communication between intra-extracranial spaces, vertebral fractures and malalignments. Injuries of craniocervical transition may be life-threatening. Arterial dissection should be kept in mind. MRI is proper to evaluate the spinal cord if available.
Non-trauma setting:
Stroke is the most frequent cause. CT with CTA and CTP answers the most important issues: 1. Haemorrhage or ischaemia? 2. Penumbra -thrombolysis. 3. Vascular abnormality.
Infections can cause severe acute symptoms. The probable diagnosis is different in immune-compromised patients.
Demyelinating diseases like MS or ADEM-AHEM are frequently encountered. MRI is the method of choice and imaging of the spinal cord may be indispensable as prompt therapy in e.g. neuromyelitis optica Devic will prevent severe disability.
Toxic-metabolic disorders like Wernicke, CPM or MBD cause acute severe symptoms not only in alcoholics but in an array of different medical conditions. MRI is the method of choice.
Tumours may cause severe acute symptoms. CT proves their presence but MRI provides further important information for surgical planning.
Conclusion: CT with the new techniques and modalities answers most questions in the largest neuro-emergency patient groups (trauma, stroke). MRI provides further important information in some patients and is the only tool providing the diagnosis in several disease groups.

Interventional neuroradiology in acute setting

Istvan Lazar, Alex Szolics, Csaba Olah

Inroduction: Despite modern imaging that we sometimes feel as a screening neuroradiological tool almost two third of neurointerventional procedures are performed in acute settings. Reasons and procedure are detailed. Discussion: The most frequent neurointervetional procedure is intradural aeurysm embolisation. In the everyday practice almost 75% of this procedure is performed after subarachnoid bleeding. This is due to the more and more conservative attitude towards silent aneurysms and the lack of clinical signs among patiens with ultimately ruptured aneurysms. With extended experiences carotid stenting sometimes also performed in patients with crescendo TIA-s or small, relatively recent infarcts. Patients who undergo intracranial angioplasty in vast majority are in the same situation, the indication of the procedure is seldom elective. Arterio-venous malformations and dural fistulaes are only embolised more and more after a bleeding episod and very rarely in patients diagnosed with seizures or headache. Intraarterial lysis and mechanical thrombectomy are playing an important role in modern ischaemic stroke therapy. Conclusion: Urgency is became the everyday procedure in neurointerventinal suits. Time is brain but there are lots of things to be done before we can be satisfied with or logistics or even results with interventional radiologic procedures in acute setting.

Role of perfusion CT in early diagnosis of acute ishemic stroke

Dolic K.,Jankovic S.,Buca A.,Kolic K.,Glavina G.,Lahman-Doric M., Kustera-Curkovic S

Purpose: The aim of this study was to present first experience with CT perfusion (CTP) compared to noncontrast CT (NCCT) in diagnosing acute ischemic stroke in University Hospital Split-Croatia and to emphasise the value of early diagnosis in adequate thrombolytic therapy application.
Methods and materials: 30 patients presenting with symptoms of ischemic stroke were submitted to Stroke protocol: NCCT + CTP + MSCTA (MSCT Sensation 16 Siemens). We used 200 ml of nonionic intravenous contrast media iopamidol 370 at an injection rate of 10,0 ml/s. Patients with ischemic stroke within 3 hours of stroke symptoms onset underwent thrombolytic therapy.
Results: Ischemic stroke was confirmed in 76,7% patients who were admitted with stroke symptoms to our emergency department. CTP was significantly superior to NCCT in the depiction of ischemic stroke (14 patients diagn osed with NCCT, in comparison to 23 with CTP, p=0,008). In 9 cases with negative NCCT there were signs of ischemic stroke on CTP, and 6 of those patients with significant penumbra received thrombolytic therapy. NCCT sensitivity (taking CTP as referent method) was 60,8%. The accuracy of this method was 70%. Negative predictive value of NCCT in comparison to CTP was 44%.
Conclusion: This study confirms CTP being a reliable tool for the identification of irreversibly damaged brain tissue and penumbra in stroke patients. It helps clinicians determine wheter thrombolysis is appropiate but it is also expected to he

Corpus Alienum Cranii

Milan Makra M.D., Gábor Forrai M.D. PhD.

We report an unusual case of transcranial penetrating head injury.
A man committed suicide in his home using a knife. The knife was removed without new brain injury and the patient had an excellent outcome.
The case highlights the difficulties of preoperative and postoperative radiological assessment, neurosurgical challenges and the verified psychiatric history.

Imaging of acute spinal cord compression syndrome

Ronald Antulov, Damir Miletic

Acute spinal cord compression syndrome (ASCCS) requires emergency investigation and treatment in order to prevent morbidity and mortality. In the majority of cases spinal cord compression implies a lesion of the vertebral column compromising the spinal canal and producing a myelopathy. Causes of ASCCS include trauma, extradural and intradural hematomas, infective lesions, degenerative pathology, neoplasms and inflammatory conditions. The most acute form of ASCSS is caused by trauma. In order to determine the cause of ASCCS and extent of spinal cord injury several diagnostic methods can be used. These diagnostic methods comprehend plain radiographs, computed tomography (CT) and magnetic resonance (MR) imaging. The diagnostic method of choice depends on the cause of ASCCS, patient's clinical condition and existence of factors that limit the possibility to apply the desire d method.

