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Behçet's disease-like presentation of bullous pyoderma gangrenosum associated with Crohn's disease

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Summary

A 47-year-old woman presented with a 2-month history of generalized arthralgia and a 10-day history of oral aphthous ulcers. After hospitalization, papulopustular lesions and perianal ulcerations developed. Pathergy test was positive and ophthalmological examination was normal. The presence of oral aphthous ulcers, genital ulcerations, papulopustular lesions and arthralgia, and the positive pathergy test suggested the diagnosis of Behçet's disease (BD). In a few days, positive pathergy reactions and papulopustular lesions evolved into bullous lesions, which were diagnosed dermatopathologically as pyoderma gangrenosum. Two days after the presentation of papulopustular lesions, the patient experienced diarrhoea accompanied by bloody stools and mucus. Histopathological examination of biopsy specimens showed no vasculitis but revealed findings suggestive of Crohn's disease. The patient responded well to treatment with systemic steroids and 5-aminosalicylic acid. Our case demonstrates that the differential diagnosis of BD and inflammatory bowel disease may be perplexing and that these two diseases may be closely related.

The differential diagnosis of Crohn's disease (CD) vs. Behçet's disease (BD) can be difficult. Although the gastrointestinal and systemic features of BD and inflammatory bowel disease overlap to a considerable extent, they are generally viewed as two distinct diseases. Here we report a case of a 47-year-old woman with active colitis compatible with CD. The coexisting extraintestinal symptoms such as orogenital aphthous ulcerations, papulopustular eruptions, positive pathergy reaction, pyoderma gangrenosum and arthritis made the correct diagnosis difficult.

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Case Report

A 47-year-old woman was referred to our hospital with a 2-month history of generalized arthralgia and fever, and a 10-day history of oral aphthous ulcerations. Dermatological examination revealed multiple oral aphthous ulcerations on the buccal mucosa, gingiva, tongue and pharynx. Arthritis of the ankles was noted. Five days after hospitalization, multiple, sharply circumscribed ulcerations, the largest 20 mm in diameter, developed on the perianal region, and two small ulcerations were seen on the mons pubis. Papulopustular lesions were noted on her right hand and the anterior aspect of the left thigh. Pathergy test was positive. Owing to the presence of oral aphthous ulcerations, genital ulcerations, papulopustular lesions and arthritis, and the positive pathergy test, the diagnosis of BD was considered (Fig. 1a).

Eight days after hospitalization, the patient developed diarrhoea, accompanied by bloody stools and mucus, and cramping abdominal pain. Papulopustular lesions

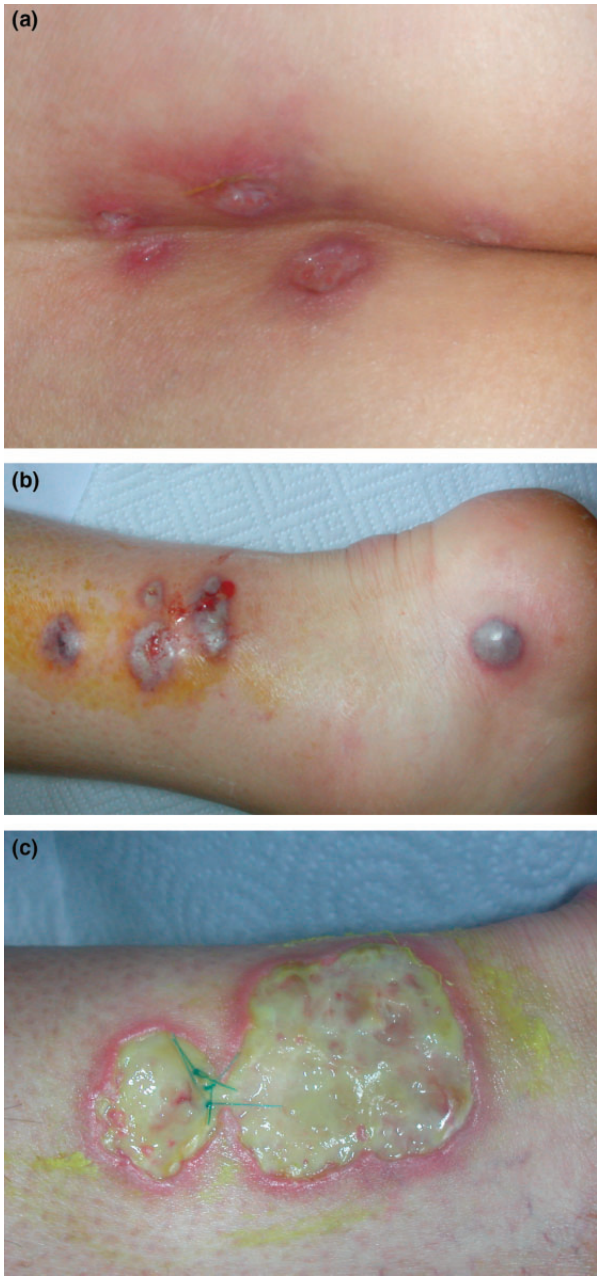

Figure 1 (a) Multiple sharply circumscribed perianal ulcerations; (b) multiple lesions of bullous pyoderma gangrenosum on lateral lower leg and foot; (c) within 24–48 h, bullous pyoderma gangrenosum lesions evolved to ulcerations.

