

Incidental appendectomy by inversion in children: A safe procedure

JG MOGILNER, A PRESMAN, L SIPLOVICH

Pediatric Surgery Department, Central Emek Hospital, Afula, Israel

Summary

Between 1983 and 1987 a total of ninety seven incidental appendectomies were performed at the Pediatric Surgical Department of the Central Emek Hospital, at the time of other abdominal procedures.

One case developed wound infection. No other complication was observed. As there is a high fre-

quency rate of acute appendicitis under the age of 20 years, and minimal complications were observed, we recommend appendectomy by inversion as an effective and safe method.

Key words: Incidental apendectomy, inversion technique

Anahtar kelimeler: Apendektomi, inversiyon yöntemi

Technique

After the main surgical procedure has been performed and the abdomen has been explored, we proceed with the appendectomy by inversion. The appendix itself is removed by this method only if it is normal, and the bowel was not opened during the main procedure. The mesoappendiceal vessels are divided, as usual, and the serosal appendix is skeletonized closely, taking special care to avoid any damage to the seromuscular layer (Fig. 1). Then the appendix is gently intussuscepted into the cecum by a metal probe, until 3-5 mm of the appendix base (Fig. 2). The probe is then backed out and 3/0 vycril tied to the appendix stump (Fig. 3). The appendiceal base is buried with a 3/0 vycril stitch. The appendix sloughs in about ten days this may be noted in the stools.

Discussion

The benefit of removing incidentally the appendix in children has been reported previously (1,5,8). They indicate that under 25 years of age, the risk of having appendicitis is about 20 %.

Patients with malignancies, receiving chemother-



Fig. 1. The appendix is skeletonized.

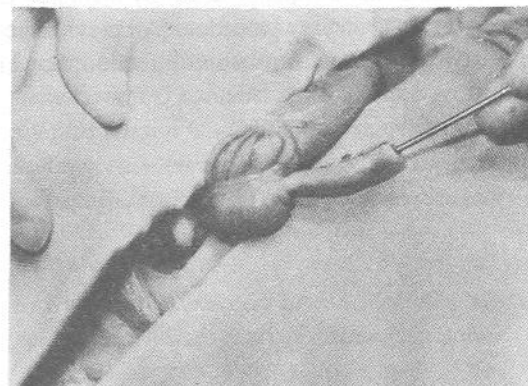


Fig. 2. Inverted with a probe.

apy and radiotherapy may develop abdominal pain and vomiting, therefore, appendectomy (by inversion) performed in the past, may lessen or prevent the appearance of these symptoms. Silvert's review (9) showed no concomitant pathology with the loss of the appendix.

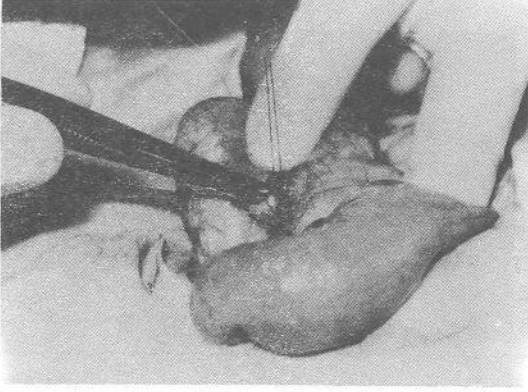


Fig. 3. The appendix stump is ligated and buried by a purse-string stitch.

Appendectomy by inversion was described and recommended by Lily and Randolph⁽⁷⁾ in their 108 cases. No complications were reported. Contraindication for this method include appendix inflammation, fibrosis, fecolitis and neoplasia. In our experience, this method has been used in association with laparatomies for bowel rotation and atresias, diaphragmatic hernias, omental cyst, bowel duplication, trauma, splenectomies, hiatal hernia, gastroesophageal reflux, mesenteric lymphadenitis and malignancies.

Incidental appendectomies with appendix amputation reported an incidence rate of wound infection of between 5% to 10%. An increased index of infection appears to be related to procedures such as cholecystectomy⁽⁶⁾, gynecology and obstetrics⁽²⁾. On the other hand appendectomy by inversion is safe, clean and an easy procedure. All previous reports^(3,4,7) showed no wound infection, bowel

adhesions or other complications if this technique is carefully performed.

Conclusions

We present 97 cases of incidental appendectomy by inversion, performed during other surgical bowel procedures. As an easy technique is involved, the surgical procedure can be considered "clean" with excellent results. Therefore this method can be recommended as being effective and safe.

References

1. Ashley DJB: Observations on the epidemiology of appendicitis. *Gut* 8:533, 1967.
2. Beath DH, Holmes DE, et al: Incidental appendectomy in obstetrics and gynecology. *Obstet Gynecol* 12:727-, 1958.
3. Bishop HC, Filston HC: An inversion - ligation technique for incidental appendectomy. *J Ped Surg* 8:889, 1973.
4. Garcia VF, Bloom DA: Inversion appendectomy. *Urology* 28:142, 1986.
5. Hewitt D, Milner J, Le Riche WH: Incidental appendectomy: A statistical appraisal. *Can Med Assoc J* 100:1075, 1969.
6. Kormorm H, Kaufman LW: Incidental appendectomy during gallbladder surgery. *Bull Sinai Hosp Detroit* 11:103, 1968.
7. Lilly JR and Randolph JG: Total inversion of the appendix: Experience with incidental appendectomy in children, *J Ped Surg* 3:357, 1968.
8. Ludbrook J, Spears GFS: The risk of developing appendicitis. *Br J Surg* 52:856, 1965.
9. Silvert MH, Meares EM: Rationale of incidental appendectomy. *Urology* 7:129, 1976.