Neurovascular emergencies

David Ozretic, Goran Pavlisa, Mrako rados

Recent developments in non-invasive neuroimaging methods have greatly advanced detection and understanding of neurovascular diseases, and at the same time breaktroughs in materials and techniques of interventional neuroradiology have revolutionized their treatment.
Most of these conditions are acute and life-threatening, and can be divided as traumatic or non-traumatic, arterial or venous, intracranial or extracranial, and ischaemic or haemorrhagic.
An overview of the commonest diagnoses (ischaemic stroke, SAH, ICH, penetrating or blunt vascular trauma presenting as dissection or A-V fistula, venous thrombosis, epistaxis, vasospasm) will be given with emphasis on radiological findings using non-invasive imaging techniques such as MSCT angiography and MR angiography, as well as on endovascular treatment strategies and options.

Embolization of pseudoaneurysm of SMA in patient with short bowel syndrome

Blaskovic D, Leder NI, Novacic K, Vidjak

Pseudoaneurysms are composed of a single layer of fibrous tissue surrounding a sac of turbulent blood flow. Trauma is rare cause of SMA aneurysms, and is mostly caused by penetrating injury. SMA aneurysms require intervention because of common occurrence of complications.Therapeutic options for pseudoaneurysm management include number of minimally invasive techniques, but open surgical repair in some cases may be necessary. We report a case of a 19-year old male patient suffered a knife stab wound to the abdomen which caused damage to parietal peritoneum and stomach. After admission in outside hospital patient developed haemorrhagic shock and bowel gangrene. Multiple open surgical procedures were performed with extensive bowel resections and consequential development of a short bowel syndrome. After admission to our hospital due to short bowel syndrome MSCT showed a large pseud oaneurysm of proximal part of SMA. DSA was indicated, showing a psedoaneurysm without extravasation of contrast material during selective approach to the neck of the pseudoaneurysm. Patient was candidate for bowel transplantation. Decision for endovascular embolization of the pseudoaneurysm was made to avoid additional surgery and complications while waiting for a donor. Endovascular embolization using micro coils was successfully performed. 3 months later bowel transplantation was done. Bowel transplant was functional for 9 months when due to immune dysfunction and graft rejection patient died.

Successful embolization of pseudoaneurysms of the gastroduodenal and superior pancreaticoduodenal arteries associated with pancreatic pseudocyst in two patients

I. Dudás, L. Szidonya, P. Magyar, B. Nemes, P. Pajor, O. Hahn, K. Karlinger, V. Bérczi

Background. Pancreatic pseudoaneurysm (PPA) is a rare, but well-known complication of pancreatitis, occurring in app. 5% of patients, and is usually associated with the presence of pancreatic pseudocyst, fluid collection or abscess. The most common involved vessel is the splenic artery, but other peripancreatic arteries may also be affected. Patients may develop palpable epigastric mass, bleeding and pain, but they are often fully asymptomatic, and incidentally discovered on abdominal US, CT or angiography examinations.
Case report. We present two cases, a 54y male with a large PPA of the gastroduodenal artery, and a 69y male with a smaller PPA of the superior pancreaticoduodenal artery. Both patients were admitted to hospital because of severe anemia, where abdominal contrast-enhanced CT was performed, and the diagnosis was made. Angiography through the femoral artery conf irmed the diagnosis. After localizing the exact origin of the pseudoaneurysms embolization was performed using a 3x5mm coil and 500-700 micron PVA particles or microcoils through the affected vessels. Postembolization angiography confirmed obliteration of the pseudoaneurysm. The control non-invasive imaging methods showed shrinkage and vanishing of the lesions. The patients were discharged one week after intervention, and they up to this day do not require further treatment.
Conclusions. Percutaneous angiographic embolization is the treatment of choice for hemodynamically stable patients.

Interventional Radiology in Emergency Conditions

Dimitrij Kuhelj, Clinical Radiology Institute, University Medical Center, Ljubljana, Slovenia

Purpose: To present the role of interventional radiology in emergency conditions.

Materials and Methods: From the introduction of the Seldinger method in 1953, interventional radiology was used as a diagnostic tool in emergency conditions. The introduction of percutaneous nephrostomy catheters and double- J splints in urinary tract injuries introduced also interventional therapy.

Since the introduction of baloon catheters in 1980s, temporary haemostasis was performed. Local thrombolysis via catheter in acute arterial occlusion improoved limb- saving and survival in such patients.

New tools in interventional radiology- embolising agents, spirals and stentgrafts in the beginning of 1990s opened the era of modern haemostasis control in emergency conditions, mechanical apiration devices made revascularization safe and fast.

In late 1990s stentgrafts for aorta made repair of injured aorta feasible. New techniques introduced emergency thrombolisis of intracranial arteries and coiling of intracranial aneurysms.

Results: All the procedures mentioned are performed in our institute. The most interesting cases will be showed during the presentation.

Conclusions: Interventional radiology became a life saving method in emergency condition. In severely injured patients it presents not only the alternative to classical (mostly surgical) treatment, but it is often the first-choice terapeutic (and sometimes diagnostic) option.

