sIRcro 2013

BOOK OF ABSTRACTS

IX. Meeting of Interventional Radiologists of Croatia

with international participation

Trakošćan in Hrvatsko zagorje
from 26th to 28th of April 2013



Section for Interventional Radiology of the Croatian Society of Radiologists

Croatian Society of Radiologists

Croatian Medical Association

List of guests, participants of sIRcro 2013

D. Sc. Andrej Schmidt,
Herzzentrum Leipzig-Universitätsklinik, Germany

Prof. Liana Cambj Sapunar,
KBC Firule, Split, Croatia

M. Sc. Dimitrij Kuhelj,
KBC Ljubljana, Slovenia

D. Sc. Jan Raupach,
Hradec Králové,
The Czech Republic

Prof. Bojan Biočina,
KBC Zagreb, Croatia

Prof. Ivo Lovričević,
KBC Sestre Milosrdnice,
Zagreb, Croatia

Asst. Prof. Maja Strozzi,
KBC Zagreb, Croatia

Prof. Okan Akhan,
Ankara, Turkey

Dr. Karlo Novačić,
KB Merkur, Zagreb, Croatia

Asst. Prof. Tajana Filipec Kanižaj, *KB Merkur,*
Zagreb, Croatia

Asst. Prof. Anna Mrzljak,
KB Merkur, Zagreb, Croatia

Assist. D. Sc. Peter Popovič,
KBC Ljubljana, Slovenia

Prof. Boris Brkljačić,
KB Dubrava, Zagreb, Croatia

Prof. Mladen Knotek,
KB Merkur, Zagreb, Croatia

Prof. Bojan Jelaković,
KBC Zagreb, Croatia

Academician Davor Miličić,
KBC Zagreb, Croatia

Prof. Krešimir Galešić,
KB Dubrava, Zagreb, Croatia

Dr. Marco Manzi,
Abano Terme, Padua, Italy

Prof. Lea Smirčić Duvnjak,
KB Merkur (KZZD),
Zagreb, Croatia

Dr. Lidija Erdelez,
KB Merkur, Zagreb, Croatia

Asst. Prof. Ljiljana Banfić,
KBC Zagreb, Croatia

Prof. Marko Radoš,
KBC Zagreb, Croatia

D. Sc. Goran Pavliša,
KBC Zagreb, Croatia

Prof. Marija Bošnjak Pašić,
KBC Zagreb, Croatia

D. Sc. Marijana Bosnar Puretić, *KBC Sestre Milosrdnice Zagreb,Croatia*

Prof. Damir Miletić,
KBC Rijeka

Dr. Firas Al-Ali,
Kalamazoo, USA

M. Sc. Zoran Milošević,
KBC Ljubljana, Slovenia

Prof. Antonin Krajina,
Hradec Králové, Czech Republic

D. Sc. Krešimir Dolić,
KBC Firule, Split, Croatia

Prof. Raman Uberoi,
Oxford, Great Britain

Asst. Prof. Željko Duić,
KB Merkur, Zagreb, Croatia

Asst. Prof. Dijana Brkljačić,
KBC Sestre Milosrdnice,
Zagreb, Croatia

Prof. Miroslav Samaržija,
KBC Zagreb (Jordanovac),
Croatia

Prof. Ante Čorušić,
KBC Zagreb (Petrova), Croatia

D. Sc. Slaven Suknaić,
KB Merkur, Zagreb, Croatia

Prim. D. Sc. Jože Matela,
KB Maribor, Slovenia

Asst. Prof. Igor Kocijančič,
KBC Ljubljana, Slovenia

Dr. Tomaž Šeruga,
KB Maribor, Slovenia

Prof. Josip Mašković,
KB Mostar,
Bosnia and Herzegovina

Prof. Vesna Vegar,
KBC Zagreb, Croatia

D. Sc. Otmar Rubin,
KBC Osijek, Croatia

Prof. István Battyány,
KB Pécs, Hungary

Asst. Prof. Ingrid Prkačin,
KB Merkur, Zagreb, Croatia

Dr. Dražen Perkov,
KBC Zagreb, Croatia

Prof. Goran Roić,
KBC Sestre Milosrdnice,
Zagreb, Croatia

Asst. Prof. Gordan Šarić,
KBC Osijek, Croatia

Asst. Prof. Vinko Vidjak,
KB Merkur, Zagreb, Croatia

Program

Friday 26. 4. 2013

8.00-8.05	Opening of sIRcro 2013. Welcome speech by sIRcro president
8.05-8.10	Welcome speech by HDR vice president

First session: Liver and hepatocellular carcinoma (HCC)

Panel: ***Krajina A., Battyány I., Popovič P.***

8.10-8.20	IR in the treatment of HCC-current status ***Battyány I.***
8.20-8.30	TACE of intermediate stage hepatocellular carcinoma with drug eluting beads under cone-beam computed tomography control ***Popovič P.***
8.30-8.50	Drug eluting beads HepaSphere the New 30-60 microns, Practical TIPS Merit Medical: Embolotherapy product line. HepaSphere EmboSphere Embogold Delivery system ***Vadier J.***
8.50-9.00	Early HCC – diagnostic challenge ***Novačić K.***
9.00-9.10	Transjugular intrahepatic portosystemic shunt: long-term patency with hypercoagulation disorder ***Krajina A.***
9.10-9.20	Discussion
9.20-9.30	Short break / panel exchange

Second session: Aorta and peripheral arterial disease (PAD)

Panel: ***Mašković J., Raupach J., Kuhelj D.***

9.30-9.40	Endovascular treatment of ruptured aortic and iliac aneurysms ***Raupach J.***
9.40-9.50	EVAR for ruptured abdominal aortic aneurysms ***Mašković J.***
9.50-10.00	Takayasu's Arteritis Type IV treated by stenting ***Mašković J.***

10.00-10.10	BTK interventions in patient with critical limb ischemia ***Ćurić J.***
10.10-10.20	Endovascular treatment of isolated common and internal iliac artery aneurysms – our results and review of literature ***Krpan T.***
10.20-10.30	Experience with multi-layered stent cardiatis ***Matela J.***
10.30 – 10.40	BIOTRONIK Vascular interventions: 4EVER, BIOLUX-PI, ***Ransom P.***
10.40-10.50	Discussion
10.50-11.00	Coffee break / panel exchange

Third session: Urogenital interventions

Panel: ***Perkov D., Rubin O., Cambj Sapunar L.***

11.00-11.10	Stenting of atherosclerotic renal artery stenosis – clinical and hemodynamic outcomes ***Perkov D.***
11.10-11.20	Percutaneous radiofrequency ablation of solid renal masses: techniques and outcomes ***Garbajs M.***
11.20-11.30	Prostatic artery embolisation for treatment of benign prostatic hyperplasia ***Novosel L.***
11.30-11.40	Paclitaxel coated balloon angioplasty of stenotic native haemodialysis fistula – our experience ***Breznik S.***
11.40-11.50	Percutaneous varicocele embolisation: our experience ***Tomšič N.***
11.50-12.00	Embolisation material for uterine fibroid embolisation ***Rubin O.***
12.10-12.20	Discussion
12.20-12.30	Short break / panel exchange

Fourth session: Different topics from interventional radiology

Panel: ***Akhan O., Al-Ali F., Kocijančič I.***

12.30-12.40	Lung RFA ***Akhan O.***
12.40-12.50	The capillary Index Score and the 50% barrier. Rethinking acute ischemic stroke treatment algorithm. ***Al-Ali F.***
12.50-13.00	Ljubljana's neurovascular experience in endovascular treatment of acute stroke ***Kocijančič I.***
13.00-13.10	Embolisation for postoperative haemorrhage ***Smiljanić R.***
13.10-13.20	CT-guided percutaneous drainage of pleural effusions and empyema: a single centre 5-year experience ***Dragičević D.***
13.20-13.30	DEBIRI TACE for treatment of liver metastases from colorectal cancer – evaluation of systemic toxicity. Pilot study ***Smiljanić R.***
13.30-13.40	Recovery vena cava filter indwelling time and retrieval rate ***Brelih M.***
13.40-13.50	Percutaneous catheter thrombectomy in Treatment of Acute Massive Pulmonary Embolism ***Štabuc M.***
13.50-14.00	Discussion
14.00-15.00	Lunch break

Fifth session: Case reports – residents and young interventionalists

Panel: ***Kuhelj D., Cambj Sapunar L., Šarić G.***

15.00-16.30	Ultrasound guided hydrostatic reduction of intestine invagination in children ***Marjanović J.***
	Stent assisted coil embolisation (SACE) for treatment of splenic artery aneurysm ***Slavica M.***

Endovascular treatment of hepatic artery pseudoaneurysm
Cvetko D.

