

CLINICAL BRUCELLAR HEPATITIS: THE RESULTS OF ISTANBUL-3 STUDY

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Introduction

Brucellosis is a zoonotic disease that primarily affects the reticuloendothelial system. But, the extent of liver damage in due course of the disease is unclear.

Materials and Methods

The study included 325 brucellosis patients with significant hepatobiliary involvement identified with microbiological analyses from 30 centers between 2000 and 2013. The patients with ≥ 5 times of the upper limit of normal for aminotransferases, total bilirubin level ≥ 2 mg/dl or local liver lesions were enrolled.

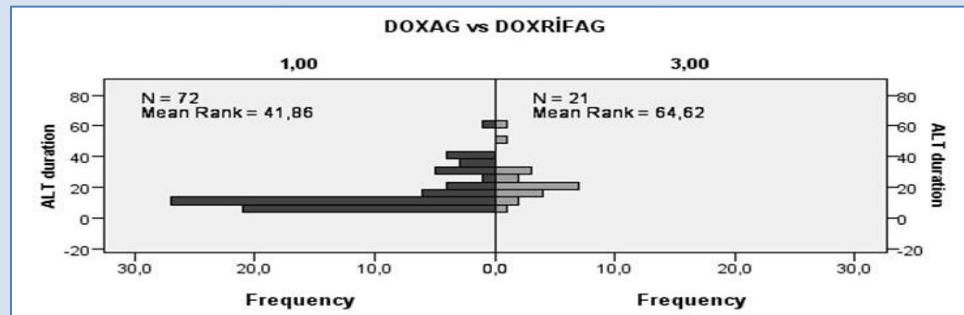
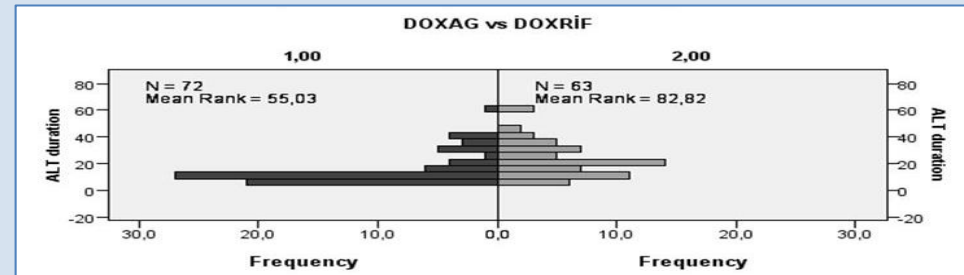
Results

Clinical hepatitis was detected in 284 patients (87.3%) and cholestasis was detected in 215 (66.1%) patients. Fatigue (91%), fever (86%), sweating (83%), arthralgia (79%), lack of appetite (79%) were the major symptoms. Laboratory tests showed anemia in 169 (52%), thrombocytopenia in 117 (36%), leukopenia in 81 (25%), pancytopenia in 42 (13%), and leukocytosis in 20 (6%) patients. When the patients with diffuse and granulamotous hepatitis were compared for ultrasonographic findings, the major difference was diffuse decline in echogenicity in favor of the latter ($p < 0.05$). The most commonly used antibiotic combinations were doxycycline plus an aminoglycoside ($n=73$), doxycycline plus rifampicin ($n=71$), doxycycline plus rifampicin and an aminoglycoside ($n=27$). The duration of ALT normalization differed significantly in three treatment groups ($p < 0.001$) (figure 1). The use of doxycycline and an aminoglycoside in clinical hepatitis showed better results compared to doxycycline and rifampicin or rifampicin, aminoglycoside, doxycycline regimens ($p < 0.05$) (Figure 2) However, the length of hospital stay did not differ significantly between these three combinations ($p > 0.05$). During the follow-up, treatment failure occurred in four patients (1%) and relapse was seen in three patients (0.9%). Mortality was not observed.



DOX+AG: Doxycycline plus an aminoglycoside, DOX+RIF: Doxycycline plus rifampicin, DOX+RIF+AG: Doxycycline plus rifampicin and an aminoglycoside

Fig.1. The comparison of three treatment arms according to the duration of ALT normalization ($p < 0.001$).



DOXAG: Doxycycline plus an aminoglycoside, DOXRIF: Doxycycline plus rifampicin, DOXRIFAG: Doxycycline plus rifampicin and an aminoglycoside

Fig.2.a&b. The comparison of DOXAG with DOXRIF (a) and DOXRIFAG (b) according to the duration of ALT normalization. (a) $p < 0.001$, (b) $p = 0.001$

Conclusions

Hepatobiliary involvement in brucellosis has a benign course with suitable antibiotics and the use of doxycycline and an aminoglycoside regimen seems a better strategy in select patients