

## Urticaria Revealing an Hepatitis B Infection: About a Case at the Dermatology-Venereology Unit of the National University Hospital Center (NUHC) of Bangui

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### Abstract

### Case Report

Urticaria is a common syndrom which is manifested by pruritic edematous erythematous plaques. These plaques have no predilection site. They can migrate during the evolution of urticaria. Their second particularity is their fleeting character for they disappear after few hours without treatment. Urticaria has been associated with psychological, allergic and infectious factors. Among incriminated infections, hepatitis viruses have been cited. We are reporting a case of urticaria revealing an anicteric hepatitis B infection.

**Keywords:** Urticaria, anicteric, hepatitis B, virus, Bangui.

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## INTRODUCTION

Hepatitis viruses are responsible of hepatic manifestations as well as extra hepatic, in particular dermatological, sometimes revealing the virale infection. Urticaria is classified acute or chronic regarding its course, less or more than six weeks ; its diagnosis can be based on clinical findings (Yeh JW *et al.*, 2020). According to Sánchez-Borges, urticaria can be classified based on its duration (acute or chronic) and the presence ou not of inducing factors (induced or spontaneous) (Sánchez-Borges M *et al.*, 2012). Another classification suggested is based upon duration and eliciting factors; three main urticaria subgroups are differentiated: spontaneous urticaria, physical urticaria and other special forms (Wedi B *et al.*, 2009). Urticaria has marked effects on quality of life (Gotua M *et al.*, 2019). Clinically, urticarial lesions are intensely pruritic, circumscribed, raised, erythematous plaques, often with central pallor. Morphology and size can vary (Gotua M *et al.*, 2019). We are reporting a case of urticaria revealing an hepatitis B infection.

## CASE REPORT

We are reporting the case of a 29 years old male patient, who consulted in the dermatology venerology unit at the National University Hospital Center of Bangui, for disseminated solid pruritic skin lesions developed progressively since 2 weeks. According to the patient, these skin lesions started appearing after a shower. The history of the disease revealed no prodrome. The treatment received in ambulatory comprised corticosteroids, antibiotics and antifungal medicines. The patient had no particular medical history. Clinical examination of the patient showed no general sign. Dermatological examination revealed no jaundice nor conjonctival icterus. On almost the entire skin surface, circumscribed edematous erythematous plaques with a non-scaly smooth surface and raised borders. Dermographism was positive. This clinical presentation lead us to discuss an acute aquagenic urticaria. Liver function tests revealed a high level of liver enzymes: alanine transaminase (ALT) at 1073 IU/l (<31), aspartate transaminase (AST) at 675 IU/l (7-37), total bilirubin at 18 mg/dl (2-20),  $\gamma$ -glutamyl transpeptidase (GGT) at 126 IU/l (0-45). Serological testing revealed a positive IgM and IgG for hepatitis B. The treatment ordered in ambulatory was H1 antihistamine drug. The patient was

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referred to the gastroenterologist for a multidisciplinary management of the case.



**Figure 1: Erythematous and edematous plaques of the back**

## DISCUSSION

Our clinical case showed an association between aquagenic urticaria and hepatitis B virus infection. According to Yeh JW *et al.*, urticaria is the most common clinical manifestation of the hepatitis B virus infection (Yeh JW *et al.*, 2020). The pathogenesis of aquagenic urticaria remains unclear, although there is evidence to suggest that it is histamine mediated (Wedi B *et al.*, 2009). Serology testing showed in our patient a high level of liver enzymes and bilirubin. In the literature, a case of urticaria associated with clinical jaundice and hepatic cytolysis in a patient with lupus lead to discuss « yellow urticaria » and auto-immune hepatitis, not viral (Toujani S *et al.*, 2023). These observations could suggest a tight link between urticaria and the complex « liver-hepatic tracts ». Yellow urticaria may be an important clue to a previously unknown hepatic or biliary pathology (Toujani S *et al.*, 2023).

Viral serology B was positive in our patient. It should be noted, as in the literature, that on top of causing an hepatic disease, hepatitis B infection, presents multiple extrahepatic manifestations. In fact, a large spectrum of skin manifestations associated with viral hepatitis has been reported (Cozzani E *et al.*, 2021). A serum-sickness-like syndrome (SSLP) occurs in approximately 15-30% of patients during the prodromal phase of the acute disease, presenting with general malaise, fever, blood anomalies...skin lesions as urticarial. Therefore, dermatologists should recognize possible cutaneous manifestations associated with viral hepatitis, as these may represent an early sign of

infection or even the only sign (Cozzani E *et al.*, 2021). The association viral hepatitis-urticaria was confirmed by Griffin *et al.*, who reported a case of urticaria manifested during the evolution of an hepatitis A viral infection (Griffin MP *et al.*, 2012). According to a systemic review of literature conducted by Imbalzano and, chronic viral infections included hepatitis B, have been reported in comorbidity with spontaneous chronic urticaria (Imbalzano E *et al.*, 2016). In adult patients, according to anterior reported data, infection by hepatitis viruses were the most frequent probable cause of urticaria; this is not the first time this association has been reported (Imbalzano E *et al.*, 2016). Par contre, au cours de l'étude de Gotua *et al.*, seules les infections à Herpes virus (HSV-2) et norovirus étaient liées à l'urticaire chronique (Gotua M *et al.*, 2019). We prescribed H1 antihistamine drug to our patient as suggested by Wedi B *et al.*, in addition to the removal of specific and non specific factors (Wedi B *et al.*, 2009). Our patient was referred to the gastroenterologist. Patients presenting symptoms difficult to control could be referred to specialists among whom gastroenterologists (Gotua M *et al.*, 2019). In all cases reported by Imbalzano *et al.*, a resolution of the urticaria has been obtained either after treatment or after spontaneous elimination of the virus (Imbalzano E *et al.*, 2016).

## CONCLUSION

Urticaria can reveal internal pathologies clinically unsuspected ; among them the hepatitis viral infection. Health professional awareness as well as a

collaboration between dermatologists and gastroenterologists are necessary.

### Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki. The authors certify that they have obtained all appropriate patient consent forms, in which the patient gave their consent for images and other clinical information to be included in the journal. The patient understands that their names and initials will not be published and due effort will be made to conceal their identity, but that anonymity cannot be guaranteed.

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