

## CASE REPORT

# Perianal Paget's Disease with synchronous adenocarcinoma: An unusual diagnosis

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## ABSTRACT

We present a 45-year-old male Caucasian with a one-year history of perianal erythema resistant to topical corticosteroid and antifungal therapy. Physical examination of the perianal region revealed a painful, non-pruriginous erythema with erosions that involved all the circumference of the anus. No oral and no genital lesions were observed. Serologic and virologic markers were collected and a skin biopsy was performed. The markers turned out to be negative and the biopsy revealed the diagnosis of Perianal Paget Disease (PPD). Immunohistochemistry was positive for CK20, EMA and CEA, and negative for CK7. Digital rectal examination suggested a suspicious thickening in the rectum and colonoscopy revealed the presence of a vegetating mass of the distal rectum. Biopsies of the rectal mass displayed a well-differentiated invasive adenocarcinoma. The patient was proposed to neoadjuvant chemo and radiotherapy, followed by abdominoperineal resection with wide surgical excision and lymph node dissection. This case illustrates the importance and difficulties encountered in the clinical diagnosis of this rare disease.

**Key Words:** Perianal Paget's Disease, Extramammary Paget's Disease, Synchronous adenocarcinoma, Rectal adenocarcinoma

## 1. INTRODUCTION

Extramammary Paget's Disease (EMPD) is a rare malignant condition affecting the epidermal apocrine glands in areas other than the nipples/areolar complex.<sup>[1]</sup> Although rare, 20% of all cases of EMPD involve the perianal region and it is often associated with an underlying carcinoma.<sup>[2]</sup>

## 2. CASE PRESENTATION

We report the case of a 45-year-old male Caucasian with a one-year history of non-pruriginous, painful, perianal erythema, resistant to topical corticosteroid (0.1% aceponate methylprednisolone cream, once a day, during one month), and antifungal therapy (2% ketoconazole cream, once a day, during one month). The patient was a heavy smoker (3 Pack-

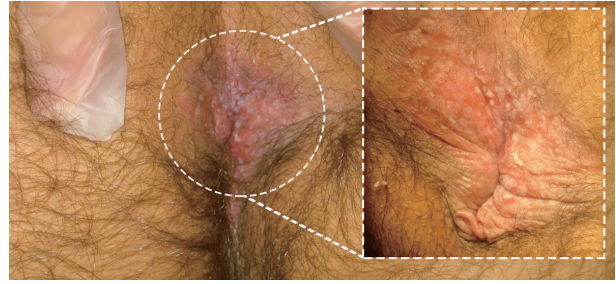
year), an ex alcoholic and heterosexual, with multiple sexual partners, who denied condom use. He also had a history of migraines and chronic hepatitis B. The patient had no history of atopy and no familial or personal history of cancer.

Physical examination of the perianal region revealed an erythematous plaque with erosions that involved all the circumference of the anus and measured 8 cm × 5 cm (see Figure 1). There was no perianal discharge and neither oral nor genital lesions were observed. The remaining physical examination was unremarkable.

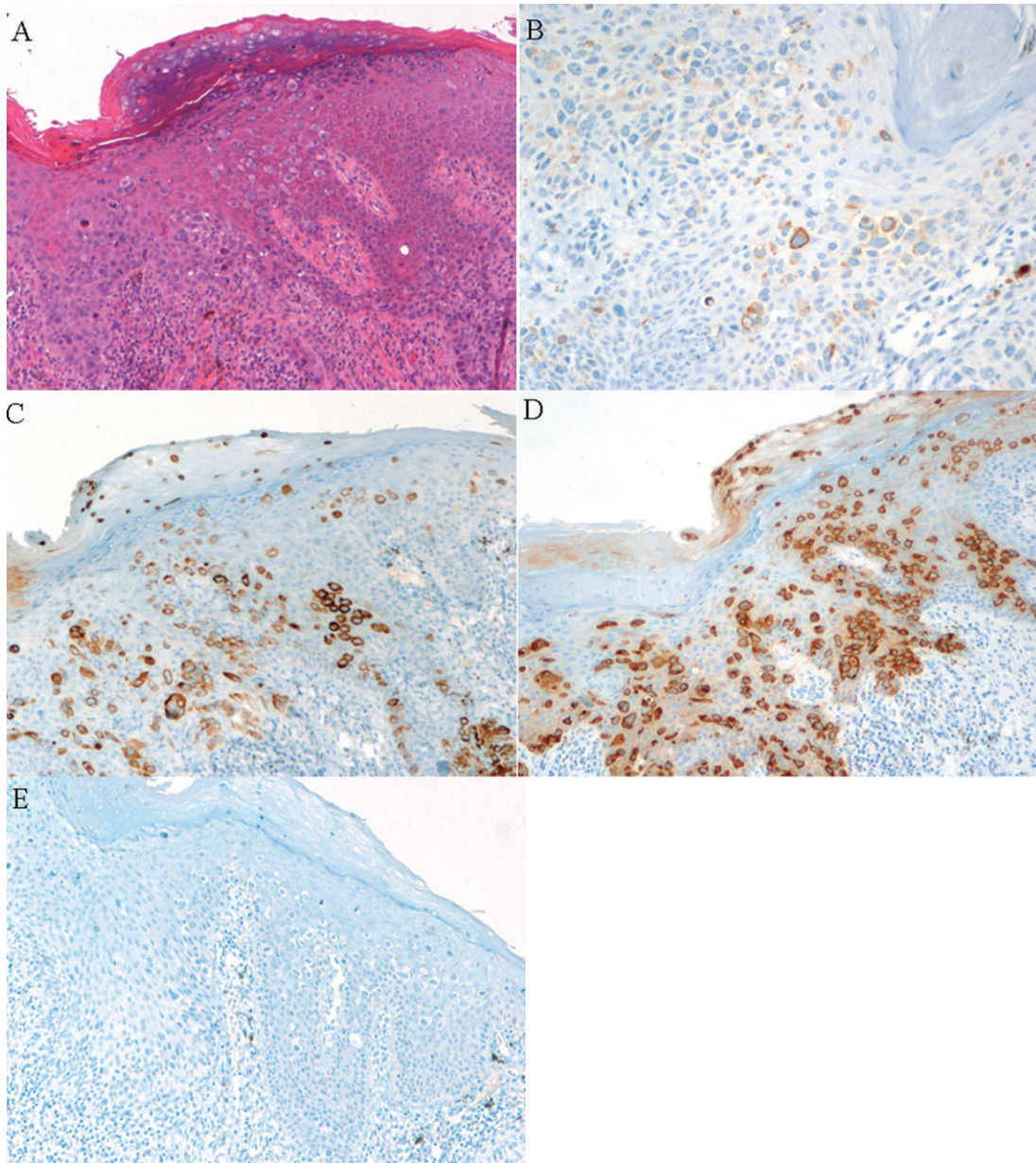
Samples were obtained for serologic and virologic analyses and a skin biopsy was performed. The patient was empirically treated with azithromycin and valacyclovir. Syphilis,