The role of helical multidetector CT in diagnosis and follow-up of aortic dissection

Veljkovic Vujaklija D, Kovacic Dujmovic S, Miletic D

Computed tomography is currently the most commonly used imaging modality in patients with suspected aortic dissection due to its availability, short acquisition time and high level of diagnostic performance. Based on its sensitivity and specificity of almost 100% the type, extent, localization and side branch involvement of aortic dissection can be assessed accurately. Helical CT can also be used to differentiate atypical forms of aortic dissection such as intramural hematoma, intramural haemorrhage and aortic ulcers. The helical CT provides valuable information for planning angioplastic procedures and is particularly useful in follow-up and diagnosis of early and late complications after surgery or medical treatment. The most important changes that need to be assessed are aortic diameter, signs of aneurysm formation, haemorrhages at surgical anastomoses or graft stent sites an d signs of organ malperfusion.
Here we present our experiences in diagnosis and follow-up of aortic dissection cases in the period of last three years.

Acute aortic occlusion

K.Banic, G.Ivanac, A.Hrkac-Pustahija, M.Ajduk, B.B

Acute aortic occlusion is a rare, catastrophic, usually fatal condition that results either from aortic saddle embolism or thrombosis. It usually presents with both vascular ischaemia as well as neurological symptoms, providing a diagnostic challenge.

A 65-yr old woman reported an abrupt onset of weakness of both legs along with severe back pain projecting to both legs, on admittance to neurological emergency room.

Her prior history included chronic renal failure, an acute myocardial infarction 3 years previous followed by two episodes of ileofemoral venous thrombosis.

Flaccid paraparesis of both lower extermities was observed on physical examination, along with signs of bilateral lower limb ischaemia.

Color Doppler ultrasonography revealed diminished flows on both superficial femoral and popliteal arteries, consistent with proximal stenosis. Subsequently perfor med CT angiography confirmed the pressumption of aortic occlusion, showing intraluminal masses of infrarenal aorta.

Infrarenal aortic thrombectomy was carried out immediately, during wich a thrombus inside atherosclerotic aorta was extracted.

The patient was then transferred to an intensive care unit where her state deteriorated.

Despite vasoconstrictive and inotropic supportive therapy, signs of circulatory insufficiency consisting of hypotension and anuria, accompanied with acidosis and leukocytosis, developed and patient died on the 3rd day upon admittance.

The selection and performing of an appropriate imaging method, based on throughout clinical examination, are critical in recognition and prompt treatment of a rare condition such as acute aortic occlusion. Nevertheless, approaching a satisfactory survival rate imposes as a goal.

Diagnosis and treatment of traumatic aortic lesions

Péter Fazekas, Zsuzsanna Takács-Szabó, Lajos Mátyás

Traumatic thoracic aortic rupture most frequently is consequence of frontal collision, fall from a height, explosions, etc. The mechanism of injury in 50-70% of the cases is due to deceleration. Localisation is more commonly at the aortic the isthmus, or in 18% at the ascending and 14% in the descending aorta sections.
A 71-years-old man fell from height during collapse of a building. Reinforced concrete fell on the left side of his chest. He was air-lifted to the traumatology department with penetrating chest injury, multiple rib fractures, haemopneumothorax, pneumomediastinum and subcutaneous emphysema. MDCT was performed which showed an incomplete aortic rupture. Endovascular endograft implantation was performed. 10 weeks later pseudoaneurysm developed which was followed by another endograft implantation. 7 weeks later an endoloeak was detected, and following a carotid-c arotid cross-over by-pass a third endograft has been inserted at the radix of the left subclavian and common carotid arteries.
Inserting the endograft sometimes does not resolve definitively the incomplete rupture of thoracic aorta due to deceleration injury. Like in this case, up to 3 endograft implantations may take place because of developed endoleak or pseudoaneurysm. The effectiveness is up to the accurate scaling and the exact positioning of the graft. After setting up the diagnosis endovascular therapy is the first choice. Follow-up with MDCT is necessary to recognise the potential complications.

Pulmonary Artery Anomalies in Emergency Radiology

dr. Lévai Andrea

Our case presents a 67-year old female with severe dyspnea and markedly elevated D-dimer levels referred for CT angiography in order to rule out pulmonary embolism.
However, occlusive emboli were not displayed in the pulmonary arteries and the lobar or segmental arteries, CTA examination confirmed a conically narrowed hypoplastic right pulmonary artery. Dual energy examination with lung perfusion imaging revealing perfusion defect in the right inferior lung segments. The arterial supply of these segments appeared to be partially by the hypoplastic right pulmonary artery and by bronchial arteries as well. Apart from atelectasis of the right inferior lobe, the right lung appeared to be decreased in vollume, with irregular vascularture and bronchial pattern. The right internal jugular vein showed to be aplastic with hypodens intraluminal mass, and markedly dilated azygos and hemiazygos vessels were also visible.
Dual energy CT of the lung can display the perfusion defect of the lung ,independent from the direct visualisation of the emboli in the pulmonary arteries. Furthermore, spiral dual energy CT angiography simultaneously provides high resolution angiography of pulmonary arteries and the possibility of perfusion defect assessment.
Our objective is to emphasis the importance of Dual energy CT angiography in emergency ragiology to detect impared perfusion caused by different pulmonary anomalies.

