Case Report

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Appendicovesical Fistula Associated with Neuroma of the Appendix

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Key Words

Appendicovesical fistula
Neuroma of the appendix
Recurrent urinary infections
Pneumaturia

Abstract

A new case of appendicovesical fistula is reported. Usually a known cause is ulcerative colitis, morbus Crohn, malignancy of the appendix or as complication to perforated appendicitis, but in the described case there was no history of such previous illness. The only pathological finding was the presence of an abundant amount of nervous tissue in the appendix. It is concluded that a history of pneumaturia and/or recurrent urinary-tract infections must rise the suspicion of the presence of a fistula between the small or large intestine and the bladder.

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Introduction

Fistulae between the small and large intestine and the bladder are well known as complications to diverticulitis of the sigmoid colon, carcinoma of the large intestine, morbus Crohn and ulcerative colitis. Appendicovesical fistulae are rare, presenting only few symptoms and may be overlooked for years. In the case reported here, the only pathological finding in the resected appendix was the occurrence of abundant nervous tissue, described as the presence of a benign neuroma.

the sigmoid colon and a presumed fistula between the sigmoid colon and the bladder.

At laparotomy a fistula was found between the apex of appendix and the bladder. The distal part of the appendix was butted, but there were no signs of previous inflammation. Appendectomy was performed, the fistula excised and the bladder was closed with 2-layer closure. The postoperative course was complicated with wound infection.

Histologic examination of the appendix showed no signs of acute or chronic inflammation or malignancy, but an abundant amount of nervous tissue, e.g. a benign neuroma.

By reviewing the X-ray pictures from the barium enema a thin fistula from the apex of the appendix could now be seen (fig. 1, 2).

Case Report

A 54-year-old male presented with a 3-year history of recurrent urinary-tract infections and during 1.5 years episodes of pneumaturia. Before admission he was treated with several antibiotics only with temporary effect. There had never been symptoms of acute appendicitis, trauma or episodes of diarrhea, bloody stools or loss of weight leading to the misdiagnosis of an

inflammatory bowel disease or malignancy. At the local hospital an intravenous pyelography had shown normal conditions.

At admission the patient was in good health. Laboratory tests were normal apart from pyuria and growth of *Escherichia coli* and *Proteus mirabilis* in urinary samples. Cystoscopy was performed revealing a small diverticulum of the bladder, but no signs of fistulae. Cystography was normal. Barium enema showed diverticula of

Conclusion

Several cases of vesicointestinal fistulae are described in the literature, often as complications to diverticulitis of the sigmoid colon, morbus Crohn, ulcerative colitis and carcinoma of the small and large intestine [5, 6], but it is very rare for the primary condition to be in the bladder. Much less common are fistulae involving the appendix [2, 8].

While fistulae between the large intestine and the bladder often give symptoms as pneumaturia and fecal-uria [2], the only constant findings in appendicovesical

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Fig. 1. X-ray from barium enema showing thin fistula from the appendix.

Fig. 2. X-ray from barium enema showing fistula from the apex of the appendix.

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- fistulae are chronic bacteriuria and recurrent urinary infections [3]. The appendicovesical fistulae represent 5 % of all intestinovesical fistulae and mainly occur in patients between 10 and 40 years of age [2]. The etiology is often believed to be sequelae of appendicitis although 2 there are seldom any associated gastrointestinal symptoms [7]. Cases with carcinoma of the appendix were 3 described [1
- 3]. No benign tumor has ever
- to our knowledge
- been reported before as a possible reason to formation of an appendicovesical fistula as in our case. The 5 diagnosis can be provided by cystoscopy in 40% of the cases
- and by barium enemas in 50% [4]. Cystography 6 and intravenous pyelography give no
- additional contribution to the diagnosis [8]
- but the use of computed 7 tomography suggests that this is the most accurate diagnostic tool
- available for demonstrating enterovesical fis- 8 tulae [8]. Missing the diagnosis can be serious
- just as the condition can lead to hypokalemic
- hypochloremic
- metabolic acidosis and uremia [6]; as well
- persistent enterovesical fistulae are often associated with high mortality from septicemia [5].
- Earlier cases have been diagnosed after the symptoms had existed For years and awareness of the possibility of an enteric origin of chronic bacteriuria should prevent long delays in diagnosis.