

**Background & Objectives:** Non-alcoholic steatohepatitis (NASH) is a morphological pattern of liver injury that is characterised by hepatocellular steatosis, ballooning and lobular inflammation. Our aims were to evaluate the distribution of morphological features, to determine NAFLD activity score (NAS) and SAF score, and to observe the effect of morphological changes on fibrosis, in paediatric age group.

**Method:** The biopsies of patients diagnosed as NAFLD under 18 years of age, between 2014 and 2016, were retrieved from the archives of the Marmara University School of Medicine.

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**Results:** We analysed 45 liver biopsies. Due to insufficient biopsy, 3 cases were excluded from the study. Among 42 patients, the mean age was 11.9 and 28 (%66.6) were male. The degree of steatosis was scored as 1 for 10, 2 for 8, and 3 for 24 cases. The distribution of steatosis were panacinar in 14 (%33.3), azonal in 11 (%26.1), peri-portal in 8 (%19), peri-central in 8 (%19) and limited to zone 2 in 1 case. The lobular inflammation score was 0 in 4 cases, 1 in 17 cases, 2 in 12 cases and 3 in 9 cases. Ballooning degeneration were evident in 21 patient, being mild or prominent in 18 and 3 of biopsies, respectively. No fibrosis was observed in 16 cases, whereas 15 were stage 1c, 7 were stage 2 and 4 were stage 3. In statistical analysis fibrosis was statistically related to the distribution of steatosis ( $p < 0.01$ ), NASH score ( $p < 0.001$ ) and lobular inflammation ( $p < 0.01$ ), but not with the degree of steatosis and/or ballooning.

**Conclusion:** Although ballooning degeneration is accepted as the hallmark feature of NASH, in our study it was not related to the degree of fibrosis. In contrast, the distribution but not the degree of steatosis and lobular inflammation were both correlated with the degree of fibrosis.

#### PS-21-025

##### **Histochemical techniques applied in freezing cuts during intraoperative biopsies in liver transplantation**

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**Background & Objectives:** The introduction of more extended clinical criteria when considering the suitability of a donor has led to an increase in the number of transplants, especially kidney transplants, and this implies a rise in intraoperative biopsies performed in the pathology department. Given this growth in transplants from “not ideal donors” makes the histological study should be more precise, optimal and objective.

**Methods:** 18 cases of intraoperative biopsy of liver transplantation between the months of December and January of 2018–2019 were studied. The samples were stained with Hematoxylin-Eosin and 2 histochemical techniques were applied: Chromotrope Aniline Blue to enhance fibrosis and Sudan III–IV for the study of hepatic steatosis, comparing the results obtained in each of both techniques.

**Results:** In the study of fibrosis comparing HE and Aniline Blue, 4 cases showed a greater lesion in their study with Aniline (22.2%), 6 cases with a diagnosis of lesion of lesser degree (33.3%) and 8 presented similar lesions between HE and Anilina (44.4%). Regarding the study of macrovesicular steatosis with HE and Sudan III–IV, 5 cases showed a greater injury with the Sudan technique (27.78%), 4 cases with lesion of lesser degree (22.2%) and 9 showed a similar injury (50%).

**Conclusion:** The introduction of the techniques of Aniline Blue and Sudan III–IV in the intraoperative study in liver transplant allows a more objective and sensitive study to detect possible alterations that show the organs, being specific techniques enhance the fibrous lesions and steatotic lesions that we must study and its application does not significantly increase the time of histological study and in case of diagnostic doubt are techniques that can offer a more reliable diagnosis.

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#### PS-21-026

##### **Diagnostic accuracy of an immunohistochemical panel to distinguish intrahepatic cholangiocarcinoma from bile duct adenoma**

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**Background & Objectives:** Differential diagnosis between intrahepatic cholangiocarcinoma (ICC), an aggressive liver tumour, and bile duct adenoma (BDA), an indolent lesion, is fundamental but sometimes challenging, particularly for well-differentiated ICC. Morphological analysis alone is often not sufficient to achieve a correct diagnosis. Several immunohistochemical markers have been proposed to improve the diagnostic performance, but all of them, taken singularly, showed a low sensitivity and are not used in clinical practice. Moreover, only a few studies focused on the differential diagnosis between ICC and BDA, so far.

The aim of this study was to investigate the diagnostic performance of a 3-marker panel, including p53, p16<sup>INK4a</sup>, and S100P, to evaluate whether their combination might help to distinguish ICC from BDA.

**Methods:** Fifty-two surgically resected liver nodules (30 ICCs and 22 BDAs) were retrospectively selected and stained with p53, p16<sup>INK4a</sup>, and S100P. p53 was considered positive when a strong nuclear immunoreaction was observed, while p16<sup>INK4a</sup> and S100P positivity was both nuclear and cytoplasmic. An algorithm was built and its diagnostic performance analysed.

**Results:** As expected, despite their perfect specificity (100%), all the evaluated markers showed a low sensitivity when considered singularly (56.7%, 26.6%, 23.4%, for p53, p16<sup>INK4a</sup>, S100P, respectively). On the contrary, the algorithm based on the sequential use of p53, p16<sup>INK4a</sup>, and S100P, showed a sensitivity of 73.4%, a specificity of 100% and an overall accuracy of 84.6%.

**Conclusion:** The adopted 3-marker algorithm is helpful in differentiating ICC from BDA. Further larger studies are needed to validate the proposed algorithm.

#### PS-21-027

##### **Pancreatic neuroendocrine microadenomatosis: clinicopathologic features of 5 cases**

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**Background & Objectives:** The presence of multiple small neuroendocrine tumours (NET) in pancreas measuring less than 0.5 cm in greatest dimension has been referred to as pancreatic microadenomatosis (PMA). PMA has been considered the precursor of NET. PMA can occur sporadically or be associated with syndromes such as multiple endocrine neoplasia type 1 syndrome (MEN1) and von Hippel-Lindau (VHL) disease. We report the clinical and histopathological features of 5 cases diagnosed as PMA.

**Methods:** Five cases diagnosed as PMA at our Institution over a 2-year period were analysed retrospectively. Clinical and demographic data were retrieved from the hospital records.