Percutaneous mechanical thrombectomy in treatment of acute massive pulmonary embolism - a case report

Popovič Peter, Manca Garbajs, Katja Novak

Institute of Radiology, University Medical Centre Ljubljana, Ljubljana, Slovenia

Massive pulmonary embolism (PE) is a life-threatening condition with a high early-mortality rate due to acute right ventricular failure and cardiogenic shock. A 51-year-old woman with a massive pulmonary embolism and contraindication for thrombolytic therapy was treated with percutaneous mechanical thrombectomy

using an Aspirex 11 Fr catheter (Straub Medical AG, Wangs, Switzerland). The procedure was successfully performed with a good immediate angiographic result. The patient made a full recovery from the acute episode and was discharged on heparin treatment. Our case report indicates that in patients with contraindications to systemic thrombolysis, catheter thrombectomy may constitute a life-saving intervention for a massive pulmonary embolism.

Imaging of vascular anomalies with 64 slice DSCT during coronary CT angiography examinations

E. Varady, B. Ruzsics, S. Szukits, G. Hernádi, T. Simor, I. Battyáni

One of the absolute indications of coronary CT angiography is detection of so called malignant and benign coronary artery anomalies. During the examinations other vascular -venous and arterial - abnormalities of the heart and the mediastinum can be proved. The purpose of this presentation is defining the malignant and benign coronary artery malformations and to show the importance of other vascular malformations from interventional and surgical aspect based on few cases. Examination protocols with 64 slice DSCT will be laid as well.

Superior mesenteric artery embolysm treated with percutaneous mechanical thrombectomy

Peter Popovič, Srečko Dobrecovič, Dimitrij Kuhelj
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Acute mesenteric ischemia still carries an appallingly high mortality rate. The traditional treatment of mesenteric arterial embolism has been early surgical laparotomy with embolectomy. A less well-established approach is local infusion of thrombolytic therapy or percutaneous aspiration thrombectomy with or without balloon dilation. We report a case of acute superior mesenteric artery embolism treated with percutaneous thrombus aspiration. Patient was effectively treated using transaxillary percutaneous mechanical thrombectomy using a 6 F Aspirex catheter.

POSTER SESSIONS

Pancreatitis following blunt injury in 9-year-old boy-case report

Situm K, Britvic S , Roglic J, Peric M, Stula I, Jankovic S

Pancreatic injury in childhood is an uncommon but serious condition usually following blunt abdominal trauma. A contrast-enhanced CT scan provides the best assessment of parenchimal lession but injury of the main pancreatic duct may be overlooked. The management of pancreatic trauma largely depends on the presence of duct disruption and other concurent injures. We report a case of non-surgical management of distal pancreatic transection in a 9-year-old boy. The injury was due to a fall on the abdomen. Initial CT scan showed transection of the distal pancreas and suggested disruption of duct. The patient was successfuly managed by percutaneous drainage of peripancreatic fluid collection. Continious monitoring was performed using US and CT imaging.

Emergency embolization of deep femoral artery branches for bleeding after traffic accidents

Perica D,Cambj-Sapunar L, Dragicevic D, Jankovic S

Injuries of femoral vessels due to femoral bone fractures in traffic accidents are rare but serious complications, therefore it is essential to consider the possibility. We present two cases of deep femoral artery injury with severe bleeding that we successfuly treated by emergency endovascular embolization of the lacerated artery. Both patients, a 74 ' year ' old woman hit by a car and a 41 ' year ' old man injured in a motorcycle accident, were admited to the hospital with multiple bone fractures and blunt abdominal traumas. Because of the rapid hematocrite decrease and swelling of the thigh an emergency CT with contrast dye was performed in both and revealed extravasation of contrast from deep femoral artery branches. After selective angiography was done, embolization by superselective chateterisation of the injured arteries was performed. Embolization with combination of gelatin sponge and helical platinum coils successfuly occluded injured arteries perserving flow in other deep femoral artery branches. We conclude that emergency selective embolization is effective minimaly invasive treatment of arterial bleeding in severly

injuried patients after traffic accidents.

Magnetic resonance cholangiography in acute biliary obstruction

Pusic M, Miletic D

BACKGROUND: Magnetic resonance cholangiography (MRC) is a noninvasive imaging test using sequences with unique weighting that allows relatively stagnant fluids, such as bile in the biliary tract, to have a high-signal intensity compared with the dark, low-signal intensity of adjacent solid hepatic and pancreatic tissue and fast-flowing fluids.
PATIENTS AND METHODS: Our study recruited 65 consecutive patients with clinical and biochemical signs of acute biliary obstruction between December 2007 and September 2008. All procedures were performed with a 1.5 T superconductive MR unit. Single-shot thick section HASTE images were obtained in the coronal (0Â°), sagittal (90Â°), and oblique (-30Â°, -20Â°, -7.5Â°, and +45Â°) planes. Breath-hold T2W 3D coronal images and axial T2WI were also performed. If non-calculous etiol ogy of biliary obstruction was suspected, standard abdominal MR was added. MRC findings were correlated with direct cholangiography, surgery, or 12 month\'s follow-up protocol.
RESULTS: Nineteen patients had stones in the bile ducts. Positive and negative predictive values as well as accuracy of MRC in the detection of bile duct stones were 95%, 99%, and 97%, respectively. All false positives referred to stones up to 3 mm in diameter, and spontaneous elimination was not excluded. MRC accurately demonstrated 5 malignant stenoses, and one benign stenosis, without false positives or false negatives.
CONCLUSION: MRC showed high sensitivity and specificity for demonstrating the level and presence of biliary obstruction. It also reliably differentiates between malignant and benign cause of biliary obstruction, including bile duct lithiasis.

