GP21 UNDIFFERENTIATED NASOPHARYNGEAL CARCINOMA IN CHILDREN AND YOUNG ADULTS: EXPERIENCE IN THE RADIOTHERAPY DEPARTMENT OF THE FES UNIVERSITY HOSPITAL CENTER

Ghita Chebihi Hassani*, Abdesslam Alami, Zineb Alami. *Radiotherapy department in University hospital center of FEZ, FEZ, Morocco*

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Nasopharyngeal malignant tumors are mainly represented in pediatrics by undifferentiated carcinoma nasopharyngeal tumors (UCNT). It is a rare entity. The aim of our work is to analyze the epidemiological, clinical, therapeutic and evolutionary aspect of children and young ≤ 20 years with nasopharyngeal cancer.

Patients and methods This is a retrospective study of 38 patients diagnosed with a UCNT between January 2012 and December 2018 and treated in the department of oncology-radiotherapy of the CHU Hassan II of Fez.

Results The age of our patients was between 10 and 19 years, with a middle age 14.7 years, the most affected age group was 10 to 15 years (70%), the sex ratio was 1.2. Diagnosis is often delayed with a revealing symptoms dominated by cervical adenopathy (85%). 85% of patients were classified T3-T4 and 60% were classified N2-N3 with 4 metastatic patients. Treatment was based on neoadjuvant chemotherapy (in 95% of patients) as well as on concomitant radio- chemotherapy. 3 patients were lost to follow-up. Acute toxicity was characterized by radio mucititis (100%) and radio dermatitis (60%) in patients receiving IMRT radiotherapy, hyposialia (55%), hypoacusis (44%) and trismus%) for those who received 3D conformal radiotherapy, with a lower delayed toxicity for IMRT (only 3 patients who presented with hyposialia). The evolution was marked by a good loco regional control in 55%, a loco regional recurrence in 10%, and remote metastasis in 15%. Thus, the overall survival was 85% and the survival without relapse was 50%.

Discussion The prognosis of this cancer remains poor considering the locally advanced forms (high frequency of stages III and IV) and the frequency of recurrences.

Conclusion Improving the prognosis of this cancer requires early diagnosis and more accessible and developed medical infrastructures. The recent advances in conformational radiotherapy by intensity modulation will have to be the main technique of treatment of all our patients.

GP22 LUNG ULTRASOUND IN NEONATES AND BABIES: IS IT AN ACCURATE TOOL FOR IDENTIFICATION OF LUNG DISEASE IN PATIENTS WITH CONGENITAL HEART DEFECTS

Ivan Akinshin, Elena Sinelnikova*, Ahlam Mohammad, Emilia Stolova, Irina Solodkova, Tatiana Kornishina, Vyacheslav Chasnyk. *Saint-Petersburg State Pediatric Medical University, Saint-Petersburg, Russian Federation*

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Introduction Lung diseases (LDs) are the most common causes of life-threatening respiratory failure in babies, while mortality of it gets up to 35%. Chest X-ray is the most valuable imaging modality for the diagnosis of LDs, but recently lung ultrasound (LUS) has been introduced, and several studies have already confirmed LUS to be an accurate and reliable method for the diagnosis of LD in infants. The goal of this study was to evaluate errors of hyper- and hypodiagnostics of LD using LUS in neonates and babies with primary LD and LD secondary to congenital heart disease (CHD).

Methods We analyzed the results of 241 ultrasonic examinations (heart and lungs) of 131 neonates and babies aged 1 - 246 days of life. Primary PD (neonatal respiratory distress syndrome - NRDS, bronchopulmonary dysplasia and neonatal pneumonia - NP) had 39 patients, CHD (complete atrioventricular canal ventricular septal defect, atrial septal defect, patent ductus arteriosus, coarctation of the aorta) had 47 patients, diseases without heart and pulmonary involvement (gastrointestinal and urinary tract pathology) had 45 patients. A quarter of patients with CHD also had PDs. LUS was performed according to recommendations of Lichtenstein et al. (2004), Picano et al.(2006). We used standard programs to verify the diagnosis. In order to calculate the errors of hyper- and hypodiagnostics of LD regression modeling and classification trees (Statistica for Windows) were used to process the description of lungs and heart in terms of ultrasound examination together with information regarding gender, mode of delivery, gestational age, body weight and length as well as laboratory and instrumental characteristics.

