

FOURNIER'S GANGRENE FOLLOWING PHOSPHATE ENEMA: CASE REPORT

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ÖZET

Genital ve perineal bölgenin necrotizan gangreni ilerleyici ve bazen hayatı tehdit edici bir durumdur. Bu enfeksiyon genellikle polimikrobiyaldır, sebebi bilinmeyebilir veya lokal travma veya cerrahiye sekonder olarak oluşabilir. Biz burada fosfat enema uygulaması sonrası gelişen Fournier gangrenli olguyu sunuyoruz.

ANAHTAR KELİMELER: Fournier gangrene; enema; fosfat

SUMMARY

Necrotizing gangrene of the genitalia and perineum is a progressive and sometimes life threatening condition. This infection is usually polymicrobial and may be idiopathic or secondary to local trauma or surgery. We present here a case of Fournier's gangrene that developed following phosphate enema application.

KEY WORDS: Fournier's gangrene; enema; phosphate

INTRODUCTION

Fournier's gangrene is a synergistic infection of the genitalia and perineum caused by a mixture of aerobic and anaerobic organisms (1-3). It may be idiopathic or secondary to local trauma or surgery. Also Fournier's gangrene is more common in immunocompromised hosts, and patients with diabetes mellitus, cancer, vascular disease, or neutropenia, as well as in human immunodeficiency virus (HIV)-positive patients, alcoholics, and transplant recipients (1-5). We described here a patient who developed Fournier's gangrene after administration of phosphate enema.

CASE REPORT

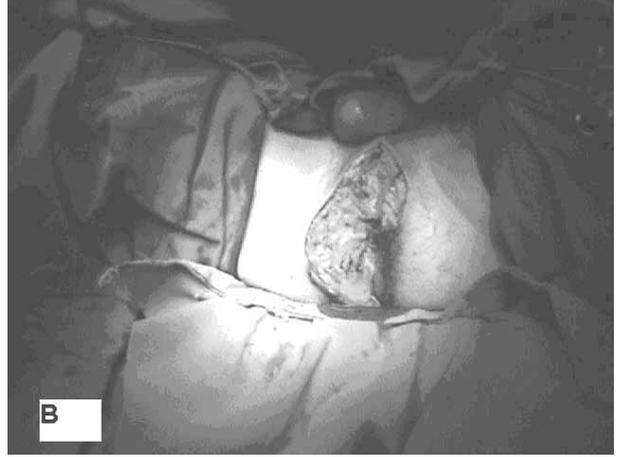
A 61 year-old man who had been under follow up in Physical Medicine & Rehabilitation department because of rheumatoid arthritis was consulted to general surgery because of the anal pain. It's learned that fleet enema was given rectally 24 hours ago in the physical treatment and rehabilitation unit of our hospital. The medical history of the patient included stroke, hypertension, and diabetes mellitus controlled by oral anti-diabetics. Vital signs on admission were as follows: Blood pressure: 130/60 mmHg, respiration: 20 breaths/min, rectal temperature: 37.8°C, and pulse: 110 beats/min. His white blood cell count was 18X10³/mL, with 7.9% eosinophils. His liver function tests and urinalysis test were normal. His fasting blood sugar level was 205 mg/dL. Physical examination revealed gangrene of perianal skin and anal mucosa (Figure 1). The tissue was warm, swollen, and non-tender during palpation. Crepitation was appreciated on examination. We debrided

extensive necrotic tissues from the perianal skin, perineum and anal mucosa below dentate line and carried out diverting Hartmann colostomy on emergency basis (Figure 2). We prescribed intravenous tazobactam + piperacilline and amikacin. Cultures of the purulent drainage revealed Escherichia coli, Enterococcus species, and Bacteroides species. Twenty five days after the operation, we performed reconstructive surgery using the skin of the perineal area. The patient was discharged home 35 days after surgery without complications. At fifth months the operation, anal incontinence developed, showing low resting and squeezing pressures in anal manometric study. In follow up the patient, it had been observed that persistence the anal incontinence at twenty months after the operation.

DISCUSSION

Fournier's gangrene is defined as an infective necrotizing fasciitis, which affects perianal, perineal and genital regions, leading to thrombosis of subcutaneous vasculature and skin necrosis. There can also be necrosis in fascial layer as well as in subcutaneous tissue, even before any clinical evidence such as erythema, crepitation, bullae formation and necrosis (1-5). The entity was first described by Baurienne in 1764 as acute onset of gangrene of the penis and scrotum of healthy young men without precipitating cause. It was named after Jean Alfred Fournier in 1883 (1). The condition is seen in all age groups, with a mean age of 50 years. Conditions that predispose to development of Fournier's gangrene include diabetes mellitus, alcoholism, immune-suppression, indwelling catheters,

Fig. 1A-B Presentation and treatment of Fournier's gangrene: A. Before surgery, considerable edema and perianal necrosis are seen. B. Perineal and anal canal after extensive debridement.



advanced age, prolonged hospitalization, malignancy and anal trauma (3, 4). Colorectal disease is the most common etiology, as confirmed by a new article by Villanueva Sàenz et. al. (2). Recently, Fournier's gangrene has also been reported following after stapled hemorrhoidectomy (6).

Diabetes mellitus appears to be a risk factor for Fournier's gangrene in many series. Poor glucose control correlates with the severity of disease and poor outcome (2-5). Our case also had irregular serum glucose levels, which were controlled by oral anti-diabetic agents.

Rectal necrosis is a complication of injury during the administration of phosphates enema which, although rare, necessitates great awareness. Painless rectal bleeding may be the only sign of injury and is an indication for thorough and repeated rectal examinations and early intervention. Sweeney et al. (7) reported three cases of rectal gangrene after phosphate enema application. The patients were compromised with intercurrent illnesses and all patients had complicated hemorrhoids before the gangrene developed. They believed that rectal gangrene might be

due to a direct necrotizing effect of phosphate to the rectum. Smith et al. (8) described a patient who developed rectal ulceration after apparently minor injury during the administration of a 130 mL phosphate enema. Hypertonic sodium phosphate enemas are available over the counter for home treatment of constipation and for use as bowel preparations before various gastrointestinal procedures. Even though the belief that the phosphate in these preparations is poorly absorbed, significant morbidity and even mortality has been reported related to as consequence of hyperphosphatemia and hypocalcemia after the use of these enemas (9-15). Despite fewer reports regarding the development of rectal gangrene after administration phosphate enema in the literature (7, 8, 16), Fournier's gangrene has not yet been defined in the same condition. Present study reports a case that developed Fournier's gangrene during phosphate enema application. It is fairly difficult to claim whether phosphate enema is direct effect or causes minor injury to rectum account for patients, who developed rectal gangrene after phosphate enema use. As a result, a great care should be exercised to particularly older patients with diabetes mellitus while applying phosphate enema.

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