

INTRODUCTION

The term cryptorchidism indicates a testis which has failed to descend to scrotum and is located at any point along the normal path of descend. It is present in about 4.5% of newborns with higher incidence in preterms (30.3%). This incidence decrease to 1.5% by the first year (*Khatwa and Menoon, 2000*).

The undescended testis may be palpable or non-palpable. The non-palpable testis is either intra-abdominal; canalicular or absent. Palpable undescended testis may be superficial inguinal; emergent and higher mid scrotal (*Whitaker, 1992*).

The most important long-term complications of undescended testis include torsion; atrophy of testis and malignancy. Infertility is seen in about 40% of unilateral; 70% of bilateral cryptorchidism. Undescended testis is 20 to 40 times more likely to undergo malignant transformation than normal testis (*Khatwa and Menon, 2000*).

Investigations of undescended testis include sonography, computerized tomography, laparoscopy, magnetic resonance imaging, retrograde venography and selective arteriography (*Scott, 1982*).

Early diagnosis and treatment of undescended testis are needed to preserve fertility and improve early detection of testicular malignancy. Therapy of an undescended testicle should begin between six-months and two years of age and may consist of hormonal (human chronic

gonadotrophin, gonadotrophin releasing hormone) or surgical treatment (*Docimo et al., 2000*).

Laparoscopy seems to offer a safe and reliable diagnostic and therapeutic option to patients with non-palpable testes. Intra-abdominal dissection allows more testes to be brought down to scrotum. The procedure is best viewed as laparoscopy assisted (*Baker et al., 1998*).

A new laparoscopic classification to facilitate decision-making during laparoscopy, according to the position of non-palpable testis and relation of spermatic vessels and vas deference to internal ring, type I no testis visualized, type II a testis is seen at internal ring with the vas and vessels looping to internal ring, type III testis at internal ring with vas and vessels going to testis directly, type IV intra-abdominal testis not related to internal ring (*Hay et al., 1999*).

General technique of laparoscopy :

General anesthesia with muscle relaxation is used to provide optimal insufflation of abdominal space.

Before using veress needle, it is essential to drain both bladder and stomach.

Make an infra or supra umbilical incision about 1cm in length through it veress needle is inserted in the abdomen.

Insufflation of peritoneal cavity with carbon dioxide to pressure 15-20mmHg. The veress needle is then removed and 5mm trocar inserted through the same incision (*Bogaert et al., 1993*).

Once a pneumoperitoneum is established, the bowel, liver and great vessels are visualized to rule out injury during initial instrument placement. Both inguinal regions are inspected for patency of internal ring (patient processes vaginlis) and the presence of spermatic vessels and vas in relation to the ring. If vessels and vas entered internal ring together but no testis was visualized, gentle pressure was applied to the skin above ipsilateral inguinal canal, which may demonstrate the presence of an intracanalicular (peeping) testis. If a normal appearing intracanalicular testis is easily expressed into peritoneal cavity or the testis was intra-abdominally, laparoscopic orchiopexy is performed (*Poppas et al., 1996*).

Algorithm for management of undescended testis (*Poenaru et al., 1993*).