Active bleeding as complication of total hip replacement
Bolanča K.

Treatment of biliary obstruction caused by gastric cancer metastasis in patient with total gastrectomy
Postružin Gršić L.

Tumour embolisation in left gluteal region
Rihtar T.

Catheter directed thrombolysis for renal artery embolism after 48 hours
Dragičević D.

Endovascular treatment of traumatic injury to upper limb arteries
Tičinović N.

Case of covering a cracked common carotid: cleaning cardiosurgeon's clutter
Vavro H.

Percutaneous embolisation of idiopathic renal AV-fistula
Alduk A. M.

17.30-19.00 **ELECTION ASSEMBLY SIRCRO 2013**
(only for Croatian IR section members)

Saturday 27. 04. 2013

Round table sessions: 8.00-17.30

8.00-8.10 Introduction by sIRcro president

8.10-9.20 ***Round table: Hepatocellular carcinoma (HCC) / IR***

Moderator: Karlo Novačić

Introduction lectures:
International: Okan Akhan *(radiologist)*
Croatian: Karlo Novačić *(interventional radiologist)*

Panel / participants:
1. Tajana Filipec Kanižaj *(gastroenterologist)*
2. Anna Mrzljak *(gastroenterologist)*
3. Peter Popovič *(interventional radiologist)*
4. Dražen Perkov *(interventional radiologist)*

9.20-9.30 Short break

9.30-10.40 ***Round table: Deep Vein Thrombosis, Vena Cava Filters / IR***

Moderator: Vinko Vidjak

Introduction lectures:
International: Raman Uberoi *(interventional radiologist)*
Croatian: Vinko Vidjak *(interventional radiologist)*

Panel / participants:
1. Ante Čorušić *(gynaecologic oncologist)*
2. Željko Duić *(gynaecologist – obstetrician)*
3. Miroslav Samaržija *(pulmonologist)*
4. Slaven Suknaić *(vascular surgeon)*
5. Diana Delić Brkljačić *(cardiologist)*

10.40-10.50 Short break

10.50-12.00 ***Round table: Chronic cerebrospinal venous insufficiency CCSVI-MS / IR***

Moderator: Goran Pavliša

Introduction lectures:
International: Firas Al-Ali *(neuroradiologist)*
Croatian: Goran Pavliša *(neuroradiologist)*

Panel / participants
1. Marijana Bosnar Puretić *(neurologist)*
2. Krešo Dolić *(neuroradiologist)*
3. Zoran Milošević *(neuroradiologist)*
4. Marija Bošnjak Pašić *(neurologist)*

12.00-12.10 Short break

12.10-13.20 ***Round table: Below the knee interventions, diabetics / IR***

Moderator: Vinko Vidjak

Introduction lectures:
International: Marko Manzi *(interventional radiologist)*
Croatian: Vinko Vidjak *(interventional radiologist)*

Panel / participants:
1. Lea Smirčić Duvnjak *(diabetologist)*
2. Ljiljana Banfić *(angiologist)*
3. Lidija Erdelez *(vascular surgeon)*

13.30-15.00 LUNCH BREAK

15.00-16.10 ***Round table: Renal denervation***

Moderator: Boris Brkljačić

Introduction lectures:
International: Dimitrij Kuhelj *(interventional radiologist)*
Croatian: Boris Brkljačić *(interventional radiologist)*

Panel / participants:
1. Davor Miličić *(cardiologist)*
2. Bojan Jelaković *(nephrologist)*
3. Krešimir Galešić *(nephrologist)*
4. Mladen Knotek *(nephrologist)*
5. Ingrid Prkačin *(nephrologist)*

16.10-16.20 Short break

16.25-17.50 ***Round table: TEVAR-EVAR / IR***

Moderator: Liana Cambj Sapunar

Introduction lectures:
International: Andrej Schmidt *(interventional cardiologist)*
Croatian: Liana Cambj Sapunar *(interventional radiologist)*

Panel / participants:
1. Maja Strozzi *(interventional cardiologist)*
2. Dimitrij Kuhelj *(interventional radiologist)*
3. Jan Raupach *(interventional radiologist)*
4. Bojan Biočina *(cardiac surgeon)*
5. Ivo Lovričević *(vascular surgeon)*
6. Vesna Vegar *(anesthesiologist)*

WORKSHOPS

FRIDAY 26 .4. 2013

10.30 – 10.50	Exoseal – Vascular Closure Device lecture, Vinko Vidjak
10.50 – 11.30	Exoseal hands on model, Karlo Novačić
11.30 – 11.50	Retrievable and nonretrievable Vena Cava Filter lecture. Vinko Vidjak
11.50 – 12.30	Vena Cava Filter hands on model, Karlo Novačić Supported by ***Cordis***
15.00-17.00	Renal Denervation Enlighten – Meet the Expert Supported by ***Sonimed***

SATURDAY 27.4.2013.

15.00-17.00	Balloons and wires Supported by ***Abbott Vascular***

Lecture Summaries

Friday 26. 4. 2013

8.10-8.20

Battyány I.

IR in the treatment of HCC-current status

Battyány I., Harmat Z., Miklós K., Faragó K.

ABSTRACT

Abstract not received

8.20-8.30

Popovič P.

TACE of intermediate stage hepatocellular carcinoma with drug eluting beads under cone-beam computed tomography control

Popovič P., Garbajs M., Kuhelj D., Rus Gadžijev B., Ponorac S., Kavčič P., Štabuc M., Šalinovič D., Nuredini D.

ABSTRACT

Purpose: *The purpose of our study in progress was to evaluate the results of drug eluting bead-transarterial chemoembolisation (DEB-TACE) performed under cone-beam computed tomography (CBCT) in patients with intermediate stage hepatocellular carcinoma (HCC).*

Materials and methods: *Between February 2010 and June 2012, 47 patients were treated with DEB-TACE. Inclusion criteria for our analysis was intermediate stage disease according to the Barcelona Clinic Liver Cancer (BCLC) staging classification. Overall, 37 of 47 patients were analysed (34 male, 3 female; average age, 67.5 ± 7.6 years; 23 patients Child-Pugh class A, 9 class B). Superselective catheterization of feeding vessels was followed by embolisation with 100-300 or 300-500 micron microspheres loaded with 50-100 mg of doxorubicin. In all cases, CBCT was used during chemoembolisation. Patients underwent follow-up CT or magnetic resonance imaging (MRI) every 3 months.*

Results: *Overall, 94 procedures were performed for 37 patients (mean, 2.5 per patient). There were 35 minor and 2 major complications (one liver abscess and one cerebrovascular insult). After a median follow-up of 8.3 months (range, 1.0 - 21.3 months), 34 of 37 (91.9%) patients achived objective response (13 patients with complete, 21 with partial response). Median overall survival was 15.6 months (range, 4.4 - 27.6 months) and preliminary 1-year overall survival was 64.9%.*

Conclusion: *DEB-TACE with CBCT is safe and effective method for patients with intermediate stage HCC.*

8.30-8.50 ***Vadier J.***

1. **Drug eluting beads HepaSphere the New 30-60 microns, Practical TIPS**
2. **Merit Medical: Embolotherapy product line. HepaSphere EmboSphere Embogold Delivery system**

ABSTRACT

1. *Now hdTACE (Drug Delivery TACE with HepaSphere Microsphres) is taking drug-delivery TACE to the next level. Manufactured by BioSphere Medical a Merit company, HepaSphere offer ease of handling, superior performance, highly efficient drug loading/delivery and clinical effectiveness.*

2. *Transarterial Chemoembolization (TACE) is a standard of care for non-resectable hepatocellular carcinoma (HCC). Drug-delivery TACE, the use of an embolic material to load and deliver chemotherapeutic agents directly to the tumor, improves on conventional TACE by enabling higher drug concentration that is precisely targeted and delivered directly to the tumor site, resulting in fewer drug-related adverse events. A major advantage of drug-delivery TACE compared to conventional TACE is improved patient safety as a result of lower systemic doxorubicin circulation, resulting in less impact on normal liver function during treatment.*

8.50-9.00 ***Novačić K.***

Early HCC – diagnostic challenge

Novačić K., Vidjak V., Lubina Z. I.

