

Burying the appendiceal stump during appendicectomy: state of art

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Appendicectomy is the most common surgical procedure performed by both pediatric and general surgeons. First open appendectomy for appendicitis was reported by McBurney in 1894 and it has remained the gold standard treatment over many years (1). Currently, surgical management for appendicitis can be safely performed with open or minimally invasive approaches. Particularly, first minimally invasive appendicectomy was reported in an adult patient by Semm in 1983 (2).

Burying the appendiceal stump during appendicectomy has been considered in the past a key point of the open procedure, in order to protect the abdominal cavity and surgical wound from a possible contamination. Moreover, this operative step is described but not usually performed during laparoscopic appendicectomy in both adult and pediatric patients (3,4) and, only 1 year after first minimally invasive appendicectomy, authors began to wonder whether burying the appendiceal stump was useful or not (5,6). Notably, a clinical prospective randomized trial conducted by Engström and Fenyö on a population of 735 patients, ranged from 14 to 91 years old, demonstrated no significant difference in post-operative complications and postulated simple ligation as standard procedure during appendicectomy (6). In 2013, Gravante *et al.* carried out an interesting meta-analysis on randomized controlled trials comparing simple ligation versus stump invagination during open appendicectomy, concluding that burying the appendiceal stump does not seem to prevent infective complications but it is furthermore associated with an increased risk of post-operative ileus and fecal fistula in uncomplicated appendicitis (7). Even if they highlighted the absence of evidence on higher-risk groups, in 2012 Markar *et al.* already found that laparoscopic approach for appendicectomy reduced overall morbidity in children (8)

and recently two meta-analyses of systematic review of the literature established that laparoscopic appendicectomy is feasible and safe for management of complicated appendicitis in both adult and adolescent populations (9,10).

In conclusion, burying the appendiceal stump during open appendicectomy continues to be still widely performed, even if evidences report several cases of complications correlated with this surgical step. However, based on the published studies discussed previously and giving the lack of scientific evidence regarding the utility of appendiceal stump invagination in cases of complicated appendicitis, we believe that burying the appendiceal stump during open appendicectomy is a surgical step that could be definitively avoided by general and pediatric surgeons, with no increase of post-operative complications but certainly facilitating and shortening the entire procedure.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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