Case Report

Primary *Cutaneous Cryptococcosis*: about a Diffuse Case in a Subject not Infected by HIV in West Africa - ☀

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**Summary**

The Primary Cutaneous Cryptococcosis (PCC) is a fungal infection due to the Cryptococcus neoformans (C. neoformans). It occurs after a transcutaneous inoculation most often among the subject immunocompromised. We report a case of profuse PCC at a young subject, not infected by HIV in West Africa. The observation has concerned a young farmer of 21 years who has presented umbilicated and necrotic papules, fester by location and diffuse, associated with nodular and tumoral lesions, painless and scattered whose the puncture brought back of frank pus. India ink staining showed yeasts compatible with Cryptococcus spp. The histopathology showed of yeasts to Gromori Grocott and the absence of tuberculosis. The patient received fluconazole for his treatment. The observance has not been good and the patient had recourse to the traditional treatments; the death occurred because of hepatitis with ascitic fluid. Better observance of antifungal treatment is able to improve the vital prognosis.

**Keywords:** Cutaneous cryptococcosis; Immunocompetent; Treatment; Burkina Faso

**INTRODUCTION**

The Cutaneous Cryptococcosis (CC) is a fungal infection due to the saprophytic yeasts of the genus Cryptococcus. These yeasts may be found in the ground, bird droppings and some trees like eucalyptus [1]. The CC represents 10% of the whole of the cryptococcosis [2]. The achievement of the skin is done by direct transcutaneous inoculation or secondarily after inoculation of the lung. It usually occurs in the subject with an iatrogenic immune deficit, cancerous, hematology and congenital immune deficit, by transplantation or infectious origin with in head the infection by HIV. The typical clinical manifestation is the umbilicated papules. One can also observe lesions type papules and pustules like in acne, ulcerated nodules, abscesses, cellulitis or erythematous plate [3,4]. Recently, the Primary Cutaneous Cryptococcosis (PCC), which occurs after transcutaneous inoculation, has been individualized as a fully-fl edged entity [5]. It is described in the immunocompromised and also among the immunocompetent. The shape of the immunocompetent is rarely described in Africa. It is usually localized and responds well to antifungal [3]. We report a case of PCC with deadly evolution at a young subject, not infected by HIV in West Africa.

**OBSERVATION**

Mr. KB 21 years, Burkinabe, expatriate farmer in the ivorian plantations, without particular history is received in December 2014 at the dermatology service of the teaching hospital, Centre hospitalier universitaire Souro Sanou (CHU-SS) in Bobo-Dioulasso (Burkina Faso) for papular lesions, diffuse nodular and tumoral lesions evolving since 6 months. The symptomatology was secondary to a bite of insect not identified. She started two weeks after the bite by a nodule located first in point of monitoring bite then an extension to the whole of the body. This eruption was accompanied by headache and a hyperthermia not encrypted which have motivated multiple modern traditional treatments without success. The general review had noted a good general condition, a weight = 60 kg, temperature = 37 °C, blood pressure = 110/ 80 mm, pulse = 80 beat / Mn and respiratory frequency = 18 cycles/ mn.

The dermatological review had noted umbilicated papules between 5 and 10 mm diameter necrotic, festers by location and diffuse lesions. It also noted nodular, tumoral and rounded lesions, variable in size from 20 mm to more than 50 mm diameter, mobile and painless on palpation, diffuse on the body with a maximum on the trunk (Figure 1). The puncture of a nodule brings back of frank pus. The review of the palms, plants and mucous membranes were without notable characteristic. The diagnosis of cryptococcosis had been evoked without excluding tuberculosi or skin histoplasmosis.

The parasitological examination of the dermal juice after colouring with the Indian Ink had shown the presence of Cryptococcus spp (Figure 1a). The identification after culture had not been carried out because after first negative fungal culture the patient did not honor the second appointment with the mycologist for a second culture. The pus was sterile to the bacteriological research. Histopathological examination of a umbilicated papule and a fragment of nodule had noted an inflammatory and granulomatous reaction consists mainly of giant cells type Muller. Into the granulomatous reaction was many small yeasts often phagocytosed by macrophages with many nucleus, visible to the (Figure 2b) and the Gromori Grocott (Figure 2c and 2d). There was no tuberculoid granuloma and no necrosis. The retroviral serology was negative. Serologies of the viruses of hepatitises B and C were not carried out. Pulmonary radiography was normal. The patient has been treated by Fluconazole 300 mg/j. It has been lost sight of because aft er fi rst negative fungal culture the patient did not honor the second appointment with the mycologist for a second culture. The parasitological examination of the dermal juice after colouring with the Indian Ink had shown the presence of Cryptococcus spp (Figure 1a). The identification after culture had not been carried out because after first negative fungal culture the patient did not honor the second appointment with the mycologist for a second culture. The pus was sterile to the bacteriological research. Histopathological examination of a umbilicated papule and a fragment of nodule had noted an inflammatory and granulomatous reaction consists mainly of giant cells type Muller. Into the granulomatous reaction was many small yeasts often phagocytosed by macrophages with many nucleus, visible to the (Figure 2b) and the Gromori Grocott (Figure 2c and 2d). There was no tuberculoid granuloma and no necrosis. The retroviral serology was negative. Serologies of the viruses of hepatitises B and C were not carried out. Pulmonary radiography was normal. The patient has been treated by Fluconazole 300 mg/j. It has been lost sight of because aft er fi rst negative fungal culture the patient did not honor the second appointment with the mycologist for a second culture.

![Figure 1: A: Papules ombliquees. B: Severe papule and nodule. C,D: polymorphic lesions diffuse (papules and nodules tumors).](image-url)
DISCUSSION

We present through this observation a case of diffuse PCC at a young age, not infected by the HIV in our African Western context. The PCC has been recognized as a fully-fledged entity [5]. It is the prerogative of the different forms of immunosuppression. Indeed, a cellular immune defect, such as HIV infection, or severe lymphocytopenia independent of HIV infection can be discovered in this setting. The shape of the immunocompetent is rare. The cases described in the literature are essentially American, European and Asian [3,4,6]. In Africa, the literature is poor and the cases described are in relation with HIV infection [7]. Our patient was negative for HIV infection. We have not found other obvious causes of immunosuppression in our investigations. Our patient presented polymorphic lesions associating umbilicated papules or not, festes or necrotic, nodules and swellings in the form of cold abscesses. These lesions were diffuse on the skin. Usually, the lesions of the CC of the immunocompetent were monomorphic localized and sits on the ends [3,6]. We have not recovered from obvious cause for this diffuse character. It is not excluded that the previous treatments were immunosuppressive more especially as it was about self medications and the antifungal treatment for the benefit of the traditional therapeutic. The course therapeutic treatment of patient was marked by multiple self-medications as well as a poor compliance of the antifungal treatment for the benefit of the traditional therapeutic. The safety of these treatments is not proven; however they are a possible cause of death.

CONCLUSION

Among parameters that seem to differentiate PCC from secondary cryptococcal infection is the immune status of the host. However, the diagnosis of PCC should prompt analysis of the host’s immune status. Although histopathological examination can contribute to the diagnosis, local inflammation does not distinguish between primary and secondary lesions. It is necessary to evoke a CC among patients with umbilicated papules even without context of infection by the HIV. Better observance of antifungal treatment is able to improve the vital prognosis.

REFERENCES


