Table 6: Comparisons of the parameters of the IAHG scoring system among patients with AIH/overlap syndromes (n = 10), coincidence of AIH and other liver disease (n = 14) and AIH patients (n = 43).

Characteristics	Patients with AIH/overlap syndromes no. of patients (%)	Patients with coincidence of AIH and other liver disease no. of patients (%)	Patients with AIH no. of patients (%)	P value
Gender				
Female	5 (50)	7 (50)	33 (76.7)	NS
Male	5 (50)	7 (50)	10 (23.3)	
ALP/ALT ratio				
Positive: score +2	8 (80)	12 (85.7)	41 (95.3)	NS
Negative: score 0, -2	2 (20)	2 (14.3)	2 (4.7)	
Serum globulin or IgG above normal				
Positive (score ≥ 1)	7 (70)	10 (71.4)	34 (79.1)	NS
Negative (score 0)	3 (30)	4 (28.6)	9 (20.9)	
ANA, SMA or anti-LKM				
Positive (titre ≥ 1:40)	9 (90)	14 (100)	43(100)	0.055*
Negative	1 (10)	0	0	
AMA				
Positive (titre ≥ 1:40)	4 (40)	0	0	<0.001*
Negative	6 (60)	14(100)	43 (100)	
Hepatitis viral markers				
Yes	0	8 (57.1)	0	<0.001*
No	10 (100)	6 (42.9)	43 (100)	
History of illicit drug use				
Yes	0	0	1 (2.3)	NS
No	10 (100)	14 (100)	42 (97.7)	
Average alcohol intake				
<25 g/day	10 (100)	11 (78.6)	42 (97.7)	0.022*
>60 g/day	0	3 (21.4)	1 (2.3)	
Histological score				
Positive (score > 0)	3 (30)	10 (71.4)	35 (81.4)	0.005*
Negative (score ≤ 0)	7 (70)	4 (28.6)	8 (18.6)	
Aggregate histological score (mean ± SD)	-2.1 ± 4.4	2.14 ± 1.7	2.73 ± 1.98	0.001**
Other autoimmune disease				
Yes	5 (50)	2 (14.3)	25 (58.1)	NS
No	5 (50)	12 (85.7)	18 (41.9)	
Aggregate AIH score (mean ± SD)	9.3 ± 4.8	10.5 ± 3.7	17 ± 3.05	<0.001**

Abbreviations are same as in text; NS: not statistically significant; SD: standard deviation; * Total x square (comparison amongst the three groups of patients; for statistical significance between groups see text of results, subheading *Comparison between groups*, third paragraph); **Kruskal-Wallis test (comparison amongst the three groups of patients; for statistical significance between groups see text of results, subheading *Comparison between groups*, third paragraph).

of liver disease (n = 24) compared to the respective score in AIH patients but significantly higher compared to that found in patients with chronic liver diseases (n = 423). The same findings observed when AIH/overlap syndromes and AIH concurrent with other liver diseases compared separately with AIH patients (n = 43) and patients with chronic liver diseases (n = 423), while the aggregate AIH score did not differ between patients with AIH/overlap syndromes and those with coexistence of AIH and other liver disease (Fig. 1). In addition, we showed that the total histological score, seropositivity for autoantibodies and the presence of other autoimmune diseases were independent predictive factors for the presence of AIH in association with any kind of other liver disorder. Separate analysis of the two groups showed that the presence of other autoimmune diseases and the total histological score were stable independent predictors for the identification of the presence of AIH/overlap syndromes and the coexistence of AIH and other liver disease, respectively. These findings are in accordance with previous reports [48] suggesting that the IAHG scoring system does provides some help for identifying the presence of AIH in association with any kind of liver diseases.

The presence of liver biopsy as an independent discriminative factor in almost all of our comparisons underlines its overall significance in the diagnosis of the AIH component of the individual case. For these reasons we believe that the second major point arising from our study is that the liver biopsy is essential in patients with liver diseases