ABSTRACT

Hepatocellular carcinoma (HCC) is 6th most common cancer worldwide, and 3rd cause of cancer related mortality. HCC represents more than 90% of primary liver cancers and is a major global health problem due to increased incidence worldwide.

In recent years advances in imaging techniques, especially CT and MRI together with new generation of contrast agents lead to signifficant imporvement in detecting liver nodules. Despite the advances in imaging, majority of patients all still being diagnosed in advanced stages when currative treatments are not amenable.

HCC develops in a multistep fashion from a dysplastic nodule (DN) to early HCC and, finally, progressed HCC. Among these stages, patients with early HCC show a longer time to recurrence and a higher 5-year survival rate than those with progressed HCC. Therefore, the ability to detect early HCC is crucial for decreasing mortality from this neoplasm. In recent years new generation of liver specific contrast were developed (Gadoxetic acid). It accumulates in normal hepatocyte cells and thus increasing liver to lesion contrast. Recently published studies showed that they can differentiate early HCC from displastic

liver nodules, and detect HCC smaller then 1cm. In conclusion Gadoxetic acid – enhanced MR imaging is the most useful imaging technique for evaluating small HCC, specifically owing to the high sensitivity for early HCC.

9.00-9.10 ***Krajina A.***

Transjugular intrahepatic portosystemic shunt: long-term patency with hypercoagulation disorder

Krajina A., Renc O., Hulek P., Chovanec V., Raupach J., Lojik M., Fejfar T.

Department Radiology, University Hospitál, Hradec Kralove, Czech Republic

ABSTRACT

Aim:
To retrospectively evaluate the efficacy and long-term patency of transjugular intrahepatic portosystemic shunt (TIPS) in patients with hepatic vein thrombosis due to hypercoagulation disorder.

Material and method:
In years 1992 – 2011, totally 38 patients with hepatic vein thrombosis resistant to medical therapy underwent TIPS creation in our department. We treated 9 males and 29 females, age 13 – 76 years (median 33 years), 6 patients were children. The underlying thrombophilic state was confirmed in 84,2 % of treated patients. The Budd-Chiari syndrome was acute in 6, subacute in 18 and chronic in 14 cases. Ascites was indication for TIPS in 31 patients, liver failure in 5 and gastrointestinal bleeding in 2 persons. All the procedures were performed in analgosedation or under general anestesia using standard technique. In 17 patients, we implanted non-covered stent or combination of non-covered and covered stents during TIPS creation, in the other 21 patients only the TIPS dedicated covered stents had been used. TIPS patency during follow-up after the procedure was based on regular ultrasonographic, clinical and laboratory examinations. In case of shunt dysfunction, a reintervention was performed.

Results:
The total follow-up period was 8 days – 207 months (median 52 months). The technical success rate was 100 %, hemodynamical success rate 86,8 % with median portosystemic gradient decrease from 23 mm Hg to 8 mm Hg, and clinically we were succesfull in 89,5 % of patients. In 7 patients, severe complications occurred during shunt creation, but none of the patients died in direct connection with the procedure. Totally 11 patients (29 %) died during follow-up period, the 1-year and 5-years survival rates were 85,3 % and 65,4 %, respectively. Due to TIPS dysfunction, totally 50 reinterventions were needed, the average 5-year reintervention rate per patient was 1,65 procedures in the bare stent group and 0,67 porcedures in the covered stent group. In the non-covered stent group, we achieved primary patency rates 52,9 % 1 year and 20 % 5 years after TIPS creation, in the covered stent group the 1-year primary patency rate was 80 % and

5-year primary patency rate 33,3 %. Angioplasty of symptomatic stenosis of the inferior vena cava was performed in 8 patients during follow-up, in 6 of these patients also stent implantation was necessary.

Conclusion:
TIPS creation is a very effective treatment of patients with hepatic vein thrombosis. The use of TIPS dedicated covered stents leads to lower dysfunction rate with lower number of reinterventions needed to reestablish the shunt patency, but strict simultaneous anticoagulation treatment and treatment of the underlying hematologic disease are necessary.

9.30-9.40 ***Raupach J.***

Endovascular treatment of ruptured aortic and iliac aneurysms

ABSTRACT

Purpose:
Ruptured abdominal and iliac aneurysms are life-threatening situations with high mortality rate between 40-80%. We retrospectively analyzed results of endovascular technique applied for these emergency situations.

Material/Methods:
Between February 2009 and December 2012 eight patients (8 men, mean age 75,2 years) with ruptured abdominal or iliac aneurysms were endovascularly treated in our centre. There were 4 degenerative abdominal aneurysms, 3 internal iliac aneurysms and 1 anastomotic pseudoaneurysm. Two patients were hemodynamically unstable, 6 were stable with clinical signs of bleeding. We performed preprocedural CT angiography in all cases. Treatment was performed under fluoroscopic guidance on high resolution angiography. We implanted bifurcated stentgraft in 4 patients, tubular stentgraft in 3 pacients, and 1 patient was treated with embolisation only (occluder and acrylate glue).

Results:
Mean time from admissions to completion of whole procedure was 73 minutes (range 45-180 minutes). Two abdominal compartment syndromes developed with the necessity of surgical drainage of retroperitoneal haematoma. The 30-day mortality rate in our group was 0 %, 1 year mortality 12,5 % (1/8), total mortality 25 % (2/8). There were no procedure-related deaths during follow-up period (median 9 months, range 1-42).

Conclusions:
Endovascular therapy of ruptured aortoiliac aneurysms is in our centre technically feasible with promising early results. Logistic problems in unstable patients should be solved.

9.40-9.50 ***Mašković J.***

EVAR for ruptured abdominal aortic aneurysms

ABSTRACT

Ruptured abdominal aortic aneurysms (rAAAs) are being treated by endovascular aneurysm repair (EVAR) with increasing frequency. Endovascular procedures offer many potential advantages over open repair: they are less invasive, they eliminate damage to periaortic and abdominal structures, decrease bleeding from surgical dissection, minimize hypothermia and lessen the requirement for deep anaesthesia. We report our experience with EVAR in four patients with rAAA treated in the past 19 months.

9.50-10.00 ***Mašković J.***

Takayasu's Arteritis Type IV treated by stenting

ABSTRACT

Not received

10.00-10.10 ***Ćurić J.***

BTK interventions in patient with critical limb ischemia

Ćurić J., Radoš S., Cvetko D., Tičinović N., Vavro H., Brkljačić B.

ABSTRACT

Infrapoplitealne endovaskularne procedure se danas rutinski koriste kao primarna metoda u liječenju pacijenata s kritičnom ishemijom ekstremiteta (CLI) usprkos relativno oskudnim podacima o rezultatima praćenja.

Cilj istraživanja je prikazati rezultate praćenja i uspješnost infrapolitealnih intervencija kod pacijenata s CLI.

Infrapolitealna perkutana transluminalna angioplastika (PTA) je učinjena kod 50 pacijenata s CLI u razdoblju od 2010. do 2012 godine. Dužina praćenja bolesnika je bila od 6 do 40 mjeseci. Tehnički uspjeh je postignut u 90% bolesnika, spašavanje ekstremiteta u 85% bolesnika a primarna prhodnost nakon godinu dana je bila 55%.

Infrapoplitealna PTA je vrlo efikasna metoda izbora u liječenju pacijenata s CLI.

10.10-10.20 ***Krpan T.***

Endovascular treatment of isolated common and internal iliac artery aneurysms – our results and review of literature

Krpan T., Kalousek V., Čulo B.

