The major impact of minimal invasive surgery onto modern surgery had been that surgeons are now thinking in terms of invasiveness. As a result open surgery has evolved as well and there is a tendency to avoid large incisions.

The smaller the exposure, the less stress response and the more difficult to prove that the endoscopic surgical variant is superior.\(^{(1)}\)

It leaves no doubt that minimal invasive surgery in its broad sense is going to develop further. Pediatric surgeons should be able to provide their patients with the best available treatment options, including the endoscopic surgical approach.

Since its first application in pediatric surgery in 1971\(^{(2)}\), laparoscopic surgery has become increasingly popular to the point of becoming the treatment of choice in many disease entities. The range of diseases for which children can receive laparoscopic surgery is also becoming more diverse.

**MIS in pediatric HBP surgery**

Jones et al.\(^{(3)}\) performed the web based world-wide survey for delineate the current status of MIS in pediatric surgery in 2008. The survey was mailed out to 390 pediatric surgeons whose e-mail addresses were available and the response rate was 38.2%.

The summary of the current status as detailed in Table 1.

In pediatric HBP surgery, several diseases can be performed in selected cases.

According to the world wide survey, the pediatric surgeons recommend laparoscopic cholecystectomy in 99%, laparoscopic Choledochal cyst excision in 28%, laparoscopic kasai procedure for Biliary atresia in 17%, laparoscopic liver resection for Liver tumor in 16%.
Laparoscopic liver surgery

Minimal invasive liver resection has not gained wide popularity because of the fear for intraoperative complications such as bleeding and gas embolism. However, improvements in laparoscopic technology and increased experience now authorize laparoscopic liver resection in selected pediatric patients. Anterior and left lateral resections (segment 2-6), including left lateral lobectomy are selected indications for laparoscopic pediatric liver surgery.
Laparoscopic kasai portoenterostomy for biliary atresia

Since the laparoscopic kasai portoenterostomy was first introduced by Esteves et al(4) in 2002, many reports have been published showing the advantages of the minimally invasive surgery for BA(5,6). The well illuminated and magnified vision, a good visualization of the portal structures can be obtained. Postoperative pain, breathing difficulty, and adhesion can be avoided after laparoscopic operation(7). In experienced hands, laparoscopic kasai portoenterotomy is effective in achieving good bile drainage although more patient data with longer follow up are required to see if this is comparable if not superior to conventional open surgery.

Laparoscopic excision of choledochal cyst

Laparoscopic treatment is feasible in the treatment of choledochal cysts. Ever since Farello’s publication(8) on Laparoscopic choledochal cyst excision, the procedure has gained great popularity around the world and become an effective alternative treatment to its open counterpart. Not only is Laparoscopic choledochal cyst excision safe and effective, but it also has several advantages over its open counterpart including excellent visualization, shorter recovery time, prevention of adhesion, less pain and obviation of long subcostal incisions(9,10)

References