Talocrural joint fractures

N.Ticinovic, M.Cavka, S.Rados, A.Hrkac-Pustahija, G.Ivanac, B.Brkljacic

Objective - To determine the number of positive X-ray examinations of the ankle in the Emergency department in University Hospital \\"Dubrava\\", Zagreb, Croatia.
Methods and materials - We have done a prospective survey on the Emergency department in University Hospital Dubrava, Zagreb, from 1 January 2007 to 31 December 2007. We have included radiographed patients with an acute ankle injury. Total of 1096 patients met the inclusion criteria.
Results - 1096 patients were used for analysis of which 215 (19.62%) had fractures. No distinction between the clinically significant or insignificant fracture was made.
Conclusion - Number of fractures (distal parts of tibia and fibula or the base of V metatarsal bone) is relatively low. Without the use of Ottawa ankle rules the rate of fractures is around 15%, and the use of the rules can reduce the radiographs by 28%. But the fear of malpractice suite increases the rate of radiographs.

Correlation of tumor size using CT and CYFRA 21-1 level in NSCLC patients

Sertic Milic H, Mazuranic I

The aim of the research is to determine the correlation between the level of tumor marker CYFRA 21-1 and the diameter of non-small cell lung cancer (NSCLC) measured by computed tomography (CT). It is hypothesized that greater tumor masses contain more cells in apoptosis, so the associated level of CYFRA 21-1 is going to be higher.
The study population includes 164 subjects with NSCLC, 52 with lung metastases and 30 with benign lung cysts. The measurement of CYFRA 21-1 level is performed by electrochemiluminescence immunoassay, and the measurement of the biggest diameter of NSCLC, lung metastases and benign lung cysts is done by CT. Obtained data are statistically analysed.
The subjects with greater tumor diameter and stage of NSCLC had a significantly higher level of CYFRA 21-1 unlike groups with lung metastases and cysts that lack such correlation. CYFRA 21-1 showed a high sensitivity in NSCLC of 74,0%.

NSCLC can be separated from the other groups by measurement of blood level of cytokeratin 19 soluble fragments.

Mycobacterium xenopi

Marusic A, Mazuranic I

Objectives: The genus Mycobacterium has more than 120 well-characterized species. Since, Mycobacterium xenopi is the most frequent NTM isolate in Croatia we studied its epidemiology, imaging characteristics and clinical relevance.
Methods: We performed a retrospective study over a 25-year period obtaining data from archives in health care institutions from all over the country.
Results: We detected 40 patients with a positive isolate of M. xenopi. Twenty-four patients met American Thoracic Society criteria for pulmonary disease and all of them had pathologic changes on chest x-ray. All patients were immunocompetent. We found COPD as the most frequent comorbid disease, especially in the group of patients with worse treatment response.
Conclusion: In patients with M. xenopi pulmonary infection all; clinical, radiographic and microbiology criteria should be fulfil led for the diagnosis of infection to be established.

MR imaging of traumatic spine injury, a case report

Körmendy T., Ozretic D., Smiljanic R, Pavlisa G, Rados M

A female patient, aged 88 years, was admitted to our emergency department after falling down the stairs in a retirement home. Upon arrival she was unconscious (GCS 3), and after ascertaining cardiopulmonal stability, an emergency whole body MSCT was performed.
The main finding was the fracture of multiple vertebral spinous processes (C4-Th2) with minimal dislocation, irregular posterior margins of bodies of C4 and C5 vertebras, with multiple small calcium densities in the spinal canal at the same level â?? probable bony fragments. There were no direct signs of major hemorrhage, the spinal canal was of appropriate width, cervical vertebral body heights were normal.
Intervertebral space height was reduced at levels C4-C5 and C5-C6, with concomitant degenerative changes (marked ventral and dorsal osteophytes) at the same level.
Apart from minimal pericardial ef fusion, the thorax, abdomen and pelvis findings were unremarkable.
However, due to the low GCS score, flaccid tetra-paresis and cervical spine

fracture, a MR scan of the cervical and thoracic spine was requested.
The MR demonstrated extensive spinal cord injury, and soft tissue and ligamentous injury not evident on the CT scan.
This case confirms that cervical MR imaging should be an integral part of diagnostic workup of patients with neurological symptoms after cervical spine injury as it is by far the best modality for evaluating the spinal cord, ligaments and paravertebral soft tissues.