ABSTRACT

Isolated common iliac artery (CIA) and internal iliac (IIA) artery aneurysms are relatively uncommon. Open surgical techniques for repair of CIA aneurysm can be complicated by difficult exposures, blood loss, morbidity and mortality. Endovascular interventions of CIA aneurysms has been associated with decreases in morbidity, 30 day mortality, blood loss, and hospital stay as compared to traditional open operations without sacrificing mid –term durability or survival. Preoperative planning is essential to determine the manner of approach to these interventions. Computed tomographic angiography with tree dimensional reformatting is very good imaging method. Images are reviewed for the presence of coincident aortic or contralateral iliac aneurysms and to ensure the suitability of the proximal and distal endograft landing zones, including the relationship of the aneurysmal disease to the origin of the IIA. We present 11 cases of endovascular treatment of CIA in our institution in 18 mth period with review of the literature.

10.20-10.30 ***Matela J.***

Naša iskustva s uporabom novih višeslojnih stentova – Cardiatis multilayer flow modulators

Univerzitetni klinični center Maribor / Slovenija
Inštitut za radiologijo

ABSTRACT

Od 2009. godine u kliničku primjenu došli su višeslojni endovaskularni stentovi – Cardiatis multilayer flow modulator – koji su se pokazali prikladnima za liječenje aneurizama visceralnih arterija kao što su renalne, ali i aneurizama perifernih arterija te abdominalne aorte, kada je bilo potrebno očuvati protok kroz arterijske ogranke koji polaze iz stjenke aneurizme.

Osnovni princip učinka novog stenta, koji je napravljen od kobaltovih niti, je u modulaciji hemodinamike krvnog toka u aneurizmatski promijenoj žili, što omogućava da aneurizmu isključimo iz cirkulacije i istodobno očuvamo prohodnost kroz kolateralne grane.

Novi stent je pletena cijev s brojnim otvorima ili slobodnim prostorima u žičanom pleteru, koje nazivamo „pore“. Veličina tih pora je od 10 do 100 mikrona. Geometrija stenta konstruirana je kao rešetka odnosno mreža s porama, a to stvara višeslojnu mrežu. Njezin glavni učinak je remodelacija krvne struje unutar aneurizme pri čemu se kao iznimno važan pokazao utjecaj stenta na protočne uvjete u aneurizmi. Najvažniji parametri, koji djeluju na rast aneurizme kao muralnog tromba su tlak na njezine stjenke, stres materijala i promjene u cirkulaciji. U zdravoj i primjereno kalibrirano arteriji očekivani tok je pretežno laminaran, a turbulentan u određenim intervalima pulzativnog ciklusa.

Pri postavljanju višelojnoga stenta preko vrata aneurizme, njezina 3D geometrija reducira vrtloženje i smanjuje brzinu protoka te istodobno poboljšava laminarni protok u glavnoj arterijskoj grani kao i u kolateralama. Dokazano je da se brzina protoka u aneurizmatskoj vreći smanjuje i ustaljuje na 80% normalne brzine protoka. U pokusima je dokazano da u aneurizmi postoje veći predjeli gdje dolazi do recirkulacije s većim smetnjama pri postojanju kolaterala. Kad se postavi stent sva područja s recirkuliranim protokom nestaju i protok se usmjeri na stjenke aneurizme.Podjela pritiska duž aneurizme je podjednaka, a pritisak na stent je nizak.Trebao bi nastati nekakav usisni učinak usmjeren prema ostijalnom dijelu polazeće arterije radi održavanja protoka kroz kolaterale. Višeslojni stent s porama omogućava prikladnu opskrbu kolaterala s krvlju i istodobno mijenja turbulentni tok u aneurizmi u laminarni tok te na taj način odtereti stjenku aneurizme.

Prikazujemo rezultate naše ustanove pri uporabi novog stenta u liječenju bolesnika s aneurizmama renalnih i perifernih arterija te abdominalne aorte – dobivene u zadnje tri godine.

10.30 – 10.40 ***Ransom P.***

BIOTRONIK Vascular interventions: 4EVER, BIOLUX-PI

ABSTRACT

Not received

11.00-11.10 ***Perkov D.***

Stenting of atherosclerotic renal artery stenosis – clinical and hemodynamic outcomes

Perkov D., Smiljanić R., Dobrota S., Fodor Lj., Jelaković B., Štern-Padovan R.

ABSTRACT

Cilj: *Prikazati ćemo učinke endovaskularne revaskularizacije s ugradnjom stenta kod aterosklerotske renalne arterijske stenoze (RAS) na periferni krvni tlak (BP), srednji arterijski tlak (MAP), aortnu brzinu pulsnog vala (PWV), augmentacijski indeks (Aix) i bubrežnu funkciju.*

Ispitanici i metode: *U ovu longitudinalnu studiju (period praćenja 6 mjeseci) uključili smo 31 bolesnika s RAS (15 muškaraca i 16 žena; 23 ostijalne i 10 trunkalnih stenoza, srednja dob 64.3 ± 10.3; raspon 42-80 godine). U 2 bolesnika RAS je bio bilateralan. Holter 24h arterijskog tlaka je mjeren pomoću Spacelab 902.107, PWV i Aix su određeni uređajem Arteriograph, eGFR je izračunata MDRD formulom.*

Rezultati: *Zabilježeno je značajno smanjenje prosječnog 24h sistoličkog (178,1 ± 20,1 na 154,1 ± 16,6), dijastoličkog (98,9 ± 12,9 na 83,7 ± 10,1) i*

srednjeg arterijskog tlaka (MAP) (125,2 ± 14,1 na 106,9 ± 11,0, p <0,001). Također smo otkrili značajan pad u PWV (13,61 ± 2,52 na 12,49 ± 2,53, p = 0,003) i Aix (12,82 ± 24,39 na 0,32 ± 25,48) sa znatno manjim brojem potrebnih lijekova (4,06 ± 1,22 na 2,99 ± 0,77; p <0,001). Prije intervencije 23 bolesnika su trebala ≥ 4 lijeka, a nakon intervencije samo 9 bolesnika. Nije bilo značajne promjene u eGFR (57,4 ± 18,6 na 56,5 ± 13,6, p = 0,668).

***Zaključak:** Osim blagotvornog djelovanja na 24h periferni i srednji arterijski tlak, šest mjeseci nakon ugradnje stenta kod RAS, zabilježen je i značajan pad PWV i Aix sa znatno manjim brojem antihipertenzivnih lijekova, i bez promjene u bubrežnoj funkciji.*

11.10-11.20 ***Garbajs M.***

Percutaneous radiofrequency ablation of solid renal masses: techniques and outcomes

Popovič P., Garbajs M., Kuhelj D., Štabuc M., Nuredini D., Salapura V.

ABSTRACT

***OBJECTIVE.** The purpose of this study was to retrospectively evaluate the results of percutaneous radiofrequency ablation (RFA) of solid renal masses.*

***MATERIALS AND METHODS.** Between January 2006 and July 2012 31 patients were treated with 37 percutaneous RFA sessions. During 24 sessions, radiofrequency ablation was performed using CT guidance, 12 were performed using ConeBeam CT guidance and one using sonographic guidance. The indications for nonsurgical treatment were high surgical risk (n = 22), bilateral renal cell carcinomas (n = 1), solitary kidney (n = 6), local reccurenc after nephrectomy (n = 1) and the presence of metastatic disease (n = 1). Median patient age was 76.6 years (range, 57.4 - 87.9 years) and median renal mass size was 2.8 cm (range, 1.1 - 5.4 cm). Follow-up imaging was performed at 3 and 12 months and then yearly thereafter. Median follow up time was 11.8 months (range, 1.4 – 77.5 months).*

***RESULTS.** 22 of 31 tumors were successfully treated in a single RFA session resulting in primary clinical success rate of 70.9 %. 9 of 31 tumors had residual enhancing tissue after the first treatment session and required a second session. 5 residual tumors were successfully ablated by a second RFA procedure. One patient is currently scheduled for another procedure, one patient was not treated because of progression of metastatic disease and two patients refused second RFA. 5 (16.7%) patients had minor and two (6.4%) major complications (large perinephric abscess needing drainage and perforation of duodenum). During follow up period 7 patients died and median overall survival was 16.1 months (range, 1.7 – 78.0 months).*

***CONCLUSION.** Percutaneous imaging-guided radiofrequency ablation is a successful and safe method for patients with small solid renal masses, which are not ideal candidates for surgical resection.*

11.20-11.30 **Novosel L.**

Prostatic artery embolisation for treatment of benign prostatic hyperplasia

Novosel L., Perkov D., Lanciego C., Ciampi J.

