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Adrenal insufficiency and hepatic cirrhosis, a relationship to discover

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Declaration of interest: The authors declare that they do not have any conflict of interest

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Dear Editor,

Cortisol is essential for the maintenance of tone and vascular permeability. Its increase causes an increase in vascular tone and cardiac output1, so it becomes more relevant in stressful situations such as septic shock. Shock and liver failure share similarities such as low average blood pressure, decreased systemic vascular resistance and increased cardiac output.

41-year-old man, with no history of interest or toxic habits, who consulted due to an increase in the abdominal perimeter. Physical examination revealed jaundice, hyperpigmentation of the palm lines (Figure 1) and splenomegaly. Analytically highlighted thrombopenia (39,000/microliter), albumin: 2.80 g/dl, direct bilirubin: 1.38 mg/dl, AST: 64 U/l, ALT: 46 U/l and GGT: 46 U/l. Coagulation had an IP: 44% and INR of 1.82. The basal cortisol was 2.89 mcg/dl and the ACTH was 90 pg/ml. Functional ACTH test was carried out with a maximum cortisola peak for 60 minutes, of 7.57 mcg/dl. Antibodies against-21 hydroxylase and quantiferon were negative. The presence of chronic HBV infection with a viral load of 2,341 copies was confirmed. CT scan of the abdomen revealed a hepatic parenchyma of nodulary splenomegaly contour. Treatment was initiated with hydrocortisone 20 mg/day, fludrocortisone 0.1 mcg/day and tenofovir 300 mg/day.

Since the studies of Fede et al2 and Galbois et al3, in which the presence of IS was found in patients with cirrhosis without hemodynamic instability, this entity is considered with a high

predisposition to IS. It is associated with a higher score on the Child-Pugh scale but is not related to the etiology of cirrhosis4. A prevalence of 9% to 38% has been described in patients with compensated cirrhosis3.4

The 250 µg stimulation test with synthetic ACTH is the standard test for diagnosing IS in critical patients4. Although higher survival has been associated in cirrhotic patients with higher cortisol values, the prognostic sense of IS in patients with stable liver cirrhosis is not clarified. As for the treatment, there are work with contradictory results. However, several studies have shown increased survival with the use of corticosteroids in cirrhotic patients with septic shock, so it seems reasonable to identify patients with IS in the context of liver cirrhosis and individualize their treatment.

Figura 1. Skin hyperpigmentation of palmar lines

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