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gallbladder in size 17x25 mm. CT and MRI was performed for the differential diagnosis. On contrast-enhanced CT scans showed a well-marginated soft tissue mass with perifereral enhancement and low attenuation of central areas. On T1 and T2-weigted images, the lesion was hypointense and hyperintense, respectively and there was intense homojen enhancement in contrast images. On T2-weighted images ,the appearance of high-signal and low-signal regions resulted in a "salt-and pepper" heterogeneity. The mass was removed laparoscopically and pathological examination resulted as paraganglioma.

Conclusion: It is important to know the radiological manifestation of this rare unusual tumor for diognosis and radiological findings should be kept in mind at all times.

Author: **Semra Duran**, Mehtap Cavusoglu, Eda Elverici
Subject: **Neuroimaging: brain**
Title: **Kallmann Syndrome**

Kallmann syndrome is a neuronal migration disorder characterised by hypogonadotrophic hypogonadism and anosmi or hyposmia.It is generally accepted that defective rhinocephalon development result in olfactory tract abnormalities. We used magnetic resonance imaging to visualize the olfactory tract and evaluate the olfactory sulci in patient whose clinical and laboratory findings were compatible with Kallmann syndrome. Coronal images of the frontal region clearly demonstrated aplasia of the bilateral olfactory sulci and absence of the olfactory tracts in patient.

CASE: 30 year old male patient was admitted with complaints of loss of smell. There was no history of drug use.The patient did not have a child six years of marriage. On physical examination, testicular size small. Axillary and pubic hair was grade 1-2. Laboratory examination hormone levels were lower.GnRH test could not get an adequate response. MRI, the bilateral olfactory bulbs and sulci are absent .There was no additional intracranial pathology.The pituitary gland is normally. The patient was diagnosed with KS.

CONCLUSION: MRI is the modality of choice in assessing for the absence of olfactory bulbs and sulci , and coronal T2 sequences are most effective.

Author: **Menka Lazareska**, Vjolca Aliji, Elizabeta Stefanovska, Nizametin Sezair, Aleksandar Stojkovski, Ana Mihajlovska Rendevska, Kristina Mitreska
Subject: **Neuroimaging: brain**
Title: **MR/MRA follow up of endovascular treated brain aneurysm**

Endovascular treatment (EVT) is increasingly used treatment of ruptured and unruptured intracranial aneurysms. Aneurysm recurrence after coil embolization has been estimated to occur in anywhere from 10%–40% of patients. This process may be related to instability and subsequent compaction of the original coil mass or migration of the coil mass into intra-aneurysmal thrombus or into the fundus of a continually expanding aneurysmal sac. Goal of EVT is complete exclusion of aneurysm from the flow of blood Technological advances in EVT devices have also improved this method with assisted coiling- balloon , stent, flow- diverter, liquids itc.

The purpose of this study was to evaluate the stability of anatomic occlusion of aneurysms and to assess the rate of recanalization and retreatment of these aneurysms.

In our institution EVT started 2005.

We evaluated 25 patient witch underwent EVT of brain aneurysm with coils from 2010 and from 2011 same stent assisted coiling. Follow up was made in this patients with MR/MRA on 3-6, 12 month and then on 1 year till 5th year. Examination include: standard MR of brain with DWI, hemo, T1FS, TOF,PC and contrast-enhanced MRAngiography.

Our findings detected: 1 lacunar infarction without neurological deficit-thrombemolic event; 1 small distal branch infarction and 1 lacunar brain stem infarction with mild neurological deficit; 1 prolaps of coil basket true wide neck-branch infarction; 1 haemorrhage in the wall (intramural) of giant EVT aneurysm; 2 recanalization, 1 retreated (refilled) because of growing on followed MRA and 1 left-stabile; 2 remnant neck, one wide but stabile (future plan-stent) and one small stabile.

Conclusion: MR/MRA is non-invasive, sensitive and chipper method for follow up of EVTed brain aneurysm. Advantages are: 3D view, condition of wall, intramural thrombus, flow abnormality on TOF, ischemia of part of the brain, silent infarction, dissection or inflammation on T1FS without and with contrast.

Author: **Georgi Janevski**, Janevska-Nakeva N., Janevski P., Bojagijeva B., Matveeva N.
Subject: **Musculoskeletal**
Title: **Pelvic index in examinees of macedonian nationality**

Janevski G., Nakeva N., Janevski P., Bojagjieva B., Matveeva N.

The aim of this study was to monitor the development of the pelvic parameters during puberty and adolescence in examinees of both sexes.

Material and methods: The measurements were made according to IBP on 1400 examinees of Macedonian nationality, divided into 14 groups.

Pelvic index and index of pelvic - Vallois width were calculated.

Results: Pelvic index 18 - 19.5 (moderate width) was found in female examinees aged 14 to 20 years. In males younger than 17 years pelvic index was smaller than 15.9, which indicates a relatively narrow pelvis. Mean value of pelvic index was found in 15-year-old females.

Conclusion: The analysis of pelvic indexes in examinees of Macedonian nationality showed that the width of the pelvis was a sexually connected characteristic. A relatively moderate width of pelvis was found in females older than 14 years, which is a secondary sexual characteristic.