ABSTRACT

Benigna hiperplazija prostate ima visoku prevalenciju u populaciji muškaraca starijih od 50 godina koja može uzrokovati različite stupnjeve opstrukcije pražnjenja mokraćnog mjehura. Cilj liječenja je olakšati simptome i poboljšati kvalitetu života, a prva metoda izbora je medikamentozna terapija. U određenom broju pacijenata kod kojih se ne ostvari željeno poboljšanje, pristupa se kirurškom pristupu, a zlatni standard je prostatektomija transuretralnim pristupom(TURP).

PAE(prostatic artery embolization) predstavlja novu, potencijalno učinkovitu metodu u liječenju benigne hiperplazijekao alternativu dosadašnjim metodama te kod pacijenata koji nisu kandidati za TURP ili otvoreni kirurški zahvat, uz istovremeno smanjenje opasnosti od komplikacija koje uključuju rizike vezane uz opću anesteziju, seksualnu disfunkciju, inkontinenciju, infekcije, gubitak krvi te postoperativne strikture. Dosadašnje studije ukazuju na dobar odgovor na terapiju u smislu smanjenja volumena prostate i poboljšanja kvalitete života, uz kraće vrijeme oporavka.

Cilj nam je prikazati ovu novu intervencijsku metodu, njene indikacije, pripremu i eventualne komplikacije kroz pregled dosadašnjih rezultata i prikaz naših slučajeva.

11.30-11.40 **Breznik S.**

Paclitaxel coated balloon angioplasty of stenotic native haemodialysis fistula – our experience

Breznik S., Lučev J., Polanec B., Slanič A., Jevšek M., Rupreht M., Ekart R., Dvoršak B., Bevc S., Matela J.

ABSTRACT

***Purpose:** Hemodialysis vascular access dysfunction is a major cause of morbidity and hospitalization in the hemodialysis population. The major cause is venous stenosis. Stenosed dialysis arteriovenous fistula (dAVF) have been shown to have venous neointimal hyperplasia composed of smooth muscle cells with expression of cytokines and mediators like endothelin, PDGF and TGF-beta. Paclitaxel is a mitotic inhibitor. The cell cycle is arrested in the phase of mitosis, inhibiting smooth muscle cell proliferation and fibromuscular hyperplasia. Paclitaxel is administered to the vessel wall via angioplasty balloon coated with paclitaxel-eluting formulation (PCB). Results of percutaneus transluminal angioplasty (PTA) with PCB for dAVF lesions were studied and compared with published data.*

Methods and Materials: *From July 2010 to January 2013, 27 PTAs with PCB due to signs of dAVF failure was performed in our department. Long term results are available for 13 PTA. Patency after using PCB was followed-up with kt/V as a measure of dialysis adequacy.*

Results: *Initial technical success was achieved in all patients. There was no procedure related complications. Three patients died during the folllow-up due to unrelated causes. Tree patients needed reintervention. One patient had 3 reinterventions.*

Conclusion: *Results of PTA with PCB for dAVF lesions in our study are promising and camparable with those published in literature.*

11.40-11.50 ***Tomšič N.***

Percutaneous varicocele embolisation: our experience

Popovič P., Tomšič N., Dežman R., Kuhelj D., Stankovič M.

ABSTRACT

OBJECTIVE: *The treatment of varicocele by percutaneous embolization of the internal spermatic vein is a safe and effective minimally invasive procedure. We present our experience with this technique.*

METHODS: *A retrospective review of patients who underwent percutaneous embolization of a varicocele at our institution from January 2009 until December 2012 was performed.*

RESULTS: *There has been a steady rise in number of percutaneous varicocele embolizations in our institution – 2 in 2009, 3 in 2010, 6 in 2011 and 19 in 2012. The majority of the patients were referred due to scrotal pain and some because of infertility. All the embolizations were performed using coils. Out of 30 procedures, 29 were technically and clinically successful (96,6 %) and in 1 case (3,3 %) the embolization was repeated due to relapse.*

DISCUSSION: *At the beginning there were very few referrals from urologists for percutaneous varicocele embolizations. Successful procedures and education of urologists about this technique significantly increased the number of referrals. Embolization also has a much shorter waiting time than surgical treatment in our institution.*

CONCLUSION: *In our experience percutaneous varicocele embolization was effective technique with high rate of success and low rate of relapse with an added benefit of shorter waiting time for varicocele treatment.*

11.50-12.00 ***Rubin O.***

Embolisation material for uterine fibroid embolisation

ABSTRACT

Odabir prikladnog embolizacijskog materijala za primjenu metode transkateterske embolizacije ovisi o organu na kojem se postupak primjenjuje i rezultatu koji želimo postići. Štoviše, embolizacijski materijal uz primjerenu tehniku selektivne i/ili superselektivne kateterizacije, najvažniji je čimbenik uspješnosti intervencijskog postupka. Metoda embolizacije u intervencijskoj radiologiji primjenjuje se više 50 godina. Niz godina dostupnost prikladno dizajniranih materijala ograničavala je primjenu u liječenju različitih patoloških stanja. Metoda embolizacije mioma maternice, temelji se na primjeni dvije osnovne vrste embolizacijskih materijala: nesferičnih i sferičnih. Srednje- i dugoročni rezlutati primjene ove dvije grupe materijala nisu potvrdili superiornost niti jedne od ove dvije grupe materijala u smislu boljih rezultata i/ili manjeg broja komplikacija, iako se uz danas dostupne mikrokatetere i precizno kalibrirane mikrosfere, svaki postupak može dovršiti brže i preciznije no što je to bilo moguće prije kada su zahtjevna anatomija organaka arterije uterine ili spazam arterije bili nepremostiva zapreka dovršenju intervencije.

12.30-12.40 ***Akhan O.***

Lung RFA

ABSTRACT

Surgery is the traditional treatment of choice for both stage-I non-small cell lung cancer and some of the patients with lung metastasis. On the other hand, surgery is associated with considerable rate of mortality and morbidity especially in patients with severe comorbidities. Local Tumour Ablation Techniques such as RFA and microwave (MWA), laser and cryotherapy lung tumours have already been used as the alternative techniques. Among them, radiofrequency ablation (RFA) and microwave ablation are the most widely used technologies.

RFA has already become an alternative option for the inoperable patients in the treatment of both stage-I non-small cell lung cancer and some of the patients with lung metastasis which are the main indications. RFA has been successfully applied to the tumour smaller than 3.5 cm up to 4-5 lesions. The procedure is performed under CT guidance and conscious sedation or general anaesthesia.

The technically successful procedure is realized in more than 95% of the patients. The procedure is associated with a low periprocedural mortality and 8-12% major complication rates. The most frequent complication is pneumothorax which is seen up to 40% and only needs a tube drainage

in almost 10% of the patients. Local recurrence rate of the lesion closely depends of lesion size.

In patients with stage I non-small-cell lung cancer, 1- and 2-and 5 year survival rates are of 78-95% and 57-84%, 27% respectively. In patients with colorectal lung metastasis, 5-year survival rate is seen up to 57% of the patients which is almost compatible with the results of surgery.

RFA in the treatment of NSCLC and lung metastasis is a safe and effective procedure which is associated with a low morbidity and mortality and successful results. However, further studies are needed to understand the possible combination of RFA with other treatment options.

12.40-12.50 ***Al-Ali F.***

The capillary Index Score and the 50% barrier. Rethinking acute ischemic stroke treatment algorithm.