and the pathergy reactions rapidly evolved to vesiculobullous and vesiculohaemorrhagic lesions, which were surrounded by an erythamatous halo. Similar lesions developed on the lower extremities and the dorsal aspects of the fingers. These were either discrete or clustered in a herpetic arrangement. Within 24–48 h, the lesions evolved to ulcers about 10–15 mm in diameter, partially coated by yellowish or serohaemorrhagic exudation with purple red elevated margins (Fig 1b,c). Culture of a swab of pustule fluid showed no Gram-positive or -negative bacteria. Under direct microscopy of the pustular fluid, dense polymorphonuclear leucocytes were seen. The patient had a high-grade fever (39–40 °C) and was in poor general health because of frequent episodes of diarrhoea. Under direct microscopy, no microorganisms were seen in a stool sample. *Salmonella* and *Shigella* species were not produced in faecal cultures. Blood cultures were sterile.

Physical examination showed moderate liver enlargement. Results of the abnormal laboratory tests were as follows: Haemoglobin 11.1 g/dL (normal range 120–150), haematocrit 33% (normal range 36–45), white blood cell count 20.6×10^9/L (normal range 4.5–11×10^3), platelets 476×10^9/L (normal range $150–400 \times 10^3$), ESR 75 mm/h (normal range 0–20), C-reactive protein 84.6 mg/L (normal range 0–5), albumin 26 g/L (normal range 34–48) and serum iron 8.0 μg/dL (normal range 35–140). HLA B51 was negative.

A skin biopsy from the vesiculohaemorrhagic lesions revealed a large abscess-like inflammatory focus in the dermis, tending to suppurate, with neutrophils consistent with the diagnosis of pyoderma gangrenosum. Total colonoscopic examination showed deep linear ulcerations covered with exudates throughout the colon reaching up to the terminal ileum, suggestive of CD. Histopathological examination of multiple biopsy specimens from the rectal mucosae and ascending, transverse and descending colon showed focal active colitis with superficial ulcerations. The ulcers were not in the form of aphthous ulcers, which are defined as ulcerations in the surface of a single crypt, but rather involved more than a few crypts. Focal cryptitis characterized by neutrophilic infiltration of the crypt epithelium and the surrounding lamina propria was observed. Mucosal architecture was well preserved, with no crypt distortion or goblet cell loss. Focal lamina propria inflammation seemed to extend to the submucosa, where increased numbers of ganglion cells were observed in one of the biopsy samples. These findings were more suggestive of CD than ulcerative colitis, although no granulomas were seen. It was difficult to make a differential diagnosis with BD; however, the lack of aphthous ulcers or thrombotic vasculitis on colonic histopathological examination in our case seemed to justify a diagnosis of pyoderma gangrenosum associated with CD according to the colonoscopic and histopathological findings.

Because of the rapid worsening of the skin lesions and diarrhoea, 5-aminosalicylate 2 g/day and methyl prednisolone 80 mg/day were initiated. The patient responded well to treatment and the pyoderma gangrenosum lesions regressed completely, leaving atrophic scars**.** No recurrence of the mucocutaneous lesions was noted during the follow-up period.

CD is a chronic inflammatory disorder, involving the entire alimentary tract. Its extraintestinal features, such as migratory arthritis, iritis, erythema nodosum, and aphthous ulcerations, make it a serious candidate in the differential diagnosis of BD.[1–3] The criteria of the International Study Group for Behçet's Disease emphasizes the importance of exclusion of inflammatory bowel disease in the diagnosis of BD.

Because of the high prevalence of BD in Turkey and the presence of the mucocutaneous lesions in our patient, which developed before the gastrointestinal symptoms and dominated the clinical picture, the diagnosis of BD was initially considered. Although oral aphthous and genital ulcerations, papulopustular lesions, arthritis, and a positive pathergy test meet the diagnostic criteria for BD, these symptoms can also be seen in CD;[1–3] 15% of cases with CD have erythema nodosum, 2–25% of cases have nondestructive mono- or poly-arthritis and 2.3% of cases have oropharyngeal ulcers.[1–3] Perianal complication of CD such as abscesses, sinuses, fistulae and fissures occur in 25–70% of patients, but perianal and genital ulcers are rare.[4–8] Approximately 75% of cases with pyoderma gangrenosum are associated with systemic disease, among which inflammatory bowel diseases are the most frequent, being present in 30–40% of patients.[4] Pyoderma gangrenosum develops in 0.5–5% of patients with inflammatory bowel disease.[4]

Gastrointestinal lesions such as erosions and apthous ulcers are found in up to 14% of patients with BD and also occur most frequently in the terminal ileum and caecum.[9,10] In our patient, colonoscopic findings of linear ulcerations were highly suggestive of CD, and although focal active colitis observed in the colonic biopsies can also be seen in BD, there were no aphthous ulcers or thrombotic vasculitis.

Our case demonstrates that the differential diagnosis of BD and inflammatory bowel disease may be quite perplexing. The difficulty in the differential diagnosis of inflammatory bowel diseases and BD results from overlapping clinical and histopathological features.

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