Conclusion: In the quest for new treatments, immunotherapy is potentially useful for chemotherapy-resistant disease. The inhibition of the programmed death ligand 1/programmed death 1 (PD-L1/PD-1) pathway has introduced a new era in cancer treatment.

PS-20-010

Body weight and crown-heel length autopsy standards in a Macedonian perinatal population: single centre experience

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Background & objectives: Foetal reference values are available for several European countries, but no reference values exist for the North Macedonian population.
We aimed to establish accurate body weight and crown-heel length standards, indigenous to our country.
Methods: We reviewed 4,073 consecutive foetal/perinatal autopsies performed between 2012 and 2019. Excluded were cases with: multiple pregnancies, unknown gestational age, congenital abnormalities, intrauterine growth restriction, hydrops, severe septicaemia/virosis, fixed/frozen specimens, newborns aged >24 hours, severe haemorrhage, and alloimmunization. BW was measured in grams and CHL in centimetres at the day of admission. Percentile curves were calculated with the Altman method.
Results: 1,129 cases met the inclusion criteria (age range: 11-42 gw, 64.07% males, 35.93% females, 1.15% undetermined sex), of which 456 (40.39%) were miscarriages, 326 (28.86%) stillborn foetuses, 243 (21.52%) neonates and 15 (1.33%) foetuses were medically terminated pregnancies. BW in grams (BWg) had the following relationship with gw: BWg = 302.923 + gw * -68.766 + gw2 *3.481 ($R2 = 0.930$, $p < 0.0001$). The relationship between CHL in cm (CHLcm) and gw was calculated as following: CHLcm = -23.89 + gw * 2.926 + gw2 * -0.0268 ($R2 = 0.926$, $p < 0.0001$). Corresponding standard deviations were modelled to derive lower and upper reference limits.
Conclusion: The current autopsy study provides bodyweight and crown-heel reference standards with standard deviations, at each gestational age, which are representative of our mixed population. The easy-to-use percentile charts could serve as a valuable tool for the practicing pathologist when performing perinatal autopsies. We believe that strict adherence to the eligibility criteria, the consistency of the autopsy procedure, and the well-designed statistical approach, support the reliability of our results.

PS-20-011

Juvenile xanthogranuloma in children

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Background & objectives: The family of Juvenile Xanthoganuloma (JXG) is a non-Langerhans cell histiocytosis occurring predominantly in neonates and children. We present the clinical and histological characteristics of JXG in children and the correlation of morphology/immunophenotype with the clinical behaviour.
Methods: A retrospective review was performed of 65 biopsy specimens from our laboratory between 2006-2020.
Results: Age ranged from 6 days to 15 years, with female predominance [35 females: 30 males], 50 patients were under 3 years. Solitary cutaneous lesions accounted for 56/65 (86,1%), 3 (4,6%) cases presented as soft tissue mass, 3 (4,6%) cases had visceral involvement and 3 neonatal cases (4,6%) had systemic JXG. Classical JXG was the most frequent 55/65 (84,6%), with variable Touton giant cells and foamy histiocytes. Spindle cell morphology was observed in 11 cases. The immunophenotype CD68/PGM-1(+), CD163 (+), Fascin(+), Factor XIIIa(+), CD1a(-), Langerin (-) was observed in all cases. The expression of Ki-67 was variable regardless of presentation and morphology. One case with systemic disease expressed ALK-1/p-80
Conclusion: JXG presents in children as a cutaneous lesion, less often as a solitary extracutaneous lesion and rarely as a systemic disease, with a favourable prognosis in localized disease. The immunophenotype is characteristic regardless of the clinical and morphologic features and contributes in the diagnosis of the systemic type of JXG which requires treatment.

PS-20-012

Expression of eNOS and CD34 in placental villi of monochorionic diamniotic twins

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Background & objectives: Endothelial NOS (eNOS) and CD34 as known markers of placental villi's endothelial cells are essential for angiogenesis and vasculogenesis. The aim of the study to evaluate eNOS, CD34 expression in placenta of monochorionic diamniotic twins with selective foetal growth restriction (sFGR).
Methods: Histological(H&E) and immunohistochemical studies to primary antibodies to eNOS, CD34(Spring Bioscience) on the paraffin-embedded slices of placental samples taken after caesarean section at 28-36 wks from 22 patients of 24-36 yrs with monochorionic diamniotic twins has been performed. The group with sFGR consisted of placenta samples from 15 puerperas and for control - placenta samples from7 ones. Cases with feto-fetal syndrome excluded.
Results: Histological and immunohistochemical study showed expression CD34 in blood vessels' endothelium of placental villi. We revealed 10x increase number of smaller diameter vessels within one villi in sFGR group(more than 10 vessels in one villi, normally 3-7 vessels), predominant branching of blood vessels($p<0,05$). In cases of sFGR eNOS expression was significantly increased in some placental areas with compensatory changes, whereas in other areas it decreased up to lost staining($p<0,05$). Moreover eNOS expression was detected in the syncytiotrophoblast as membrane cytoplasmic and granular staining. This confirms the high level of angiogenic factors in the trophoblast. In controls eNOS, CD34 expression was moderate in the villous tree and placentas were within gestational age.
Conclusion: CD34, eNOS expression indicates depletion of the compensatory mechanisms of the placenta with sFGR in cases of monochorionic diamniotic twins.

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Mole and twin: a complete hydatidiform mole and coexistent surviving foetus case report

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Background & objectives: Twin pregnancy with a complete hydatidiform mole and a coexistent viable foetus is a rare entity, with associated risks both during and after pregnancy. A case with a surviving neonate is presented.