ABSTRACT

Not received

12.50-13.00 ***Kocijančič I.***

Ljubljana's neurovascular experience in endovascular treatment of acute stroke

ABSTRACT

Not received

13.00-13.10 ***Smiljanić R.***

Embolisation for postoperative haemorrhage

Smiljanić R., Perkov D., Dobrota S.

ABSTRACT

CILJ: *Prikazati pregled materijala i mogućnosti embolizacije postoperativnih krvarenja s prikazom naših iskustava.*

MATERIJALI I METODE: *Prikazan je pregled indikacija, materijala i mogućnosti emboloterapije postoperativnih kirurških komplikacija te nekoliko kliničkih primjera embolizacijskog liječenja iz naše svakodnevne prakse.*

REZULTATI: *Endovaskularna embolizacija je relativno siguran i jednostavan način za zaustavljanje unutrašnjeg krvarenja nakon operativnog zahvata.*

13.10-13.20 ***Dragičević D.***

CT-guided percutaneous drainage of pleural effusions and empyema: a single centre 5-year experience

Dragičević D., Gabrić J., Marinović Guić M., Cambj Sapunar L., Janković S.

ABSTRACT

BACKGROUND: *CT-guided percutaneous drainage has been used with increasing frequency as a treatment option for various types of intrathoracic pathological liquid collections.*

OBJECTIVE: *To evaluate the safety and usefulness of thoracic drainage under radiological guidance for various types of pathological liquid collections in a university hospital.*

METHODS: *A retrospective study of cases of pigtail catheter placement under CT-guidance over a 5-year period in a university hospital.*

RESULTS: *99 patients underwent 116 pigtail catheter insertions during 5-years period for the clinical inications of empyema, parapneumonic pleural effusion, malignant effusion, lung abscess, liquidopneumothorax, and hematothorax, with CT-guidance used in all cases. The overall success rate of radiological drainage was 93,8%. The complications were few and minor.*

CONCLUSIONS: *Pigtail catheter insertion under CT-guidance is a useful procedure for the treatment of various types of intrathoracic pathological liquid collections. This technique can be used as a first-line procedure in the majority of cases.*

13.20-13.30 ***Smiljanić R.***

DEBIRI TACE for treatment of liver metastases from colorectal cancer – evaluation of systemic toxicity. Pilot study

Smiljanić R., Dobrota S., Perkov D., Badžek S., Golem H., Pleština S., Štern-Padovan R.

ABSTRACT

CILJ: *prikazati ulogu DEBIRI emboloterapije u liječenju metastatskog kolorektalnog karcinoma i procjenu sistemske toksičnosti kemoterapije.*

PACIJENTI I METODE: *U pilot-studiju uključeno je 7 bolesnika, u kojih je provedena sistemska kemoterapija kolorektalnog karcinoma FOLFIRI protokolom, uz embolizaciju metastaza u jetri po DEBIRI protokolu. U tri bolesnika sistemska kemoterapija provedena je u punoj dozi, a u četiri bolesnika doza sistemske kemoterapije je bila smanjena 20%. U sedam bolesnika učinjen je 21 postupak kemoembolizacije. Provedena je komparacija sistemske toksičnosti u obje grupe.*

REZULTATI: *Učinjen je 21 postupak embolizacije po DEBIRI protokolu u 7 bolesnika. U dva bolesnika razvio se kolecistitis, od toga je kod jednog došlo do egzacerbacije kroničnog kolecistitisa, koji je tretiran konzervativno, a drugi je liječen operativno. U jednog bolesnika došlo je do perforacije duodenalnog ulkusa, koji je izliječen hitnim kirurškim zahvatom.*

ZAKLJUČAK: *Kemoembolizacija jetrenih metastaza kolorektalnog karcinoma po DEBIRI protokolu je relativno siguran i svrhovit postupak u selektiranih bolesnika. Nije uočena razlika u sistemskoj toksičnosti u dvije grupe bolesnika.*

13.30-13.40 ***Brelih M.***

Recovery vena cava filter indwelling time and retrieval rate

Popovič P., Brelih M., Kuhelj D., Stankovič M., Nuredini D., Salapura V., Kavčič P., Ključevšek T., Šalinovič D.

ABSTRACT

PURPOSE: *The purpose of our study was to evaluate retrieval rates, implantation period and safety of withdrawal of Bard Recovery vena cava filter in our institution.*

METHODS: *140 retrievable Recovery (Bard) vena cava filters were implanted in 140 patients (69 men, 71 women, age range 24-87 years, mean age 67 years) at our institution between January 2009 and December 2011. We retrospectively reviewed rate of successful retrieval, complications during retrieval and mean period of implantation of retrievable filters.*

RESULTS: *Of the 140 filters implanted, removal of 39 was attempted (28%). The filter was successfully removed in 37 patients (94%). The mean period of implantation of the retrieved filters was 64 days (range from 10 to 305 days). No serious complications occured during any of these procedures. Failure of retrieval was due to technical difficulties (n=2). Average implantation period of these 2 filters at the time of attempted retrieval was 447.5 days (568 and 327 days).*

CONCLUSION: *We have demonstrated success in retrieving 37 filters that have been implanted for up to 305 days. The results show that Recovery filter can be safely removed in majority of patients even after a prolonged period of implantation. Attempted removal rate in our institution was well within the range cited in the recent literature.*

13.40-13.50 ***Štabuc M.***

Percutaneous catheter thrombectomy in Treatment of Acute Massive Pulmonary Embolism

Popovič P., Štabuc M.

ABSTRACT

Massive pulmonary embolism (PE) is defined as a severe condition occurring in haemodynamically unstable patients that has been shown to have a mortality rate of more than 30%. The severity of PE should be understood as an individual estimate of PE-related early mortality risk rather than the anatomical burden and the shape and distribution of intrapulmonary emboli. Current guidelines suggest replacing potentially misleading terms such as 'massive', 'submassive' and 'non-massive' with the estimated level of the risk of PE-related early death (high risk or non-high risk). Patients with PE presenting with shock or hypotension (previously considered 'clinically massive' PE) are at high risk of in-hospital death. Most deaths occur within the first few days after diagnosis due to acute right ventricular failure. In patients with massive PE (high risk patients), systemic thrombolysis or surgical embolectomy, in addition to anticoagulation, are standard treatments. When thrombolytic therapy fails or is contraindicated, and surgical embolectomy is not feasible, a non-surgical, less invasive alternative is available. For this group of patients, with massive PE, percutaneous mechanical thrombectomy (PMT) with the use of certain mechanical devices is an option. There are currently three catheter-tip thrombectomy techniques: aspiration thrombectomy, fragmentation, and rheolytic thrombectomy.

***Learning Objectives:** 1. To review the indications and results with percutaneous mechanical thrombectomy in patients with a diagnosis of acute massive pulmonary embolism with acute pulmonary arterial hypertension and right ventricular dysfunction.*

15.00-16.30 ***CASE REPORTS – RESIDENTS AND YOUNG INTERVENTIONALISTS***

Marjanović J.

Ultrasound guided hydrostatic reduction of intestine invagination in children

Roić G., Marjanović J., Grmoja T., Posarić V., Odorčić-Krsnik M.

ABSTRACT

Invaginacija ili intususcepcija je uvlačenje jednog dijela crijeva (intussusceptum) u susjedni, distalniji dio crijeva (intussuscipiens). Zbog nastanka akutne crijevne opstrukcije, invaginacija je najčešće hitno abdominalno stanje u dojenčadi i male djece. U najvećeg broja bolesnika dječje dobi invaginacija je ileokolične lokalizacije, najčešće

bez poznatog uzroka. Vjeruje se da je zadebljanje limfatičnih folikula u završnom dijelu ileuma osnovni etiološki faktor koji dovodi do poremećenog širenja peristaltičkog vala i nastanka invaginacije. Posljednjih desetljeća postignut je veliki napredak kako u dijagnostici tako i u terapiji invaginacije. Hidrostatska redukcija invaginacije pod kontrolom fluoroskopije ili pod kontrolom ultrazvuka neoperativne su metode kao prvi korak terapije ovog stanja. Zbog svojih karakteristika, ultrazvučno vođena hidrostatska redukcija invaginacije pokazala se prvom metodom izbora u dijagnostici i neoperativnoj terapiji invaginacije. Uz primjenu optimalnog protokola, ova intervencijska neoperativna ultrazvučna tehnika rezultira vrlo visokim postotkom izlječenja, čak i preko 90%. Ultrazvuk se također pokazao vrlo pouzdanom metodom u dijagnostici i diferencijalnoj dijagnostici invaginacije kao i drugih akutnih abdominalnih stanja u dječjoj dobi.

