Duplication of vermiform appendix

Kothari AA, Yagnik KR, Hathila VP

A 9 year old girl presented for transverse loop colostomy closure. She had an imperforated anus, for which an anal pull-through procedure was carried out at the age of four years. On examination, a transverse loop colostomy was present on the right upper abdomen, which was prolapsing through the stoma. The colostomy was functioning normally. Per-rectal examination revealed normal tone of anal sphincters and she was able to retain the saline infused per rectally. A distal loopogram was carried out, which showed a patent distal loop with a narrowing in the region of descending colon, possibly due to disuse. Hence, exploration was planned by a midline vertical incision.

On abdominal exploration performed after colostomy closure, two appendices were found to be present, each one having its own mesoappendix and each one opening separately in two individual caeca. Both appendices and caeca were found to be normal. One of the appendices was pre-ileal (5 cm long) and the other was pelvic (7 cm long). The pelvic appendix opened into a duplicated caecum, which had no opening of the ileum on to it. The duplicated caecum was placed inferomedially to the original caecum, just below the terminal end of the ileum. Each appendix had its own blood supply, derived from appendicular arteries, both of which were given off by the ileocolic artery. Appendicectomy was performed in the usual manner. Both the appendices were found to be normal. The postoperative period was uneventful and she recovered well on regular follow-up. Histopathological examination did not reveal any signs of inflammation.

Discussion

Duplication of vermiform appendix is reported with an incidence of 0.004%\(^1\) and may be associated with other congenital duplications or other anomalies.\(^2\) The presence of double appendix with imperforate anus in our patient confirms this. Appendicectomy is usually left for junior surgical residents to perform. Though rare, a greater awareness of this entity among junior surgical residents is essential. Failure to recognize this condition may have serious clinical and medico-legal consequences.\(^3\) Double appendix are usually asymptomatic, the majority of them are diagnosed at surgery or on postmortem examination, some of them can be picked up preoperatively on barium enema. Symptoms are usually the result of obstruction and inflammation. The clinical presentation can vary according to the location of the appendices.

Cave and Wall Bridge\(^4\) have classified the duplication of appendix into three types viz: A: Partial duplication of the appendix on a single caecum; B: Single caecum with two completely separate appendices; B:\(_1\): “Bird-like appendix” called so because of its resemblance to the normal arrangement in birds, where there are two appendices symmetrically placed on either side of the ileo-caecal valve; B:\(_2\): One appendix arises from the usual site on the caecum, with another rudimentary appendix arising from the caecum along the line of one the taenia coli; and C: Two caeca, each bear an appendix. The present case represents Type C of appendicular duplication.

In patients with appendicular duplication, when only one of them is found to be inflamed on exploration or laparoscopy, both of them should be removed so as to avoid diagnostic confusion that may arise on removal of single appendix. However, non-inflamed duplication detected when exploration or
laparoscopy is performed for some other condition need not be subjected to appendicectomy.^

References

Subscription Form

To
The Editor,
Journal of Postgraduate Medicine

Sir,
Kindly enter my subscription to “Journal of Postgraduate Medicine”. The details are as follows:

Name of the subscriber
Current institutional attachment
Designation
Delivery address
City Pin code
State Country
Phone no. (with STD/ISD code)
Fax no. (with STD/ISD code)
E-mail address

Subscription details
Subscription period One year / Three years / Fifteen years
Subscription type Individual / Institutional AND Print only / Print + yearly CD
Subscription starting from (month/year)

Payment details
Cheque No Dated
Amount Drawn on

Signature of the subscriber Date:

* Kothari et al: Duplication of appendix