IS-008 The impalpable testicle? Does imaging really help?
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Aim: To evaluate the role of imaging in the diagnosis of impalpable testes and identify laparoscopy as a reliable diagnostic and therapeutic tool for these patients.

Materials and Methods:
The study is a prospective analysis of all 150 boys referred with undescended testis over a period of five years (2002-2006). All children referred with impalpable undescended testis by the referring physician underwent an ultrasound scan prior to clinical review. This was followed by detailed clinical examination by a paediatric surgeon and MRI scan for those children in whom the testes could not be felt even at subsequent examination. Children with palpable undescended testis were treated by conventional open orchidopexy through an inguinal approach. The testis was identified and mobilized, the sac ligated and the testis placed in the subdartos pouch. Children with impalpable testes underwent laparoscopy. Details: open or closed internal ring, status of vas and quality of vessels, presence or absence of testis, size of testis, position, size and feasibility for a single stage or two stage orchidopexy, were recorded. Laparoscopic orchidectomy or laparoscopic clipping and division of the testicular vessels for high intraabdominal testis was done. All patients who underwent orchidopexy were reviewed two and six months after the procedure for the position and size of the testis. The sensitivity and specificity of Ultrasound and MRI were reviewed Vs Laparoscopic findings.

Results:
The mean age at surgery was 1.5 years (1-8 years). The right testis was undescended in 97 children (65%) and the left in 36 (24%). 10 (11%) children presented with bilateral undescended testes. 98 (65%) children underwent primary procedure whereas laparoscopy was required in the remaining 52 (35%) with impalpable testis. Of these, 22 (42%) were canalicular, 29 (56%) abdominal and 1 (2%) was absent. All children recovered well following operation. The mean follow up period was 1 year (1 year ? 4 years). MRI was done in 50 boys (parents of two children did not consent for the study). MRI located 35 testes, 5 (14%) of which was false positive. MRI did not locate 15 testes, 14 (93%) of which were false negative. The overall sensitivity of MRI was 68.18% and specificity was 16.66%. Review of ultrasound (US) was done for the 50 boys with impalpable testes showed that US located 30 testes, 20 (67%) of which were false positive. Of the 20 testes not identified on US, 19 (95%) were false negative. The overall sensitivity of US was 34.4% and specificity was 4.76%.

Conclusion:
Laparoscopy is the gold standard for investigation of impalpable testes. Imaging studies are unnecessary in boys with impalpable testes because they have a limited role and do not alter the surgical approach in these patients.