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HIV, HCV and HSV markers were negative. Hepatitis B markers showed an inactive chronic disease. The biopsy revealed the presence of acanthosis and hyperkeratosis of the epidermis, with medium to large-sized cells with round to ovoid nuclei and clarified cytoplasm (see Figure 2A). Immunohistochemistry was positive for cytokeratin 20 (CK20) (see Figure 2B), epithelial membrane antigen (EMA) (see Figure 2C) and carcinoembryonic antigen (CEA) (see Figure 2D), and negative for cytokeratin 7 (CK7) (see Figure 2E). The diagnosis of perianal Paget's disease was made.



**Figure 1.** Erythematous plaque with small white erosions that involved all the circumference of the anus and measured 8 cm × 5 cm



**Figure 2.** Acanthosis and hyperkeratosis of the epidermis, with medium-sized to large-sized cells with round to ovoid nuclei and clarified cytoplasm (A). Positive immunohistochemistry for: CK20 (B), EMA (C) and CEA (D). Negative immunohistochemistry for: CK7 (E).

Due to the possibility of an underlying neoplasm, digital rectal examination was performed which suggested a suspicious thickening of the rectum. Colonoscopy confirmed the presence of a vegetating mass of the distal rectum. Biopsies of the rectal mass confirmed the presence of invasive adenocarcinoma. MRI and CT revealed the presence of an ulcerated rectal mass and perirectal adenopathies. The patient was referred to a multidisciplinary consultation that proposed neoadjuvant chemo and radiotherapy, followed by laparoscopic abdominoperineal amputation. The surgical specimen revealed the presence of an ulcerated mucinous adenocarcinoma with moderate differentiation, with invasion of all layers of the rectum and lymphatics. Molecular biology of the biopsy demonstrated no microsatellite instability. Due to the locally advanced stage and bad clinical prognosis the patient was proposed to perform adjuvant chemotherapy (FOLFOX regimen).

### 3. DISCUSSION

Perianal Paget's Disease (PPD) accounts for 20% of EMPD and its true incidence is unknown.<sup>[2]</sup> Clinical presentation is often nonspecific, its differential diagnosis is complex and the diagnosis is frequently misdiagnosed. PPD has been classified as either primary or secondary, based on immunohistochemistry markers: primary (CK7+/CK20-/gross cystic disease fluid protein (GCDFP)15+)/secondary (CK7±/CK20+/GCDFP15-).<sup>[3]</sup> CK7 is a sensitive marker

for almost all pagetoid neoplasms of the breast and genital skin, but is also expressed by some rectal adenocarcinomas. CK7 positivity has no practical value to distinguish the type of PPD.<sup>[4,5]</sup> Expression of CK20 may be seen in colorectal carcinomas but is negative in primary PPD.<sup>[6]</sup> Although, as a group, only 15% of the EMPD harbor an underlying neoplasm, a higher percentage of neoplasia is associated with PPD (up to 60%).<sup>[2,7]</sup> Surgical methods of treatment are still the mainstay, although other non-surgical modalities have been described (radiotherapy, chemo-radiotherapy, photodynamic therapy, imiquimod 5% cream).<sup>[8,9]</sup> Local recurrence is high (31%-61%), so long-term follow-up must be guaranteed.<sup>[10]</sup>

### 4. CONCLUSIONS

This case illustrates the importance and difficulties encountered in the clinical diagnosis of this infrequent disease. The take home message should be that a neoplastic cause (Bowen/Paget disease) should be suspected when an infiltrative erythematous lesion at the perianal region persists after a well-documented corticosteroid and antifungal topical treatment. Reporting cases of EMPD is important to increase awareness of this clinical entity, and establish diagnostic and treatment guidelines.

### CONFLICTS OF INTEREST DISCLOSURE

The authors declare no conflicts of interest.

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