Evaluation of temporal bone fractures

Tripalo Batos A, Kadazabek T, Sverko A, Galovic Maric A, Borojevic N, Hat J, Krolo I, Marotti M

When traumatized, temporal bone fractures in three different patterns: longitudinal, transverse and mixed. Fracture fragments can cause nerve trauma, vascular damage or disruption of middle or inner ear structures. Potential complications are hearing loss, vertigo, facial nerve injury, infection, otholiquorrea, perilymphatic fistula.
HRCT scan in thin slices (0.6 - 1 mm) is golden standard for evaluation of the temporal bone and small structures within middle and inner ear. When temporal bone fracture occurs HRCT scan demonstrates a lucency through the temporal bone. By evaluation of the line of traumatic force we can predict pattern of temporal bone injury and possible complications. Longitudinal fracture usually occurs after temporal or parietal trauma. It is parallel with the petrous bone long axis. Involvement of the middle ear, carotid canal, bony labyrinth, and exter nal auditory canal should be noted. Transversal fracture occurs after occipital trauma or trauma of craniocervical junction. It is perpendicular to petrous bone long axis. Involvement of the inner ear structures and facial nerve course should be noted. Mixed fracture has both transverse and longitudinal elements. Involvement of the middle ear, petrous bone, otic capsule, and facial nerve canal are the primary determinants of prognosis. Although temporal bone HRCT scans rarely change acute management, when they do, it is in regard to the need for further workup of possible vascular injury.

Complications of liver rupture - case report

Igrec J., Zokalj I., Pavcec Z.

Aim: In this case report authors wants to describe complications of liver rupture in polytraumatized patient injured in car accident.
Case report: Male patient, 22 yrs old was admitted to the emergency department with clinical signs of hypovolemic shock and right hip fracture.Conventional radiograms depicted multifragmentar fracture of the right acetabulum with femoral head luxation and blood tests revealed anaemia.
CT asay showed stellate laceration of the parenchyma close to falciform ligament, lesion of the spleen, right acetabulum fracture and right femoral head fracture.During the first operation, liver laceration and splenic capsule lesion were treated with haemostatic material.Right acetablum fracture was treated with osteosynthesis and after haemodynamic stabilisation of the patient.
Recovery, was complicated with massive production of free intraperitoneal f luid coloured with bile. Interventional gastroenterologist was asked for help because of suspected intrahepatal bile duct lesion.ERCP depicted rupture of VII. liver segment bile duct and stenosis of the right main bile duct.Endobiliary stent was placed and intraabdominal bile leak and production of free intraperitoneal fluid decreased.
Three days after bile duct intervention, patient developed high temperature and colicky abdominal pain.During relaparotomy, multifocal intraabdominal abscesses were found (bacterial and fungus etiology).
After second laparotomy, patient was discharged from hospital 79. day after trauma.
Conclusion:Polytraumatized patients care demands close coordination of various clinical and diagnostic specialists in order to prevent and treat potentially fatal complications.

SLE patient with opstructive jaundice and midle lobe atelectasis - case report

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Aim: Non-specific symptoms like weaknes and clinical signs like high temperature in chronically ill patients with long history of seronegative spondiloarthropaty can be misleading because lot of side-effects of long-term therapy.
Case report: Male patient, 54 year was admitted to the emergency department because of weaknes and elevated body temperature 38,3ºC. Patient had three chronical diseases, 20 year long history of systemic lupus eritematodes (SLE), arterial hypertension and insulin-dependent diabetes mellitus. 19 years before partial pancreatectomy with pancreatojejunoanastomosis, cholecystectomy and splenectomy were performed because of necrotizing pancreatitis. Two years before this episode patient suffered of opstructive jaundice because of stenosis of anastomosis which was confirmed with endoscopic retrograde cholangiopancreatography (ERCP) and resolved with sphincterotomy and stenting of anastomosis.
First chest X-ray at the admition showed pleural effusion in the right hemithoax base. First biochemistry tests revealed signs of hepatic function lesion, hyperbilirubinemia with 186µmol/L (norm.3-20). C-reactive protein (CRP) was highly elevated 231,8mg/l (norm. <5,0). Total leukocyte count was elevated $16x10^9$ /L and erythrocyte decreased $3,47x10^{12}$ /L.
First abdominal ultrasound depicted pleural effusion in right hemithorax base, dilated intrahepatic end extrahepatic bille ducts with stones in common bile duct.
Computed tomography (CT) of thorax and abdomen confirmed calculosis of common bile duct, dilatation of bile ducts, stenosis of distal part of common bile duct and depicted disruption of the stent. CT also revealed midle lobe atelectasis.
During bronchoscopy intraluminal tumor of the main midle lobe bronchus has been diagnosed - patohistologic analysis showed planocellular carcinoma.
Patient was temporarly transfered in another institution in atempt to resolve hyperbilirubinemia with repeated endoscopic intervention.
After cholangiopancreatography which confirmed ultrasound and CT finding papilotomy and dilatation with baloon-catheter were performed. Two more stents were placed in stenotic distal part of common bile duct and anastomosis.

Hyperbilirubinemia and CRP level gradualy decreased after intervention, but signs of hepatic function lesion remained unchanged. Diminished liver function, comorbidity conected with high risk of perioperative complications were reasons for decision of paliative treatment of midle lobe bronchi carcinoma with therapeutic irradiation.
Conclusion: Diagnostic evaluation of patients with long-standing chronical diseases in emergency situations can be very demanding and close coordination between physicians of various specialities is needed to resolve the acute problems.