Slavica M.

Stent assisted coil embolisation (SACE) for treatment of splenic artery aneurysm

Slavica M., Leder N.I., Kavur L., Novačić K., Vidjak V.

ABSTRACT

Stent-assisted coil embolisation is well established interventional procedure for treatmnet of intracranial wide necked aneurysms. We report a case of a young woman with incidental finding of splenic artery aneurysm who was succesfully treated with stent-assisted coil embolisation procedure.

Cvetko D.

Endovascular treatment of hepatic artery pseudoaneurysm

Cvetko D., Ćurić J.

ABSTRACT

Pseudoaneurizme visceralnih arterija su relativno rijetke komplikacije nakon operativnih zahvata. Kao komplikacije su primarno povezane sa kirurškim zavatima u području gušterače i hepatobilijarnog sustava, kao posljedica traume, jatrogenih uzroka i upalnih bolesti. Bez obzira na etiologiju, pojavljuje se u 0,01-2% opće populacije, i iako rijetke, povezane su sa po život opasnim krvarenjima i moraju se promptno liječiti. Endovaskularno liječenje je osobito indicirano u liječenju pseudoaneurizmi kod pacijenata sa komorbiditetima i ranijim kirurškim zahvatima.

Predstavljamo slučaj pacijenta sa PSAN hepatalne arterije kao komplikacijom kirurškog i endoskopskog liječenja kroničnog pankreatitisa i strikture koledokojejunalne anastomoze, koja je uspješno embolizirana.

Bolanča K.

Active bleeding as complication of total hip replacement

Bolanča K., Kalousek V., Kolundžić R., Čengić T., Čulo B.

ABSTRACT

Pacijent, 1937. godište primljen je u Traumatološku polikliniku zbog bolnosti desnog kuka. Učini se klasična RTG obrada koja pokaže znakove nestabilnosti totalne endoproteze desnog kuka (TEP) kao što su malrotacija glave femura, osteoliza ispod osteosintetskog materijala i uz distalni dio endoproteze femura.

11.12.2012. pristupi operativnom zahvatu ekstripacije TEP desnog kuka – op. Girdlestone.

Učini se prijeoperacijska obrada u smislu scintigrafije TC koja upućuje na koštanju pregradnju u smislu nestabilnosdti i scintigrafija GA koja upućuje na infekt. Intraoperacijski se uzme bris te se mikrobiološkom analizom utvrdi Staphilococcus aureus.

Učini se postoperacijski MR desnog kuka sa kontrastom koji u preegzistirajućem intraartikularnom području, te između gluteusa medijus i minimusa prikaže nepravilnu kolekciju koja razmiče okolne strukture , ali ih ne infiltrira te se rubno imbibira kontrastnim sredstvom što upućuje na granulacijsko tkuvo unutar kojega se na T2 sekvencama vise formirani nivoi tekućina-tekućina u smislu hematiziranog sadržaja.

Nakon profuznog krvarenja na ranu, koje više nije moglo biti zbrinuti kirurškim putem uz značajan pad u krvnoj slici, indicira se hitna MSCT angiografija zdjelice koja u vidljivom granulomu prikaže aktivno krvarenje te se pristupi intervencijkom zahvatu.

Učini se DSA cross-over tehnikom koja prikaže aktivno krvarenje iz glutealne arterije desno te arterije femoris profunde. Učini se embolizacija istih s coilovima, a na kontrolnim angiogramima se ne nalazi znakova svježeg krvarenja.

Pacijentu se stanje stabilizira nakon čega slijedi oporavak uz otpuštanje iz bolnice uz planiranje daljnjeg zahvata. Na kontrolnim rengenogramima prikaže se poboljšanje mineralizacije koštane strukture desnog femura.

Postružin Gršić L.

Treatment of biliary obstruction caused by gastric cancer metastasis in patient with total gastrectomy

Postružin Gršić L., Kalousek V., Čulo B.

ABSTRACT

U slučaju opstruktivnog ikterusa uzrokovanog metastatskim procesom u gastrektomiranih bolesnika, zbog neoplazme želuca, uslijed promijenjenih

anatomskih odnosa nakon formirane ezofagojejunalne anastomoze nije moguće izvesti ERCP i tim putem plasirati stent. U takvih bolesnika metoda izbora je invazivni radiološki postupak.

Prikazuje se slučaj rješavanja opstruktivnog ikterusa, uzrokovanog metastatskim procesom, u bolesnika kod kojeg je učinjena totalna gastrektomija zbog mucinoznog adenokarcinoma želuca, PTC om sa postavljanjem bilijarnog stenta.

Iznosimo ovaj slučaj, kako bi prikazali da je kod izrazito agresivnih metastatskih procesa, sa infiltracijom i ponovnom opstrukcijom duktusa choledochusa, moguće opetovano rješavanje opstrukcije invazivnim radiološkim postupkom.

Rihtar T.

Tumour embolisation in left gluteal region

Rihtar T., Kalousek V., Čulo B.

ABSTRACT

Pacijent u dobi od 73 godine upućen je od strane kirurga radi hipervaskularizirane tvorbe glutealno lijevo koja je ranijom dijagnostičkom obradom u vidu MSCTa u više navrata verificirana kao sekundarizam.

Pacijent je prije više od dvadeset godina nefrektomiran poradi tumorskog procesa lijevo, a unazad osam godina je učinjena operacija tumora prostate. Prošao je više tretmana radioterapije na koje proces nije mijenjao veličinu niti konzistenciju.

Učini se MSCTa te dijagnostička DSA koja pokazuje hipervaskularizirani sekundarizam smješten glutealno lijevo, koji potiskuje koštane strukture ilijačne kosti te sakrolumbalnog dijela kralježnice.

Proces se dominantno opskrbljuje iz unutrašnje ilijačne arterije i njezinih ogranaka.

U dogovoru s kirurgom učini se embolizacija u vidu supraselektivne kateterizacije navedenih arterija koje opskrbljuju proces te se intratumoralno apliciraju PVA čestice od 500-700 µm, a potom se dovodne arterije okludiraju sa zavojnicama.

Na kontrolnim angiogramima izostaje prikaz vaskularne opskrbe tumorskog procesa, a na kontrolnoj MSCT angiografiji i MR zdjelice vidljiva je nekroza tumorskog procesa sa zauzimanjem više od 80% samog tumora.

Pacijent navodi smanjenje otekline i njezino omekšanje te izrazito smanjenje bolova.

Dragičević D.

Catheter directed thrombolysis for renal artery embolism after 48 hours

Dragičević D., Tadić T., Tičinović Kurir T.

ABSTRACT

Renal artery embolism is a disease that is easilly missed due to its infrequent and non-specific presentations. Early diagnosis and optimal thrombolytic tratment can sometimes restore renal function. For treatment, the therapeutic guidelines have not yet been accepted. However, early anticoagulant therapy is beneficial and selective infusion of lytic agents into renal artery has been reported with increasing frequency and efficacy if used in the early stage. We described that intra-arterial thrombolytic therapy witha a low dosage of 35 mg recombinant tissue plasminogen activator (rt-PA) may be an effective and safe strategy for the treatment of RAE, despite the period of ishaemia being long more than 48h.

Tičinović N.

Endovascular treatment of traumatic injury to upper limb arteries

Tičinović N., Ćurić J., Radoš S., Cvetko D., Cavka M., Brkljačić B.

ABSTRACT

Učini se DSA arterija desne ruke kojom se verificira bisakularana pseudoaneurizma desne ulnarne arterije sa A-V fistulom.

Učini se PTA i postavi stent graft na mjestu AV fistule desno sa zadovoljavajućim rezultatom. Rani postintervencijski period protječe uredno. Arterijske pulzacije palpabilne do krajnje periferije.

