Comment on: Relationship between splenomegaly and hematologic findings in patients with hepatosplenic schistosomiasis

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Schistosomiasis remains an important public health problem worldwide. It is a parasitic disease endemic in over 70 countries and is estimated that the infection is responsible for more than 200,000 deaths annually[1,2].

For Gryseels et al.[3] inflammatory hepatic schistosomiasis is the main cause of hepatomegaly and severe splenomegaly in children and adolescents. The severity of disease is related to the intensity of the egg infestation. The most severe form of the disease, hepatosplenic schistosomiasis, is an important cause of morbidity and mortality (30% and 10% of those infected, respectively)[4].

Dunn& Kamel[1] showed that Schistosomiasis is one of the most common causes of non-cirrhotic portal hypertension in the world

Schistosomiasis is associated to significant morbidity including anemia, chronic pain, diarrhea, exercise intolerance, malnutrition, bladder cancer, portal hypertension and central nervous system complications[5]. Although most infections occur in residents of endemic areas, it has been clearly documented that brief freshwater exposure is sufficient to establish infection; thus, travelers may also be infected.

From the standpoint of laboratory exams, these patients have leukopenia and significant thrombocytopenia. Sometimes patients have pancytopenia, iron deficiency anemia, leukopenia and thrombocytopenia secondary to great hepatosplenic schistosomiasis[6-8]. We know that both leukopenia and thrombocytopenia are correlated to size of the spleen[9], but there are no studies that directly or precisely correlate splenomegaly and hematologic findings. It is still controversial whether the thrombocytopenia observed in patients with chronic liver disease is more associated to splenomegaly or to very high portal blood pressure.

In the early stages the portal resistance, hypertension is principally presinusoidal. However, due to progressive fibrotic changes in the portal tracts, lobular distortion occurs at the sinusoidal level. This results in increases in resistance to portal venous flow, as evidenced by increased wedged hepatic venous pressure in advanced cases[10]. This may explain possible hematological abnormalities in these patients.

Martins et al.[11] revisited 141 medical records of patients with hepatosplenic schistosomiasis mansoni submitted to the surgical treatment of portal hypertension. The variations in the serum levels of platelets in both the pre- and postoperative periods of these patients were directly correlated to changes in weight and volume of the spleen. Splenomegaly was directly responsible for the variation in the number of platelets. In this study, patients who underwent surgical treatment showed increased serum levels of platelets in the immediate postoperative compared to the preoperative period.

Santos et al.[12] showed that this result refers to the splenic sequestration that occurs in schistosomiasis. The results of this study suggest that ultrasound can be reliably used in the classification of periportal fibrosis using the criteria of Niamey in patients with the advanced form of schistosomiasis. Ultrasound scans in patients with schistosomiasis have been restricted to study the caliber of the portal and splenic veins, and organometric investigations of the portal vein[13].

Some studies reported results relevant to the understanding of the importance of the correlation between splenomegaly and thrombocytopenia in hepatosplenic schistosomiasis. Martins et al.[11], analyzing the serum level of platelets in respect to pre and postoperative weight, tried to correlate this with volume of the spleen in patients with hepatosplenic schistosomiasis with indication for the surgical treatment of portal hypertension. He found that the number of platelets in the immediate postoperative period was inversely correlated with the weight of the spleen removed. Splenomegaly was directly responsible for the variation in the number of platelets.

Thus, the study of Leite et al. is highly relevant since it suggests that the hematological abnormalities are associated with splenomegaly, hypersplenism and hypertension[14]. Further studies are necessary to verify that the platelet count may be a non-invasive tool for portal hypertension.

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