Occipital condyle fracture

Ivan Zokalj, Zlatko Pavcec

Aim: Computed tomography (CT) is primary imaging method for radiologic evaluation of polytraumatized motor-vehicle accidents victims in emergency departments, especially for patients with low Glasgow coma score (GSC), from 3 to 6. Case report: Motorcyclist, male, 21 year, was suddenly stopped by another car which blocked his route. Driver was expeld from the seat with strong force. Patient was admitted to the hospital nonconsciousnes, without spontaneous breathing and carotid pulse, GSC was 3. After 20 minuts long cardiopulmonal resuscitation, repeated physical examination and stabilisation patient underwent CT which depicted left occipital condyle avulsion fracture probably caused by cervicocranium ligaments hiperflexion injury with dorsal displacement of bony fragment which encroaches foramen magnum more than half of the diameter. Head was in anteposition in relation to t he cervical spine. Free bony fragment in foramen magnum compressed the spinal medulla. Brain CT showed brain parenchymal edema and massive subarachnoidal hemorhage with propagation in the ventricular system. Body CT revealed right hemithorax serial rib fracture and liquidopneumothorax. GSC was 3 from the beging of the hospitalisation.
Described cervicocranial fracture is Anderson and Montesano type III fractures which is the most common type of this rare type of cervicocranial fracture. This type of cervicocranial trauma is most probably caused by combination of severe contralateral flexion and rotation.
Conclusion: CT is imaging method of choice for polytraumatized patients with suspected cervicocranium lesions and low Glasgow coma score (3-6).

Gastric incarceration and perforation following posttraumatic diaphragmetic hernia

Amra Djerzić, Marija Dolenšek

Clinical Institute of Raidology, University Medical Centre Ljubljana

We report a case of a late presentation of traumatic diaphragmatic rupture with gastric incarceration and perforation.

A 29-year-old male patient presented in Emergency department with severe chest pain, heavy breathing and vomiting. He denied acute traumatic event but confirmed blunt abdominal trauma 2 years ago.
Emergency chest radiography (CXR) showed signs of left-sided fluidopneumothorax with associated medistinal shift. Computer tomography (CT) scan revealed left-sided diaphragmatic defect with almost complete herniation of the stomach into the thorax and large fluidopneumothorax, conclusive of gastric perforation.
The emergency surgery confirmed CT findings. The stomach was necrotic and total gastrectomy was performed. Pleural space was washed thouroughly with saline and drained. Diaphragmatic defect was repaired without grafting.
Postoperative course was uneventful and the patient was discharged from hospital 14 days after the surgery.

Alveolar proteinosis without symptoms

Ádám Perényi

A completely asymptomatic young health care worker presented for regular medical check-up. Chest radiograph and CT scans were suggestive of alveolar proteinosis, which was confirmed with consequent fiberoptic bronchoscopy with bronchoalveolar lavage and transbronchial biopsy. This case presentation draws attention mainly to the clinical and radiological signs of this rare disease.

Value of multislice CT in emergecy radiology

Gergely Turóczy, MD, Mária Bakos, MD

Multislice CT gives the possibility of 3D reconstruction, so radiologists can help in planning trauma operations with 3D reconstruction of trauma and multiple trauma patients. We are presenting 4 emergency cases where multiplanar and 3D reconstrucions added diagnostic information therefore operational tactics was changed.

Congenital Anomaly of the Caval Vein

M. Csete, A. Lévai, I. Battyány

During the embryogenesis the development of VCI and pelvico-abdominal venous system is a complex process, including the anastomosis originated between the 3 pair of embryonal veins and the retrogression of some parts of these. Beside the generally known „normal" vascular system many variation can develop in a small percentage. Recognizing these variations usually happens randomly, mostly in asymptomatic patients during CT examinations.
Among VCI anomalies belong the renal vein around the aorta, the left renal vein in retro-aortic position, the double VCI, the left VCI (VCI transposition), the „discontinuation" of VCI with azygos/ hemiazygos continuation, and the persisting VCS (bilateral VCS).
To avoid diagnostic failures and traps the knowledge of these congenital disorders are essential for radiologists and al so necessary for clinicians to plan many surgical procedure precisely.

The role of Dual Source CT in the diagnosis of crystal arthropathies

S. Szukits, I. Battyány, E. Várady, M. Csete, A. Lévai

Crystal arthropathies are well known types of the musculosceletal diseases. They have no specific appearance on X-ray, ultrasound and CT. The differential diagnosis of the Gout, Pyrophosphate dihydrate crystal deposition disease (CPDD), Hydroxylapatite crystal deposition disease (HADD), Corticosteroid- induced crystal synovitis (CICS) are difficult and it makes biopsy required. The biopsy as an invasive diagnostic method painful and increasing the risk of joint space infection. The authors discuss their and international results in the noninvasive differential diagnosis of crystal arthropathies with dual source CT. With help of dual energy imaging the authors could make the crystals visible and present their practice in the differential diagnosis of the crystal arthropathies.