Tijekom boravka na odjelu bolesnik se žali na bolnost desne nadlaktice uz otok. Na desnoj nadlaktici i prijelaz podlaktice palpira se ekspanzivna aneurizmatska pulzacija uz auskultatorni sistolički šum.

Učini se color doppler pregled arterija desne ruke kojim se verificira trombozirana pseudoaneurizma promjera 3 cm uz brahijalnu arteriju u području punkcije dok se u području ranije postavljenog stent grafta te u radijalnoj i ulnarnoj arteriji desne ruke registriraju se zadovoljavajući protoci.

Vavro H.

Case of covering a cracked common carotid: cleaning cardiosurgeon's clutter

Cvetko D., Radoš S., Ćurić J., Vavro H., Brkljačić B.

ABSTRACT

Central venous catetherization is often performed for long-term intravenous access, perioperative management and follow-up. The carotid-jugular arteriovenous fistula is a rare complication of internal jugular vein catheterization. It can be caused by trauma, as well.

We present a case of a fistula between right common carotid artery and internal jugular vein in a 50-year old patient with a heart transplant and a history of two subsequent endomyocardial biopsies in order to monitor the heart for rejection, done by right jugular vein approach. A small pseudoaneurysm of the anterior wall of the common carotid artery was also detected.

After diagnostic workup, a covered stent was deployed in the common carotid artery, resulting in complete obstruction of both fistula and pseudoaneurysm.

Alduk AM

Percutaneous embolisation of idiopathic renal AV-fistula

Alduk A.M., Perkov D., Štern-Padovan R.

ABSTRACT

Renalna arteriovenska fistula (AVF) je rijetko stanje koje može biti stečeno, kongenitalno ili idiopatsko. Terapija izbora ovih lezija je embolizacija, no postoji rizik distalne migracije embolizacijskog materijala u vensku i plućnu cirkulaciju. To je osobito važno kod velikih, visokoprotočnih fistula.

Prikazat ćemo slučaj simptomatske idiopatske AVF u 31-godišnjeg bolesnika koja je, nakon neuspješnog pokušaja superselektivne embolizacije zavojnicama, tretirana embolizacijom pomoću "Amplatzer vascular plug II".

Ova metoda je rezultirala potpunim zatvaranjem fistule uz očuvanu arterijsku opskrbu bubrežnog parenhima.

Saturday 27. 4. 2013

8.10-9.20 **ROUND TABLE: HEPATOCELLULAR CARCINOMA (HCC) / IR**

Okan Akhan

Introduction to the treatment of HCC with the perspective of Interventional radiology

ABSTRACT

HCC is a difficult disease for the treatment because of the underlying chronic liver disease in most majority of the patients and high risk of recurrence. Radiofrequency ablation (RFA) has already become very popular with successful results for the treatment of HCC in very early and early stages. The best treatment of choice in patients with limited tumours is liver transplantation. In patients with early stage HCC, Image-guided tumour ablation is accepted to be the best treatment of choice if liver transplantation or hepatic resection are not possible. In patients with very early stage HCC (one lesion smaller than 2 cm. in diameter) Image-guided tumour ablation (such as RFA) is considered to be the first treatment option. Either Transarterial chemoembolization (TACE) or Radioembolization with Yitrium 90 is employed for the treatment in patients with multiple tumours. In patients at the terminal stage they are given sorafenib for the improving of survival. Results of Microwave ablation and Irreversible electroporation are also encouraging as they have a great potential to improve the efficacy of RFA.

Karlo Novačić

IR management of HCC in Croatia

Novačić K., Vidjak V., Lubina Z. I.

9.30-10.40 **ROUND TABLE: DEEP VEIN THROMBOSIS, VENA CAVA FILTERS / IR**

Raman Uberoi

The Role of Interventional Radiology in the Management of DVT and the Importance Vena Cava Filters

ABSTRACT

Not received

Vinko Vidjak

Deep vein thromobosis, vena cava filters and IR

Vinko Vidjak, Karlo Novačić, Nikola Ivan Leder, Marko Slavica, Lovro Kavur, Maja Crnčević Grubelić

ABSTRACT

Acute deep venous thrombosis (DVT) may result in pulmonary embolism (PE) and death of patients (in up to 30% of cases),whose incidence is always too high and excessive. Significant studies and research are the basis for the guidelines (American Venous Forum) on the management of PE and DVT. Guidelines give us valuable knowledge about the aggressive approach and treatment of acute DVT, which reduce the incidence of fatal complications. If it is an initial DVT of thigh and pelvic veins, aggressive treatment with percutaneous pharmacomechanical thrombectomy (PMT) compared to standard conventional treatment with anticoagulants, provides acceptable results with long-term financial cost-benefit. Protection with vena cava filter (VCF) implies an indication for its use , as well the type of used VC filter. Numerous clinical institutions in the Republic of Croatia (Croatia) are highly specialized for the treatment of the most complicated clinical conditions, including DVT and its consequences. However, the incidence of indication for VCF and PMT does not confirm this. There are many objective obstacles to such a state, which include: low financial limits of medical facilities, Croatian Institute of health insurance administratively does not acknowledge some expert interventional radiological procedures , there is a lack of physician training for indications and use of VCF and PMT.

10.50-12.00 ***ROUND TABLE: CHRONIC CEREBROSPINAL VENOUS INSUFFICIENCY CCSVI-MS / IR***

Firas Al-Ali

MS and CCVI *(exact title not received)*

ABSTRACT

Not received

Goran Pavliša

Endovascular treatment of multiple sclerosis: The beginning of the end?

ABSTRACT

Not received

12.10-13.20 **ROUND TABLE: BELOW THE KNEE INTERVENTIONS, DIABETICS / IR**

Marko Manzi

Not received

ABSTRACT

Not received

Vinko Vidjak

Below the knee vascular changes, diabetes mellitus and IR

Vinko Vidjak, Karlo Novačić, Nikola Ivan Leder, Marko Slavica, Lovro Kavur, Filip Matijević

ABSTRACT

Diabetes mellitus (DM) often causes peripheral ischemic disorders because of multilevel arterial changes. With progression of such changes in a person with DM, almost 15% of them will experience ulcerations in the periphery, of which 24% will need amputation. Early detection and treatment of peripheral vascular changes can reduce the incidence of amputations, which are eight times more frequent in patients with DM (compared to people without DM) , and mortality, which is nearly 40% in two-year period in patients after they had amputation. For years, surgical thromboendarterectomy and bypass were the dominant approaches in the treatment of peripheral arterial disease (PAD). However, in the last three decades (and especially during the last 10 years) an alternative is minimally invasive procedure, of which basic one is percutaneous transluminal angioplasty (PTA). People with DM and advanced PAD are poor candidates for extensive surgery. For this reason minimally invasive procedures , because of their technique and many opportunities, have an advantage. In the treatment of PAD of lower leg arteries, especially in patients with DM, angiosome principles, teamwork and multiple options of treatment methods and procedures play an important role in peripheral revascularization and preservation of the integrity of the extremities. It is the reason for formation of diabetic foot centers (DFC), which promote multidisciplinary treatment and maintenance of much needed quality of life in people with DM and PAD. During the last decade in Croatia a high incidence of amputations has been recorded. By reorganization of service, and the introduction of new noninvasive diagnostic and interventional radiological vascular procedures, but also by the formation of DFC (as already proven by examples in the world) the observed frequency of small (63%) and large (50%) lower limb amputations, can be reduced. The pressure of economic recession and a need to rationalize the procedures accordingly to GDP, would not be aggravating circumstances, but with the necessary administrative and technical modifications in approach to PAD in patients with DM.

15.00-16.10 ***ROUND TABLE: RENAL DENERVATION***

Dimitrij Kuhelj
Not received

ABSTRACT

Not received

Boris Brkljačić
Not received

ABSTRACT

Not received

16.25-17.50 ***ROUND TABLE: TEVAR-EVAR / IR***

Andrej Schmidt
Importance of EVAR/TEVAR *(exact title not received)*

ABSTRACT

Not received

Liana Cambj Sapunar
Not received

ABSTRACT

Not received

sIRcro 2013

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