

HAI by Hepatiq: Marker for ALD or for alcoholic hepatitis?

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INTRODUCTION

The cause of the sudden change in the course of alcoholic liver disease (ALD) characterized by jaundice and ascites is unclear. Liver biopsy may show terminal hepatic vein fibrosis or veno-occlusive disease with/ or without cirrhosis. We have reported the Hepatic activity index (HAI) on quantitative liver spleen scan (QLSS) as a hemodynamic index reflecting severe early injury in alcoholic hepatitis (AH) that may correlate with the hemodynamic changes described above. We compared patients with alcoholic liver disease with an HAI $<-.09$ with those with $>-.09$ to determine what factors explained the differences.

Table 1

	#		Wt (Lb/IBW)	PHM	fSV (cc/lb IBW)	fLV (cc/lb IBW)	HAI	Days No alc
HAI $<-.09$	9	avg(SD)	1.14(.13)	57 (7)	3 (2)	12 (5)	-0.31 (.17)	-65 (41)
HAI $>-.09$	11	avg(SD)	1.12(.12)	86 (20)	3 (2)	10 (3)	0.06 (.10)	293 (78)
p			ns	$<.001$	ns	.05	$<.001$	$<.001$

RESULTS

ALD was present in 21 patients of the 258 total patients. 10 patients had a HAI $<-.09$ and 9 of these had acute alcoholic hepatitis. In the remaining 248 patients with an HAI $>-.09$ there were an additional 11 patients with ALD for comparison with the 9 patients with HAI $<-.9$ (see table) to determine what the difference was between the two groups and whether HAI was detecting ALD or a specific stage in the evolution of ALD.

PATIENTS

258 consecutive patients: ALD (20), HCV (27), HBV (40), NAFLD (51), CC (6), immune (23), misc (81). The clinical diagnosis of ALD was based on lack of other cause for the CLD, heavy alcohol intake, presentation with jaundice and/or ascites and/or liver biopsy. ALD could be acute or a more distant diagnosis with recovery. Cirrhosis was diagnosed by biopsy, nodular liver surface (US, CT or MRI) or PHM < 95 . Length of abstinence was recorded as date of scan minus date of abstinence. Negative numbers reflect continued drinking after the first scan.

CONCLUSIONS

- **HAI $<-.09$ is strongly suggestive of acute alcoholic hepatitis**
- **HAI returns to normal with recovery associated with abstinence**
- **HAI is diagnostically useful differentiating recent severe acute alcoholic injury from recovered ALD and other non-alcoholic liver diseases**