Gonococcal anovaginal fistula: A new clinical entity for an old disease?

Fistule anovaginale à gonocoque : une nouvelle forme clinique d'une maladie ancienne ?

Ano- and rectovaginal fistulas represent 5% of anorectal fistulas. Their most common causes are obstetrical injuries, Crohn’s disease, traumas (including previous surgeries), cancers and pelvic irradiation, while crypto-glandular infection are rare [1]. Neisseria gonorrhoeae (NG) is the second most common bacterial sexually transmitted infection (STI), after Chlamydia Trachomatis, causing genital, pharyngeal, and anorectal infections [2]. It is a public health concern worldwide, affecting quality of life and causing serious morbidity, and its incidence has been increasing for the last two decades [3,4]. In addition, treatment of gonorrhoea is threatened by the emergence of antibiotic-resistant NG isolates [5,6].

A 41-year-old woman, with no past medical history and no current treatment, was referred to a proctologist by the gynaecologist for a history of painful swelling between the anus and the vulva, which had progressed in the previous month. This was not associated with fever or rectal symptoms such as tenesmus or mucopurulent or bloody anal discharge. She practised anal-receptive intercourse. She did not report a history of sexually transmitted infection.

Clinical examination revealed an anterior rectal induration with a painful nodule in the anovaginal area. She subsequently underwent an examination under general anaesthesia, which revealed a transsphiphincteric anovaginal fistula connecting an internal opening in the anteromedian wall of the anal canal to an inflammatory external opening in the inferior third of the vaginal wall. Histological specimens were collected for analysis, and a draining seton was left in place. Figure 1A shows the drained anovulvar communication with a seton. The examination also showed the presence of mucus in the rectum. Specific searches for both NG and Chlamydia trachomatis (CT) were performed on a rectal swab by nucleic acid amplification testing (NAAT; GeneXpert CT/NG, Cepheid, Maurens-Scopont, France). The results of NAAT tests revealed the presence of NG DNA and remained negative for CT. Cultures on chocolate agar PolyVitEX VCAT3 (bioMérieux, Marcy l’Étoile, France) confirmed this result, yielding numerous NG colonies. The NG strain isolated was sensitive to ceftriaxone (minimum inhibitory concentration < 0.016 mg/L), tetracycline and all fluoroquinolones according to EUCAST breakpoints. Histopathology showed acute and subacute fibroinflammatory rearrangements with no evidence of malignant lesions. HIV serology was negative. In accordance with these results, the patient received ceftriaxone 500 mg in a single intramuscular dose and doxycycline 100 mg orally twice a day for 7 days, resulting in rapid clinical improvement (decreasing pain and vulvar discharge). Clinical examination 6 days after ceftriaxone injection showed a complete regression of inflammation in the vaginal communication and no mucus in the rectum. The seton was then removed, doxycycline was continued for 21 days at all. In the following days, anal and vulvar discharges disappeared and the passage of gases between anus and vagina stopped. At 7 weeks of follow-up, the patient was asymptomatic. The vaginal communication was dried, almost closed and was no longer inflamed (See arrow in figure 1B).

Discussion

NG proctitis is typically encountered in men who have sex with men (MSM; 6–21%) and more rarely in women (0–3%) [7]. The factors more often associated with anorectal STI are young age, multiple sex partners and anal sex [8]. The typical symptoms of anorectal gonorrhoea include mucopurulent discharge with tenesmus, pruritus and constipation, bleeding may be present. Examination with anoscopy can show mucopurulent discharge, mucosal oedema or erythema. This case report is, to our knowledge, the first to describe an anovaginal fistula due to NG in the literature. This presentation was very unusual, the common causes of ano- and rectovaginal fistulas are obstetrical injuries, Crohn’s disease, traumas (including previous surgeries), cancers and pelvic irradiation. Anovaginal fistulas are more rarely caused by cryptoglandular infection. Their management is often complex and requires surgical repair [1].

The clinical course of anorectal gonorrhoea infection seems to have changed. Recently, atypical clinical presentations rarely described since the pre-antibiotic era, such as perianal abscesses [9], perianal fistulas and disseminated gonococcal disease [10], have been reported in the literature. In our centre, we found that 29% of NG proctitis were associated with an anal abscess, in a retrospective study performed between January 2013 and March 2015 (submitted). We do not know exactly whether these new presentations are due to untreated chronic infections becoming complicated over time, or more virulent bacterial
strains. Indeed, NG has different virulence factors, including pili, Opa proteins, lipoooligosaccharide (LOS), Por proteins and IgA1 protease, which facilitate adaptation within the host [11]. Moreover, the emergence of multidrug-resistant strains of NG has become a matter of concern [12,13]. European and American guidelines recommend combined treatment with ceftriaxone and azithromycin (or doxycycline) for the treatment of uncomplicated gonorrhea of the urethra, cervix, rectum, or pharynx [14,15]. The aim is to improve treatment efficacy and potentially slow the emergence and spread of cephalosporin resistance, and to eradicate known or suspected concurrent CT infection. In this case, symptoms disappeared after a combined antibiotic treatment and a short drainage time, but these measures did not succeed in completely healing the fistula. However, no additional surgical repair (flap, injection material) have been needed until now.

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References

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