Case report aorto-caval fistula as a rare complication of abdominal aortic aneurysm

István Gyuricza, András Laki Gábor Beke, Csaba Kőrösi, Gábor Zentai, Gábor Forrai

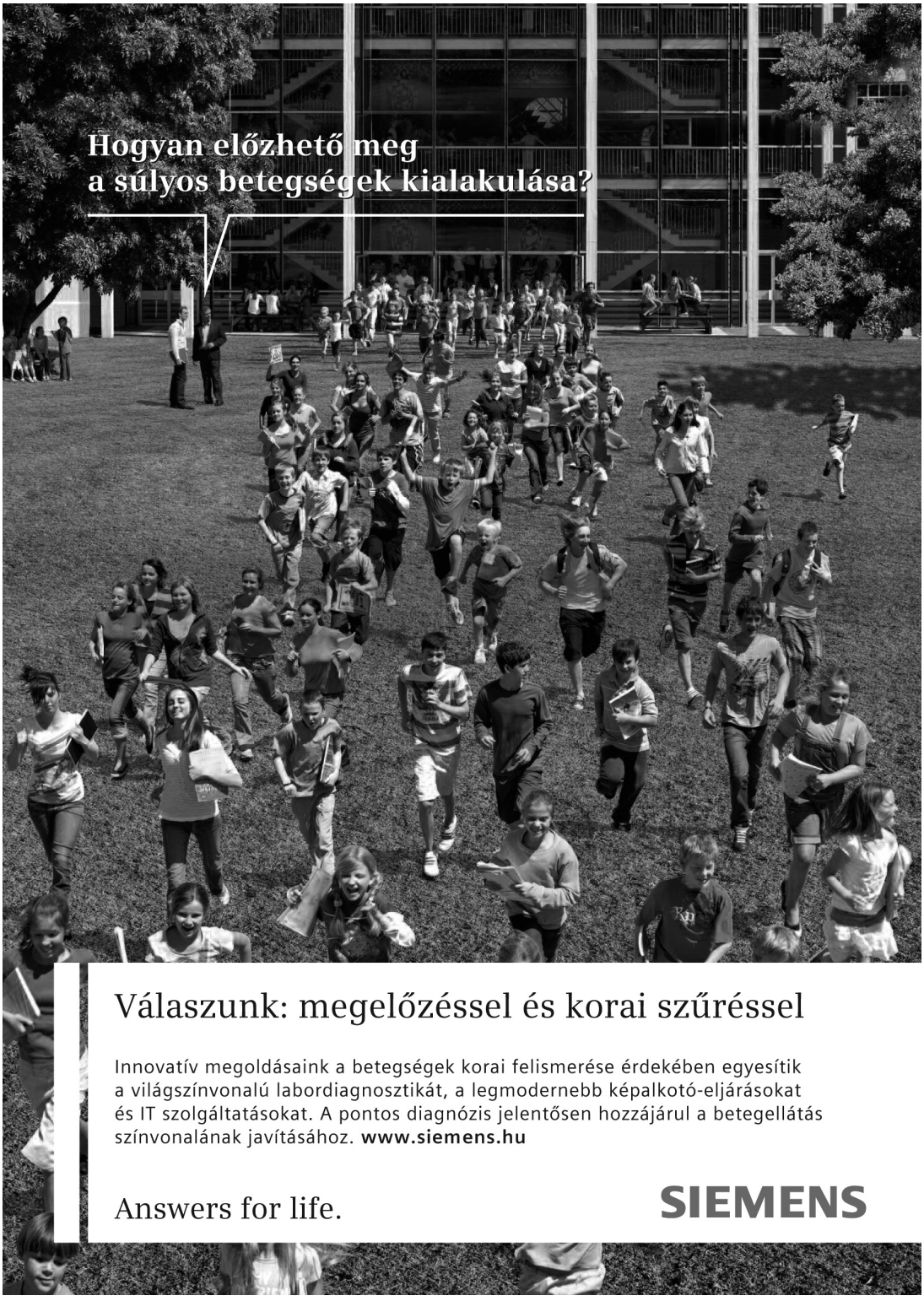
Background: Aorto-caval fistula is a rare complication of abdominal aortic aneurysm (AAA), reported less than 1% of all AAA cases.
Patient:A 56 year old male patient suffering from back pain and numbness of the legs was admitted to our emergency department. Hypotension, cool and pale skin with periumbilical livid discoloration were observed. By physical examination a 4 cm pulsating mass was found at the right hypogastrium above the origin of common iliac artery with.
Methods: Unenhanced helical scan followed by three-phase contrast enhanced helical series were performed of the thorax and abdomen to the symphysis with a 8-row multidetector CT (GE Lightspeed, Milwaukee, USA)
Results: A 180 mm long AAA propagating into both common iliac arteries with an axial width of 85x95 mm was detected starting below the orifice of the superior mesenteric artery. The right renal artery arised from the aneurysm.A thick mural thrombus was seen within the aorta.Contrast media extravasation was found through the thrombus passing into the inferior vena cava revealed by the enhancement of the IVC during the arterial phase.A large retroperitoneal haematoma was detected predominantly at the right side of the AAA. The patient was immediately operated on but he died 5 hours later at the end of the surgery.
Conclusion: Despite the fatal outcome of this case the angio-CT examination seems to be a reliable method for diagnosing this rare clinical condition.

Aortic dissection presenting as acute neurological sindrom – CT findings

Danijel Cvetko, Dražen Milevčić

Introduction: Aortic dissection is frequently associated with ischemic stroke, however high clinical suspicion is needed when presentation is not typical.

Case report: We present 52-year old patient, previously healthy, who developed crossed hemiparesis and displayed with normal brain and on chest CT as type I (Stanford A) aortic dissection.
Conclusion: This case emphasizes the need to include aortic dissection as differential diagnosis in patient with normal brain CT and severe stroke symptoms.
Key words: computerized tomographic angiography, acute stroke, aortic dissection.



Válaszunk: megelőzéssel és korai szűréssel

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