

Hepatocellular carcinoma and metabolic risk factors in a main reference center in Italy

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BACKGROUND

Hepatocellular carcinoma (HCC) is increasingly reported to be related with metabolic risk factors, mostly in patients with nonalcoholic fatty liver disease (NAFLD). Particularly, obesity, type 2 diabetes mellitus (T2DM), and dyslipidemia are the most common metabolic risk factors associated with NAFLD. Among the components of metabolic syndrome, current evidence strongly indicates obesity and diabetes as hepatocellular carcinoma (HCC) risk factors.

AIM

Our aim was to evaluate the impact of metabolic factors and the related NAFLD in the recurrence, severity and therapy of HCC.

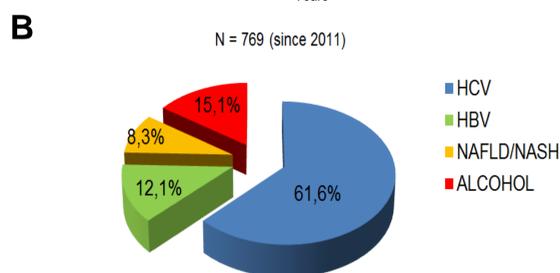
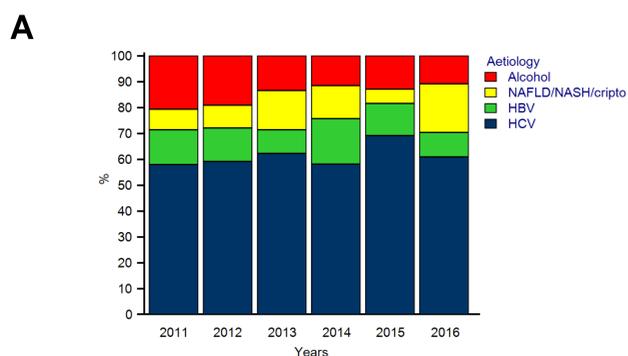
METHODS

Following the introduction of a centralized specialist team to manage patients with HCC, we characterized the demographics of patients referred to the GI Division at the University Hospital of Torino and sought the relationship between the severity of HCC and their metabolic comorbidities.

In total 1039 patients with HCC were consecutively referred since 2011

RESULTS

Clinical, epidemiological and metabolic characteristics of HCC affected patients are shown in the following figures.

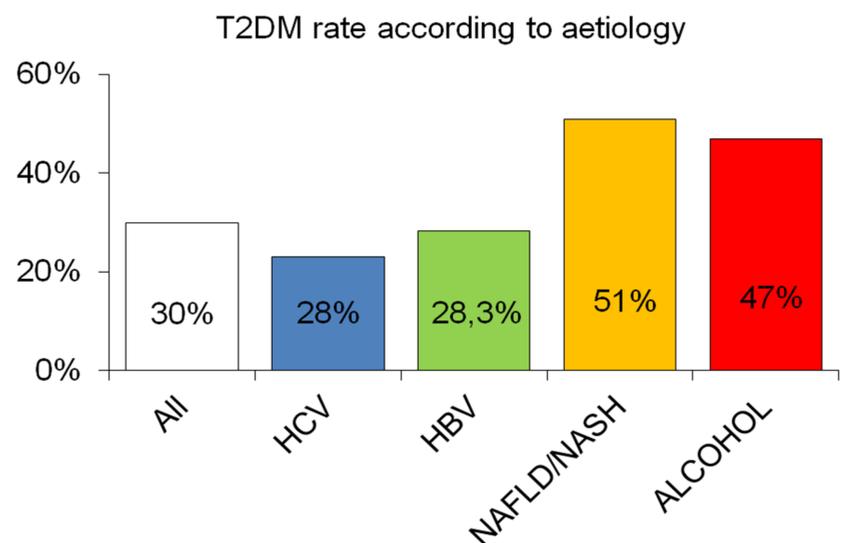


In **Figure 1 A-B** we can see the incidence of HCC divided by aetiology. An increase of NAFLD/NASH-HCC and a decrease of all other causes has been observed.

Figure 2 shows the prevalence of Type 2 Diabetes according to aetiology. In this context, the highest prevalence is observed in HCC patients affected by NAFLD/NASH.

