CASE REPORT

Crohn’s disease: Another unusual manifestation responded to metronidazole

Abdullah Al Summareea a, Fahad Al-Saif a,*, Salim Alkerayeb b, Norah Al-Oraifejb

a Department of Dermatology, King Khalid University Hospital and King Saud University, P.O. Box 2925, Riyadh 11461, Saudi Arabia
b King Khalid University Hospital and King Saud University, Riyadh, Saudi Arabia

Received 26 February 2011; accepted 1 April 2011
Available online 31 May 2011

Abstract Cutaneous involvement is a well-recognized manifestation of Crohn’s disease. The incidence of these manifestations varies widely and occur in 14–40% of patients with Crohn’s disease. These can be either metastatic, contiguous or reactive. Cutaneous Crohn’s disease, also known as metastatic Crohn’s disease, refers to noncaseating cutaneous granulomatous lesions that are not contiguous with intestinal Crohn’s disease. This clinical presentation is rare, especially in children.

We report a case of metastatic Crohn’s disease manifesting as scrotal swelling and eczematous eruption over genitalia and around anus in a 6 years old boy which dramatically responded to Metronidazole.

Keywords Crohn’s disease; Metronidazole; Saudi Arabia

1. Case report

A 6 year-old boy presented with 6 months history of a progressive, asymptomatic scrotal swelling and eczematous eruption over perianal region. No other symptoms were present at the time of presentation. No history of abdominal pain, nausea, vomiting, diarrhea or bloody stool. No history of inflammatory bowel disease. General examination confirmed that the patient was in good health. Height and weight percentiles were normal for age. Skin examination revealed dramatic edema of the scrotum and well-defined, indurated, erythematous, fissured eczematous lesions over perianal and anal areas (Figs. 1–3). Skin biopsy showed: parakeratosis and spongiosis of the epidermis, along with marked chronic inflammatory cell infiltration, granuloma formation, and foreign body giant cell reaction in the dermis. PASD, AFB, and GMS stains were negative. Blood tests including: CBC, ESR, LFT, U/E, C-reactive protein, were all normal. Patient was then evaluated by a pediatric gastroenterologist who confirmed that patient has GI involvement consistent with Crohn’s disease. The patient was treated with Metronidazole 125 mg/ml twice daily for one month which resulted in almost complete clearance of the skin lesions (Figs. 4–6).

2. Discussion

Crohn’s disease, a chronic granulomatous inflammatory disorder of the intestine, was first described by Crohn, Ginzburg, and Oppenheimer (Crohn et al., 1932) in 1932. It often begins...
between the second and fourth decades of life (Greenstein et al., 1976; Shum and Guenther, 1990), but one third of cases of intestinal Crohn’s disease developed before age 20 years (Booth and Harries, 1984; Mekhjian et al., 1979). Cutaneous Crohn’s disease (C-CD) refers to granulomatous noncaseating cutaneous lesions, separated from primary gastrointestinal affected areas by absolutely normal skin (Shum and Guenther, 1990; Parks et al., 1965; Gregory and Ho, 1992; Burgdorf, 1981; McCallum and Kinmont, 1968).

These lesions are rare and are easily misdiagnosed, especially when the characteristic gastrointestinal symptoms are absent (Shum and Guenther, 1990). They are to be distinguished from contiguous lesions, which are complications due to direct skin involvement from the gastrointestinal disease, e.g., perianal, peristomal, and perifistular inflammations (Gregory and Ho, 1992; Burgdorf, 1981; McCallum and Kinmont, 1968). The pathogenetic mechanism by which these skin lesions develop is enigmatic (Crowson et al., 2003). Skin lesions occur in 14–44% of patients with Crohn’s disease (CD) (Greenstein et al., 1976; Magro et al., 1997; Buckley et al., 1990, and are seen most commonly in patients with colonic involvement and generally unrelated to the activity of bowel disease (Veloso, 2004). The most common cutaneous reaction pattern is associated with dermal tissue neutrophilia, encompassing Sweet’s syndrome (SS), PG Buckley et al., 1990; Tiveljung et al., 1999; Petermann et al., 1999, bowel dermatitis-arthritis syndrome (Delaney et al., 1989), periorificial pyoderma (Smoller et al., 1990), pyoderma faciale (McHenry et al., 1992), and a sterile neutrophilic folliculitis with perifollicular vasculitis (Magro and Crowson, 1998). Cutaneous Crohn’s disease can be divided into two forms: genital (56%)
and nongenital (44%) Ploysangam et al., 1997. Two thirds of children with cutaneous Crohn’s disease had genital involvement compared with approximately 50% of adults with cutaneous Crohn’s disease (Ploysangam et al., 1997). Examination of a child with genital or anal disease may give rise to suspicion of sexual abuse and genital Crohn disease has often been mistaken as such (Stratakis et al., 1994; Sellman et al., 1996). Clinically, the lesions may manifest as subcutaneous nodules or erythematous plaques and secondary ulcers (Veloso, 2004).

Our patient presented with eczematous lesions which is unusual for cutaneous Crohn’s disease. Treatment is often unsatisfactory: randomized controlled trials are lacking; metronidazole, steroids, and sulfasalazine are helpful (Ploysangam et al., 1997), but complete resolution is uncommon and unpredictable (Pinna et al., 2006). Surgical removal of the diseased bowel does not necessarily improve cutaneous Crohn’s disease (Cockburn et al., 1980).

The value of metronidazole in treating perineal Crohn’s disease is convincingly demonstrated in the literature, which prompted us to use it for our patient with a dramatic response. The exact mechanism of action of metronidazole in Crohn’s disease remains to be elucidated, but its antimicrobial, anti-inflammatory and immunosuppressive properties may be of significance (Ursing et al., 1982). Prolonged administration of metronidazole is associated with a number of adverse effects. The most important symptom is bilateral pedal paresthesia (Brandt et al., 1982), other side-effects include a metallic taste, darkening of urine, nausea, anorexia, fatigue, headache, glossitis, urticaria and reversible neutropenia (Bernstein et al., 1980).

3. Conclusion

We here describe a case of cutaneous Crohn’s disease, presenting as eczematous plaques over scrotum, and perianally in a 6 years old child, which improved dramatically on oral metronidazole for one month.

References


