PARALLEL SESSION 4:
HEAD & SPINE BLOCKS
TIME: 15:45 – 17:15

Chairman: Head & Spine Blocks

Where do locate the Ilioinguinal & Iliohypogastric nerves in children?

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Abstract:

Objective: The purpose of this study is to examine the localization of the Ilioinguinal and Iliohypogastric (ILIH) nerves by using ultrasound and its relationship to age and body weight in children.

Methods: Children between 1-16 years of age, ASA I-II class, admitted to the surgical department for inguinal hernia, orchidopexy, and hydrocele repair were included in this prospective, randomized study at the National Center for Maternal and Child Health of Mongolia. We divided these children into three age groups: 1-4 years, 5-8 years, and more than 9 years old. The ultrasound transducer was placed longitudinally at the line drawing from the ASIS to the umbilicus and after identifying the ILIH nerves we measured the distances of the anatomical structures: depth or thickness of the abdominal anterior wall structures and distance of ILIH nerves from the ASIS. When we identified the ILIH nerves we saved the pictures in the US machine. Identification and visibility scores of nerves and muscles were made by using a Likert scale and Vienna score and showed in the median. We recalled the data and analysed it with repeated measurements, followed by ANOVA for a single factor. The correlation was calculated using the Pearson's correlation coefficient. The tables show a mean ±SD and number (%) of subjects. A p-value<0.05 was considered statistically significant.

Results: A total of 55 pictures were analysed. The current study showed that the distance and depth of some anatomical structures, such as the mean distance of skin-peritoneum was 1.43±0.37 cm (CI 95% 0.76-2.37, p=0.0023), the thickness of internal oblique muscle was 0.33±0.14 cm (CI 95% 0.11-0.75, p=0.0022), the target point of ILIH nerve which was equal to the skin to transversus abdominal muscle (TAM) distance 1.06±0.3 cm(CI 95% 0.56-1.82, p=0.0093) were increasing regarding the age. For other measurements of depth not seen age-related statistically significant differences. According to the location of the ILIH nerves to the ASIS, in younger children they locate closer than in bigger children, however, only the distance of ASIS-IHN was statistically significant. The ILIH nerves localize closer to the iliac bone in the younger children and when ages increasing the nerve locates more medially and it correlates to the BW and ages.

Conclusion: ILIHN are visible by ultrasound in children. ILHN location correlates to age, BW and BMI.