Concomitant finding of sessile serrated adenoma in a diverticulous appendix

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Background

- Diverticular disease of the colon is one of the most common causes for hospital admissions in the US.
- Diverticular disease found in the appendix is exceedingly rare,and accounts for less than 1% of all appendectomy specimen findings. Even more rare is the pathologic finding of an appendiceal sessile serrated adenoma.
- There is scarce reported evidence of the concomitant finding of a diverticular appendix with presence of a sessile serrated adenoma
- This finding is of considerable significance given the tangible risk for the development of invasive adenocarcinoma if never discovered.
- On surgical exploration, the finding of a diverticular appendix should prompt the performance of an appendectomy due to the known association with appendiceal neoplasms.

Case Description

This is a case of a 72 yo male with a prior history significant for medically managed COPD, BPH, and diverticulosis, last normal colonoscopy 5 years prior. His abdominal surgical history included a laparoscopic cholecystectomy. Patient presented hemodynamically stable to our Emergency Department with bilateral lower quadrant pain present for 1 month and acutely worsening for the past 5 days. He was tender but non peritoneal on exam. An orally contrasted CT scan of the abdomen and pelvis revealed perforated sigmoid diverticulitis with a large pelvic abscess abutting the tip of the appendix. Patient was refractory trial of conservative management with intravenousbroad spectrum antibiotics and resuscitative fluids. Without a feasible window for interventional radiology drainage, patient underwent a Hartmann's Procedure. At the time of surgical exploration, a diverticular, inflamed appendix was identified, and an appendectomy performed. The specimen was sent for pathologic evaluation. His surgical pathology revealed an appendiceal sessile serrated adenomatous polyp. Patient recovered postoperatively as expected. He then underwent surveillance colonoscopy 6 weeks with no suspicious findings.

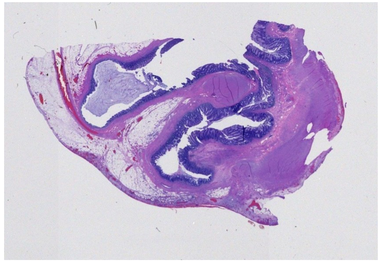


Figure 1 Appendiceal diverticulum. The diverticulum is characterized by herniation of appendiceal mucosa into periappendiceal adipose tissue (H&E stained section, 1× magnification).

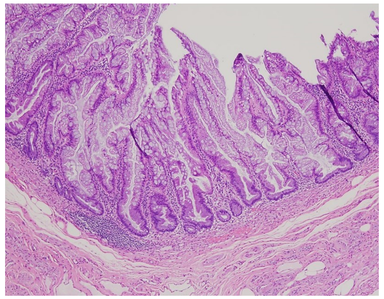


Figure 2 Sessile serrated polyp/ adenoma (SSP/A) of the appendix. The crypt epithelium displays a serrated appearance with abundant mucin production. The base of the crypts extend to the muscularis mucosa and show abnormal architecture, with crypt dilation and lateral branching (H&E stained section, 20× magnification).



Figure 3 Diverticular appendix surgical specimen [Khan et al.]

Discussion

Diverticulosis is one of the most common gastrointestinal conditions and one of the most common causes for surgical admissions [1]. Right-sided diverticular disease is uncommon and reported to occur in 1-2% of surgical specimens in European and American series [2]. Right-sided diverticula are a wide known entity, despite this, appendiceal diverticula remain a widely unrecognized finding, only found in 0.004–2.1% of all appendectomies, and 0.2–0.66% of autopsy specimens [3]. Appendiceal diverticulitis tends to present on males > 30 years old with a more insidious onset of RLQ pain without the typical migration from the periumbilical region [4]. Presence of an appendiceal diverticula is thought to be associated with a 7% risk for concurrent presence of colonic and appendiceal neoplasms [5-6]. In the case of our patient, histopathologic review of his appendix revealed the presence of appendiceal diverticulosis and a sessile serrated lesion. Upon through review of the literature, only one report has been documented highlighting the concomitant finding of appendiceal diverticulosis associated with a sessile serrated lesion

Conclusions

- The presence of right lower quadrant pain in a male older than 30 years old should prompt the question of the possibility of right sided or appendiceal diverticulitis
- Furthermore, on surgical exploration, for any cause, the finding of appendiceal diverticula should be explored with histopathologic examination given the known association with appendiceal neoplasms, which could include sessile serrated lesions, and therein, the risk for malignant conversion to invasive adenocarcinoma.
- This finding should also prompt a thorough colonoscopic evaluation when clinically feasible

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