Author: **Petar Janevski**, Janevski G, Janevska-Nakeva N., Mitreska N., Aliji V.
Subject: **Neuroimaging: brain**
Title: **Multidetector CT Angiography retrospective study of fetal origin of posterior cerebral artery of the population in R. Macedonia**

BACKGROUND AND PURPOSE:

Fetal origin of the posterior cerebral artery is a common anatomic variation in the posterior cerebral circulation. It is estimated to occur in up to 30% individuals. The aim of this study is to show the incidence of unilateral and bilateral fetal origin of he posterior cerebral artery of the population in R. Macedonia.

MATERIALS AND METHODS:

The sensitivity and specificity of multidetector CT angiography are reported to be high (81%–90% and 93%, respectively). Retrospectively we reviewed random multidetector CT Angiography studies of 100 patients in our clinic, to determine the incidence of fetal origin of the PCA of the population in R. Macedonia (sex and age was not taken into account)

RESULTS:

Form the randomly selected 100 individuals examined in our clinic in the last year, 32 (32%) had fetal PCA, and only 4 (4%) of those had bilateral fetal PCA. From the 28 individuals with unilateral fetal origin of the posterior cerebral artery, 19 had right fetal PCA and 9 had left fetal PCA.

CONCLUSION:

The study showed that the incidence of fetal origin of posterior cerebral artery of the examined population in R. Macedonia is 32%. The incidence of unilateral fetal PCA is 28% and of bilateral fetal PCA is 4%. From all the examinees 19% have unilateral right and 9% unilateral left fetal PCA.

Author: **Sinan Akay**, Veysel Akgun, Bulent Karaman, Fatih Ors
Subject: **Interventional Radiology**
Title: **A Successful Endovascular Treatment of a Case with Active Renal Artery Bleeding After Nephropyelolithotomy Following the Diagnosis by Computed Tomography**

PURPOSE: To present non-enhanced computed tomography (CT) and catheter angiography findings of case with renal segmentary-subsegmentary bleeding after nephropyelolithotomy who is successfully treated with endovascular embolization.

MATERIALS and METHODS: In a 22 year-old man who has a history of nephropyelolithotomy, high WBC (17700/μL) and fever developed on post-op 7th day. The patient was referred to our department for detailed evaluation by urinary ultrasonography.

RESULTS: On ultrasonography; Right kidney was large. Grade 4 hydronephrosis was detected. Heterogeneous hyperechogeneities in the dilated collecting system were seen that primarily suggested as bleeding because of the known operation. On non-enhanced CT; Large homogeneous-hyperdense area that fills most of the calyces is detected. Catheter angiography was planned to find the active bleeding site and if needed to make endovascular treatment. During angiography, contrast extravasation was seen at subsegmentary arteries in middle section and inferior pole of the right kidney. Bleeding sites were successfully embolized using non-spherical material via superselective catheterization. Control angiography confirmed that the bleeding has stopped.

CONCLUSION: Hematomas and active bleeding arising from renal artery can be diagnosed by non-enhanced CT. If certain bleeding site can not be determined by imaging modalities, it can be detected correctly by selective-superselective angiographic studies, and these vessels can be successfully embolized.

Author: **Goga Mrmeski**, Gordana Antuleska-Belceska, Margareta Stanojoska-Kalevska
Subject: **Neuroimaging brain**
Title: **Case report: Ataxia and Teleangiectasia with Abnormal White Matter Signal on MRI**

Introduction: Ataxia telangiectasia is a multisystem disease characterized by cerebellar ataxia, oculomucocutaneous telangiectasias, and susceptibility to certain infections and neoplastic processes. Sometimes classified as a phakomatosis. The estimated incidence is at around 1:40,000 - 300,000 live births. Thought to result from a defective gene located on chromosome 11q22–23.

Case report: Girl, age 20, born full term 3600 gram with no perinatal problems. Started walking at age 1, with tendency to sway backward. She could never climb stair one stair at a time. Developed "red eyes" in early childhood. At age 8, had a respiratory illness with fever, cough, after that a severe deterioration in walking noted. At age 11 finally stopped walking on her own. At age 11 the possibility for ataxia telangiectasia was raised based upon her ataxia. Boy, age 16 born full term, 3550 gram, product of uncomplicated, pregnancy, labor and delivery. No perinatal problems. At age 6 diagnosed with ataxia telangiectasia, parents insist that he had no symptoms at that time. At age 8 was first time noticed that he developed "red eyes". At aproximately the same time he had severe febrile illness, following which he had neurological deterioration. Parents report that he was able to walk on his own until 2005 (age 10). Abnormal finger nose - finger manouver, deep tendon reflexes diminished. Unable to stand or take steps on his own, can only take few steps if firmly supported. Both kids have normal WBC, lymphocyte count, normal distribution of lymphocyte substes. Girl had hypoglobulinaemia, with deficiencies of IgG1, IgG2 and IgG4. Boy had combination of IgA and IgG4 deficiency. Laboratory results (from USA) showed that they both had increased chromosomal damage after in vitro x-ray exposure, consistent with the diagnosis of A-T. MR image shows cerebellar atrophy and conjuctival telangiectasia, and multiple hypointense foci in the white matter bilaterally, more in girl. Spin-echo sagittal T1-weighted MR image shows cerebellar atrophy. Spin-echo axial T2-weighted MR image shows multiple hypointense foci in the white matter bilaterally.

Conclusion: In summary, we report a case of ataxia telangiectasia with hypointense white matter foci on T1-and T2-weighted MR images. These foci may reflect changes related to previous hemorrhage or abnormal white matter vasculature.

Key words: ataxia teleangiectasia, MRI, cerebellar ataxia, oculomucocutaneous telangiectasias, white mater focus