Results Our results confirmed the level of 94–95% sensitivity and specificity of LUS for identification of RDS and NP, which is almost the same as in thoracic X-ray. Regression models identified 76% as maximal explained variance for interstitial syndrome described in terms of LUS. LUS explained 42% of variance of right ventricular dimensions. Error of hyper- and hypodiagnostics of pulmonary hypertension reached 0% and 27% respectively, while interstitial syndrome was more informative than alveolar consolidation (score: 22 versus 62 correspondingly). LUS is not useful for differential diagnosis of primary and secondary LD in neonates (errors of hyper- and hypodiagnostics 16% and 35% correspondingly)

Conclusions Our results confirmed usefulness and feasibility of LUS in diagnostics of NP and NRDS. In addition, LUS is accurate enough for identification of pulmonary hypertension in patients with CHD.

GP23 PERCUTANEOUS CLOSURE OF PATENT DUCTUS ARTERIOSUS: SINGLE CENTER EXPERIENCE

Birsen Ucar*, Pelin Kosger, Hikmet Kiztanir. *Eskisehir Osmangazi University Faculty of Medicine, Department of Pediatric Cardiology, Eskisehir, Turkey*

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Aim In this study, we aimed to evaluate our clinical experiences in the percutaneous closure of patent ductus arteriosus (PDA) in the pediatric population with our early and late results.

Method A total of 156 patients who underwent percutaneous PDA closure between March 2004 and January 2018 were included in the study. Clinical, echocardiographic and angiographic findings of patients, characteristics of procedures, complications, early and late results were evaluated.

Results The mean age of patients undergoing PDA closure was 4.5 ± 4 years (1.5 months-17 years), with an average weight of 17.8 ± 12.1 kg (2.3–68 kg). The PDA type was conical in 117 (75%) patients, tubular in 34 (21.7%), window type in 4 (2.5) patients and complex in 1 (0.6%) patient. In 150 (96.1%) patients, the procedure was successful, PDA was

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closed in 43 patients (28.7%) with coil (28 in Nid-occlud, 10 in Cook, 5 in Gianturco coil), in 27 (18%) patients with Amplatzer duct occluder (ADO) I, in 38 (25%) patients with ADO II, in 24 (16%) patients with ADO II Additional Size (ADO II AS) and in 18 (12%) patients Occlutech Duct Occluder (ODO) device. All 6 patients with failed PDA closure were attempt to be closed with coil. The mean duct diameter was 2.1 ± 1.24 mm, and the mean Qp/Qs ratio was 2 ± 0.95. Ductus diameter was greater in ADO I and ODO group than coil and ADO IIAS group, and in ADO I group than ADO II group. The Qp/Qs ratio was higher in ADO I group compared to the coil, ADO II and ADO IIAS groups, in ODO group than coil and ADO IIAS groups and in ADO II group than coil group. In a patient with residual shunt after PDA closure, a second coil was placed in the ductus after 1 year. The early closure rate was 85.3% after the procedure and the complete closure rate at the first day echocardiography was 99.3%. In the follow-up, mild left pulmonary artery stenosis in 2 patients and mild stenosis in the descending aorta in 3 patients were detected.

Conclusion Transcatheter closure of PDA in children is a treatment option that can be preferred safely depending on the shape of the duct, device selection and clinician's experience. With the increase of device diversity, the success rate of percutaneous closure is increasing. In our clinic, our successful closure rate increased with the introduction of duct occluder devices.

GP24 SERUM RENALASE LEVELS IN ADOLESCENTS WITH PRIMARY HYPERTENSION

[1]Marta Lemiesz, [1]Edyta Tenderenda-Banasiuk*, [1]Katarzyna Taranta-Janusz, [2]Dorota Sosnowska, [1]Anna Wasilewska. *[1]Department of Pediatrics and Nephrology, Medical University of Bialystok, Białystok, Poland; [2]Department of Obstretrics- Gynecology, Medical Hospital in Garwolin, Garwolin, Poland*

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Background The prevalence of hypertension continues to rise in pediatric populations. Recent studies suggest that renalase plays an important role in blood pressure regulation. The aim of this study was to evaluate serum renalase concentrations in hypertensive children.

