

Case report

Severe rectal inflammation followed by stenosis induced by long-term abuse of analgesic suppositories containing paracetamol, caffeine, and codeine

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SUMMARY

We describe the case of a 59-year-old female who developed severe rectal inflammation and stenosis after long-term abuse of suppositories containing paracetamol, caffeine, and codeine. After extensive evaluation in order to exclude all other possible causes, she admitted to the abuse of the suppositories. She was unsuccessfully treated with frequent endoscopic balloon dilations. Because of severe constipation, she required a protective colostomy, with resection of stenosis. The colostomy could be closed after the healing of rectal inflammation, six months later. To our knowledge, this is the second described case of severe rectal inflammation and stenosis due to prolonged abuse of suppositories containing paracetamol, caffeine, and codeine.

Key words: Rectal Inflammation, Stenosis, Analgesic Suppositories

INTRODUCTION

Many conditions induce focal or diffuse inflammatory changes in rectal mucosa. Besides the well-known idiopathic inflammatory colitis (Ulcerative colitis and Crohn's

disease), attention has been paid to colitis of infectious, ischemic and traumatic etiology. Prolonged use of non-steroidal anti-inflammatory drugs (NSAIDs) and analgesic drugs in the form of suppositories has been related to the development of ano-rectal lesions.^{1,2}

We describe a 59-year-old woman who developed severe rectal inflammation with resultant stenosis, after prolonged abuse of suppositories containing paracetamol, caffeine and codeine.

Case history

A 59-year-old woman presented to our outpatient clinic five years ago, complaining of lower abdominal discomfort with blood and mucus admixture in the stools. Her past medical history revealed hypertension, gastroesophageal reflux, depression and persistent headache. She was on ranitidine, propranolol and suppositories containing paracetamol, caffeine and codeine. In an effort to relieve herself from her persistent headaches, she increased the dose of suppositories from the prescribed thrice per day, to 6-8 per day. After one year of suppository abuse, she started to have defecations with blood and mucus admixture and lower abdominal discomfort. Laboratory data revealed: hematocrit 35.6%, hemoglobin 12.3%, serum iron 32µg/dl, total iron binding capacity 395µg/dl, and serum ferritin 97ng/dl. Serology for syphilis or gonococcal infection, a tuberculin skin and the titer of antibodies against chlamydia were negative. A total colonoscopy revealed exudation and a diffuse inflammatory pattern of the rectum, extending from 2 to 8 cm above the dentate line and covering the whole circumference (Figure 1). Biopsies taken from the lesion showed non-specific inflammation of the rectal mucosa. Crohn's dis-

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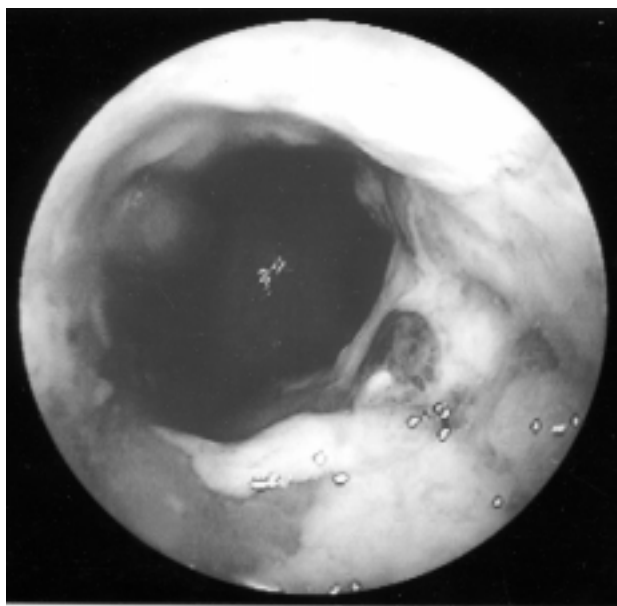


Figure 1. The rectal mucosa is erythematous, edematous, friable and covered with whitish exudates.

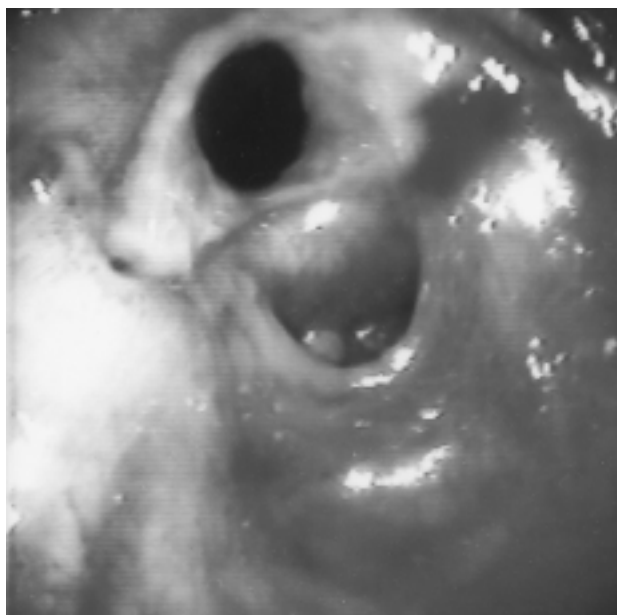


Figure 2. Endoscopic view showing severe stenosis of the distal rectum.

ease and ulcerative colitis were excluded.

