

*Case report*

# Crohn's disease in a young male with prolactin producing pituitary adenoma

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**SUMMARY**

A case of a 24-year-old male with a prolactinoma who developed Crohn's disease is described. He presented with fever, diarrhea, a perianal abscess and a past medical history of a prolactin producing adenoma of the pituitary gland, treated with bromocryptine. Crohn's disease was finally diagnosed and the patient was successfully treated with 5-ASA, metronidazole, steroids and azathioprine. A possible causal link between the two conditions is discussed.

**INTRODUCTION**

Prolactin producing adenoma of the pituitary gland is uncommon in young males. The onset of inflammatory bowel disease (IBD) usually occurs at the third decade of life. We describe the case of a 24-year-old male with a history of prolactinoma, who presented with fever and perianal abscess and in whom Crohn's disease was finally diagnosed. To our knowledge no previous case of inflammatory bowel disease associated with prolactinoma has been reported.

**CASE REPORT**

A 24-year-old male was referred to our hospital with a 15-day history of fever up to 38.5°C, associated with malaise, loose stools and mucopurulent discharge from the perianal region. He presented with hematochezia 18 months ago, when a rigid sigmoidoscopy showed inter-

nal hemorrhoids and he was treated with metronidazole and a local steroid ointment with temporal improvement. Six months later, hematochezia reappeared associated with tenesmus, fever and perianal pain. Sigmoidoscopy showed internal hemorrhoids and a fistula orifice at 8cm from the anal verge. He underwent hemorrhoidectomy and surgical drainage of an abscess. He continued having low grade afternoon fever, mucopurulent discharge and a non-healing wound, although he was on metronidazole. His past medical history included a prolactin producing pituitary microadenoma, diagnosed in another hospital with a brain CT scan and increased prolactin levels, treated with bromocryptine for 6 years, and a b-thalassemia trait. Interestingly, his twin brother suffered from gynecomastia but without any evidence of prolactinoma. On admission the patient was pale, his temperature was 38°C and blood pressure was 110/80mmHg. Physical examination showed left gynecomastia, mild tenderness at the right lower quadrant, a palpable liver 3cm below the costal margin and a just palpable spleen. Laboratory investigation included: 10.1g/dL; hematocrit 32.4%; MCV 50.2fl; MCH 15.7; MCHC 31.3pgr; WBC 14.000/mm<sup>3</sup> (neutrophils: 80%); platelet 420.000/mm<sup>3</sup>; erythrocyte sedimentation rate 24mm/hour; CRP +++; HIV negative. Prolactin blood levels were within normal limits. Urine and three consecutive blood cultures were negative but culture from the anal wound grew *E. coli*. A colonoscopy revealed a nodular mucosa with ulcerations leading to a "cobblestoning" appearance of the right colon and terminal ileum. Endoscopic biopsies were taken and histology showed deep ulcerations, crypt distortion and infiltration of the lamina propria with lymphocytes and plasma cells. These findings were compatible with Crohn's disease. The patient received 5-ASA, metronidazole, oral steroids and azathioprine leading to a favorable course of his disease. He has remained asymptomatic for the last two years.

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## DISCUSSION

Prolactinoma accounts for 50% of pituitary tumors, with a male/female ratio of 1/5 and an incidence of 7.1/100,000.<sup>1</sup> Microprolactinomas are more common than macroprolactinomas with 90% of the former found in woman and 60% of the later found in men. They are usually diagnosed in puberty when gynecomastia becomes evident associated with absence or delay of secondary male characteristics. Diagnosis is confirmed by measuring prolactin blood levels and the finding of an adenoma of the pituitary gland on CT scan. Our patient was treated with bromocryptine, which is a dopaminergic agonist and the treatment of choice for prolactinomas. Six years later, he developed Crohn's disease with perianal involvement. The obvious questions that arise are whether Crohn's disease developed as a complication to treatment with bromocryptine or if prolactinoma could be considered as an extraintestinal manifestation of a quiescent IBD. Toxic compounds such as formalin and acetic acid can induce colitis in experimental models but such an effect has not been attributed to bromocryptine. Nevertheless, bromocryptine can induce vasoconstriction, ischemia and finally damage to intestinal microcirculation which is likely to be a contributor to Crohn's disease pathogenesis.<sup>2</sup> Dermatologic, ocular, skeletal, vascular and hepatobiliary disease have often been reported associated with IBD.<sup>3</sup> Endocrine and growth abnormalities with abnormal pituitary function tests have also been described as extraintestinal manifestations of IBD,<sup>4</sup> but to our knowledge no case of prolactinoma associated with Crohn's disease has been re-

ported. A possible link between these two conditions could be the neuroendocrine-immune axis leading to "gut-brain" interaction.<sup>5</sup> Hyperprolactinemia has the potential to exacerbate autoimmunity and the development of associated cases of systemic lupus erythematosus have been described.<sup>6</sup> Accordingly, a case of longstanding hyperprolactinemia can induce gut immune reactions known to take part in pathophysiology of IBD. We have to note that our patient did not have high levels of prolactin at the time he was admitted to the hospital, but high peptide values, at least intermittently, during the past 18 months can not be ruled out.

## REFERENCES

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