

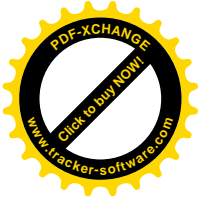
Introduction

Approximately 400 years ago, a French surgeon named *Ambroise Pare* recognized that inguinal hernia in children was probably congenital in nature and they could be cured. Today; inguinal hernia is one of the most common pediatric operations performed (*Shalaby, et al., 2005*).

The incidence of inguinal hernia in children is around 1-5% and increase up to 7-30% in premature infants. The inguinal hernia is liable to many complications; especially incarceration which carries the incidence of 7-17% jumping to 60% in premature babies with inguinal hernias. So; there's no place for conservative management with overt inguinal hernia (*Dariusz, et al; 2006*).

The processus vaginalis is an outpouching of peritoneum attached to the testicle that trails behind as it descends retroperitoneally into the scrotum. The gubernaculum, also extends from the caudal pole of the testis to the scrotal floor. The descent of the testes through the inguinal canal is thought to be regulated by both androgenic hormones produced by the fetal testis and mechanical factors resulting from increased abdominal pressure (*Brandt; 2008*).

Before birth, the layers of the processus vaginalis normally fuse, closing off the entrance into the inguinal canal from the abdominal cavity. In some individuals, the processus vaginalis remains patent. Some studies indicate that calcitonin gene-related peptide (CGRP), released from the



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genitofemoral nerve, may have a role in the fusion. Failure of luminal obliteration; so, a ready-made sac is present (a *preformed sac*) can result in:

- An inguinal hernia or,
 - Hydrocele (communicating or non-communicating)
- (*Othersen; 1993*).

The conventional approach in treating pediatric inguinal hernia is herniotomy after high ligation of the hernial sac. This approach has proven its efficacy, minimal damage, low recurrence rate and acceptable scar. While trying to decrease surgical morbidity, and to improve cosmetic appearance without impairment of therapeutic efficacy, the effort was directed toward utilization of the available recent technology and instruments for achievement of what's called "Minimal Access Surgery ". In the field of pediatric inguinal hernia, many trials were done to narrow the internal inguinal ring through this way of minimal access surgery by Laparoscopic Needle Assisted Techniques (*Shalaby, et al; 2005*).

Among the different techniques for laparoscopic needle assisted internal ring narrowing, one technique was chosen to be studied in comparison with the conventional open inguinal approach. This selected laparoscopic needle assisted technique is:

- Laparoscopic assisted PCT closure of internal inguinal ring using ordinary needle holder.