After excluding all other possible causes, it was then considered that the rectal inflammation was most likely the result of analgesic suppositories abuse. This was explained to the patient and she was advised to discontinue the suppositories.

The patient failed to attend follow-up for the next five years and then presented six months later complaining of constipation. During endoscopic examination, moderate rectal inflammation was observed and the development of severe stenosis of the rectum at its proximal margin was noted. After persistent questioning, the patient admitted to continuing the excessive use of suppositories during the last five years because of her intractable headaches.

Regular pneumatic dilation sessions using a balloon (Rigiflex ABD achalasia balloon dilator Microvasive, Boston Scientific Corporation, Boston, Massachusetts, USA) of 3 cm diameter at 10 PSI were started, initially twice and later once a week. The dilations were unsuccessful and it was decided to refer the patient for surgery. A double-barreled sigmoid colostomy with resection of stenosis was performed. The patient was relieved from constipation after the procedure and discontinued the analgesics. Regular endoscopic examinations showed slow but continuous healing, leading eventually to the complete disappearance of the inflammation. Six months after the operation, the colostomy was closed. The patient is now free of constipation; she has normal bowel habits and is off analgesic suppositories.

DISCUSSION

Whereas indomethacin, diclofenac and acetylsalicylic acid are known to cause damage to mucus membranes and other epithelia and to have incomplete rectal absorption, paracetamol is promptly absorbed from the gastrointestinal tract and is not known to irritate mucus membranes.¹⁻³ The combination of acetylsalicylic acid and paracetamol has been described as the cause of rectal lesions in nine cases.^{3,4} Three patients had uncomplicated rectal ulcers that healed completely. Six patients had distal rectal stenosis. Five were initially treated with dilations and three of them later required surgery (endorectal resection, anterior resection of the rectum, and transient protective colostomy without resection of the stenosis). One patient with a very rigid stenosis had surgical resection without prior dilation. There is one case report⁵ of occlusion of the distal rectum by scar tissue following the use of suppositories containing acetylsalicylic acid, paracetamol and codeine for 3 years. The lesion was treated as a surgical emergency. There are also several French case reports^{4,8} of rectal lesions induced by suppositories containing d-propoxyphene and paracetamol. Two of the described patients had severe stenosis of the distal rectum. One was treated with dilations; the other required abdominoperitoneal resection of the rec-

tum. A third patient started the use of suppositories after painful surgery for hemorrhoids. She became dependant of the suppositories and required major surgery for their complications three times. Eventually she continued the abuse via the vagina. Two more patients developed anterior rectal ulcers during the use of suppositories after the galenic preparation had been changed as a consequence of the earlier reports of rectal lesions. Both patients healed completely.

Our patient is the second one reported who presented severe rectal inflammation and stenosis induced by analgesic suppositories containing paracetamol, caffeine and codeine. The first case was reported by Nauman et al.⁹ They described a 53-year-old woman who developed an ulcer of the distal rectum with mild stenosis after prolonged use of suppositories containing paracetamol, caffeine and codeine. After undergoing extensive diagnostic testing that excluded other possible causes, she admitted to the abuse of suppositories. She was treated with frequent endoscopic balloon dilations to prevent progression of the rectal stenosis. Because of severe pain on defecation, she required a protective colostomy, which was closed after the ulcer healed, 7 months later. There was no residual stenosis.

Which ingredient of the suppositories is the likely cause of the development of rectal lesions in our patient? Paracetamol is a drug with comparatively weak antipyretic and analgesic action and its main mechanism of action is still unknown.¹⁰ Caffeine induces cerebral vasoconstriction and reduces vascular resistance in the peripheral circulation. It is also well absorbed from the rectum and is not reported to be an irritant of mucus membranes.¹⁰

According to their pharmacological properties, paracetamol and caffeine were excluded as possible causes of the rectal lesions in our patient. Therefore, we believe that codeine was the agent responsible for the development of our patients rectal lesions, despite the fact that this is not easily explained by its mechanism of analgesic action.

We conclude that it is important to warn patients that the excessive use of such suppositories may lead to the development of rectal lesions.

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