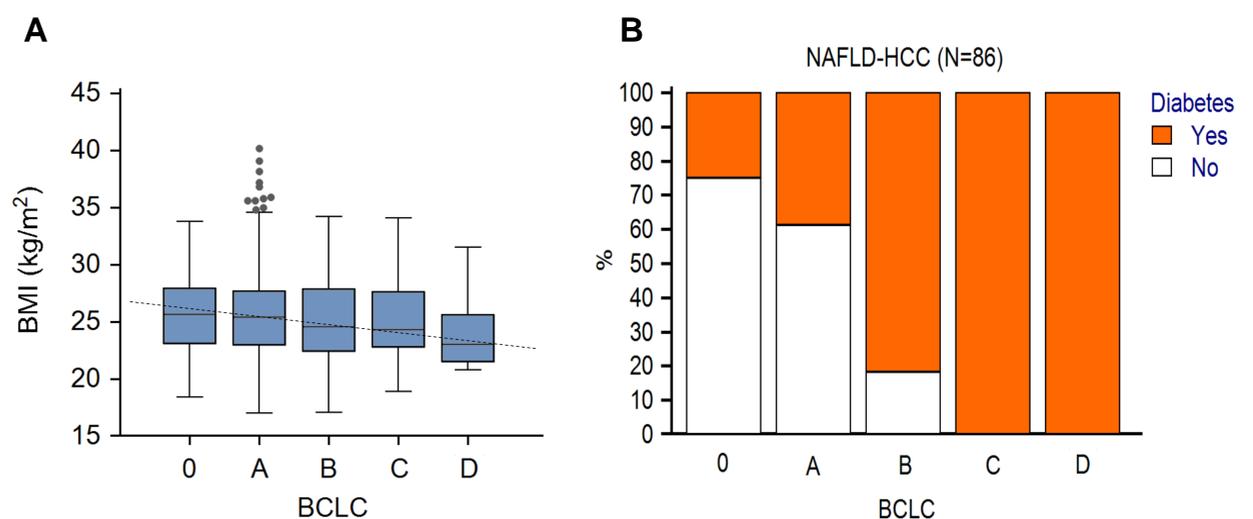
RESULTS

Figure 2



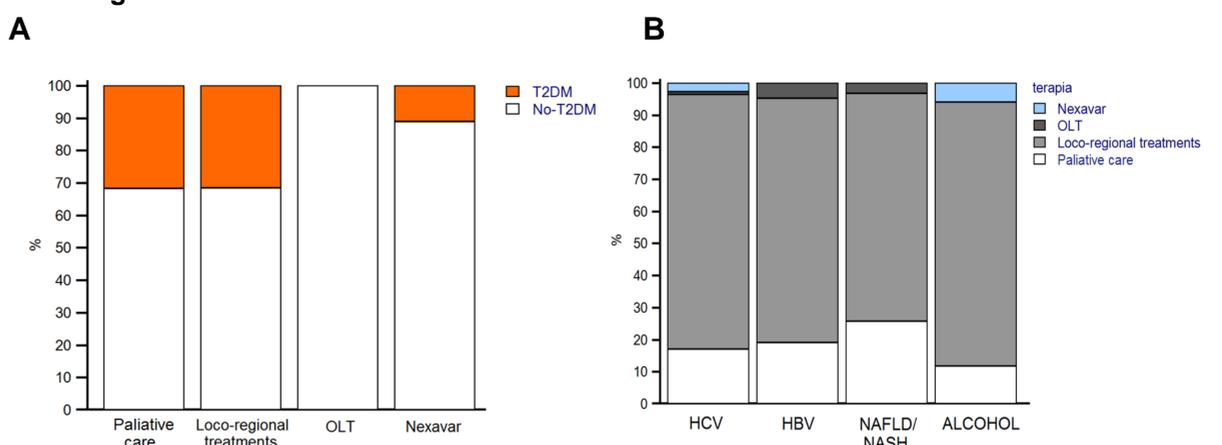
Barcelona Clinic Liver Cancer (BCLC) stage was inversely related with BMI (OR 0.64, 95% CI 0.42-0.98; p=0.0384) in the whole cohort (**Figure 3A**) and in the NAFLD-HCC cohort it was directly related to the presence of DM (OR 11.3, 95% CI 2.1-62.1; p=0.0052), **Figure 3B**.

Figure 3



The presence of T2DM is associated with a higher likelihood of loco-regional and/or palliative treatments compared to liver transplant or pharmacological therapy (**Figure 4 A**). When HCC patients were subdivided according to aetiology, the access to therapeutic options was not significantly different across groups (**Figure 4 B**).

Figure 4



CONCLUSIONS

The presence of DM is associated with HCC severity according to BCLC score in the NAFLD-HCC cohort and it is also associated with multiple loco-regional therapy and less likelihood of surgical treatment in the whole HCC cohort.