

SIV7: MODIFICATION OF LAPAROSCOPIC INGUINAL HERNIA REPAIR ACCORDING TO PIRS METHOD IN CHILDREN BY USE OF AN ADDITIONAL PORT AND LAPAROSCOPIC INSTRUMENT

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Background Inguinal hernia repair is the most common operation performed by pediatric surgeons. Recently minimal invasive access surgery has challenged this conventional surgery. One of the popular method is PIRS described by Patkowski in 2006. We present a modification of PIRS method including an additional port and working instrument that decreased the rate of conversions.

Materials and methods There were 276 laparoscopically treated children using the PIRS method for inguinal hernia in 2008–16. In all, we got abdominal access through the umbilicus using open technique. Under the control of 3,5–5 mm optics and abdominal pressure of 8–12 mmHg the inguinal internal ring was closed percutaneously with braided, non-absorbable suture. Since 2014 the additional 3.5 mm port with instrument was used. In cases of difficulty with hernia sac closure, difficulty of vas deferens visualization and for visualizing the pelvic organs to detect Complete Androgen Insensitivity Syndrome (CAIS) in girls.

Results At the beginning of our series 24 primary laparoscopic children were converted to classic open surgery. In 10 boys, despite the PIRS suture placed large gas leakage to the scrotum was maintained. In 8 boys and one girl, we observed the presence of different forms of hydrocele. At two children, distended bowels have made PIRS surgery impossible. Two ovaries were present in the inguinal canal. One hematoma occurred because of iliac vessels puncture, which made it impossible to identify structures of the inguinal canal. In 14 cases (7 boys and 7 girls), we inserted another 3.5 mm port with instrument in the right lower abdomen that improved the proper placement of the percutaneous suture thanks to retracting peritoneum and securing testicular vessels with vas deferens in boys and improved visualization of pelvic organs in girls with bilateral inguinal hernia. Since then, we had no conversion.

Conclusions It seems that use of additional port with laparoscopic instrument may prevent conversion to classical surgery procedures in the case of PIRS.

Key words inguinal hernia, PIRS, children, laparoscopy