Methods This study was a prospective cohort analysis of 88 adolescents (40 girls; 48 boys) aged 11 - 18 years, divided into two groups: HT – 38 subjects with primary hypertension and R - reference group – 50 subjects with normal blood pressure. Serum renalase concentration was measured using a commercial enzyme-linked immunosorbent assay kit (USCN Life Science Inc., China).

Results Hypertensive patients had higher serum renalase levels (median 29.8 μg/mL; Q1-Q3: 26.1 – 35.8) than the reference group (median 26.8; Q1-Q3: 22.96 – 29.4, $p<0.01$). Serum renalase was strongly related to serum uric acid levels. In hypertensive patients, serum renalase was positively correlated with 24H-SBP and 24H-DBP and 24H-SBP and 24H-DBP Z-score (LMS).

Conclusion Our results allow us to draw the conclusion that serum renalase is correlated with blood pressure elevation. Special attention should be drawn to the correlation between renalase and serum uric acid levels not only in hypertensive, but also in normotensive teenagers. Further studies are needed to answer the question if increased serum renalase may be a predisposing factor to hypertension in normotensive patients with hyperuricemia.

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GP25 COMPARISON OF ASSOCIATIONS AND OUTCOMES OF PRENATALLY AND POSTNATALLY DIAGNOSED RIGHT AORTIC ARCH: SOUTH WALES' EXPERIENCE

Ana Maria Irimia*, Amos Wong, Orhan Uzun. *Noah's Ark Children's Hospital for Wales, Cardiff, UK*

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Objectives To evaluate clinical associations and outcomes of antenatally and postnatally diagnosed Right Aortic Arch (RAA) in South Wales.

Methods Retrospective observational study of all RAA patients diagnosed in South Wales between 2000–2018.

Results We identified 38 cases of RAA, 68.4% antenatally diagnosed and 31.6% postnatally. Following the introduction of a structured teaching programme of fetal 3 vessels trachea (3VT) views to sonographers in South Wales in 2013, the pick-up rate of antenatally diagnosed RAA has increased, from an average of 1 patient per year prior to 2013, to 9 patients in 2018. 100% of cases were diagnosed antenatally starting from 2015. 57.7% of antenatally diagnosed cases were referred specifically for RAA, and 7.7% for suspicion of abnormal arch, while 66.7% of postnatally diagnosed patients were referred for associated cardiac conditions. Two asymptomatic patients (16.7%) from the postnatal group were referred for cardiac screening after being diagnosed with DiGeorge and 1 patient (8.3%) for RAA symptoms.

Associated cardiac conditions were found in 65.8%, while 32.4% had isolated RAA. The most common associated cardiac conditions were pulmonary stenosis or atresia and ventricular septal defect, at 23.7% each, followed by tetralogy of Fallot (18.4%). 3 patients (7.9%) had 22q11 microdeletion, all in the isolated group. One patient had Edwards syndrome and one patient had CHARGE syndrome (2.6%) in non-isolated group. 7 patients (18.4%) had non-cardiac conditions. The branching pattern was described in 34.2% of cases, of which 6 cases (46.15%) being RAA with mirror image branching (MIB) and 4 cases (30.76%) being RAA with aberrant left subclavian artery (ALSCA). 4 cases of MIB compared to 1 case of ALSCA had associated cardiac conditions.

81.6% of patients with RAA were asymptomatic. 6 patients (15.8%) had respiratory symptoms, of which 4 had isolated RAA, with a median age of onset of 2.2 months, and one patient (2.6%) had apnoeic episodes (on prostaglandin for pulmonary atresia). One patient from the isolated group and one patient from the associated group underwent corrective surgery for vascular ring for significant symptoms. The majority of isolated RAA (82.6%) were discharged.

Conclusions 3VT view resulted in improved antenatal diagnosis of RAA. Most RAA were associated with other cardiac conditions. RAA were mostly asymptomatic, with few developing respiratory symptoms, with a median onset at 2.2 months of age.

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