



## Routine use of Abdominal Drainage after Laparoscopic Appendectomy: Yes or No?

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### Mini Review

Acute appendicitis is a common cause of abdominal pain and is one of the most common surgical abdominal emergencies. Surgical treatment of acute appendicitis has undergone a paradigm shift from open appendectomy to laparoscopic appendectomy, both in adults and in pediatric patients [1]. In open appendectomy, a skin incision in the right inferior abdominal quadrant over McBurney point was performed and the appendix was removed through a relatively small wound. An abdominal drain was rarely used. In laparoscopic appendectomy, we perform three small skin incisions and insert three trocars into the abdominal cavity. The abdominal drains are used more frequently than in open appendectomy, since certain studies suggested increased intra-abdominal abscess rates following laparoscopic appendectomy, especially for perforated appendicitis [2].

The routine use of abdominal drain after laparoscopic appendectomy is still under debate. None of the prospective randomized clinical trials has shown the benefits of routine drainage of the abdominal cavity after laparoscopic appendectomy for uncomplicated acute appendicitis. Even in complicated acute appendicitis, the placement of intra-abdominal drain may not present benefits and may even lengthen hospital stay. Observations from some authors suggest that there is no need of using a drain in laparoscopic appendectomy for complicated acute appendicitis [3]. However, according to some other authors, the use of intra-abdominal drainage in patients with perforated or gangrenous appendicitis during laparoscopic appendectomy has decreased rates of pelvic abscess [4].

Routine prophylactic abdominal drains after laparoscopic appendectomy for perforated appendicitis in children are still controversial. Throughout the history of surgery, potential benefits of the abdominal drains have been described. However, in recent studies, no benefits were observed and serious complications have been reported. The prophylactic use of abdominal drainage after laparoscopic appendectomy for perforated appendicitis in children does not prevent postoperative complications and may be associated with negative outcomes. Further prospective randomized studies will be necessary to verify this question [5].

According to WSES Jerusalem guidelines from year 2016, drains are not recommended in complicated appendicitis in pediatric patients. In adults, drain after appendectomy for perforated appendicitis and abscess/peritonitis should be used with judicious caution, given the absence of good evidence from the literature. Drains did not prove any efficacy in preventing intra-abdominal abscess and seem to be associated with delayed hospital discharge [1].

### References

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