Mortality trend for hepatocellular carcinoma in Albania: a hepatitis B virus endemic area

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Introduction: Albania remains a high hepatitis B virus endemic country, despite the evident reduction of HBsAg in the general non-vaccinated population from 18% to 9.5% after the implementation of the hepatitis B vaccination program (1). Also, chronic hepatitis B virus infection is recognized as the most common risk factors for hepatocellular carcinoma (HCC) which is the second cause of death from malignancy in the world (2). Therefore, it seemed of interest to investigate the mortality from HCC in a high-risk area. The aim of this study was to describe the trend of HCC mortality among different age groups in Albania, an endemic area of hepatitis B virus infection in South-eastern Europe.

Methods: We retrieved official death certification data for liver cancer (ICD-9 code: 155.0) from 2006 till 2010 based on the official information from the Institute of Statistics. We calculated age-standardized mortality rates per 100,000 persons by sex in separate age groups and overall using the world standard population as reference. Annual percent change (APC) was computed for each identified trends by fitting a regression line to the natural logarithm of the rates using calendar year as a regressor variable.

Results: Overall, HCC mortality (per 100,000 persons) was 5.4, 5.3, 5.8, 4.9 and 4.2 for the years 2006, 2007, 2008, 2009 and 2010, respectively. During these five years HCC has declined (APC = -8.3%) even though it is not significant (p trend = 0.23). There was a similar decline in men and women (APC = -7.6% and APC = -8.1%, respectively). HCC mortality decreased in all age groups with different APC. There was decreasing significant trend in the youngest age group (APC = -18.8% at age 20-49, p trend < 0.05) whereas a decreasing not significant trend was observed in the middle-aged and the oldest age group (APC = -4.6% at age 50-69, p trend = 0.4 and APC = -7.5% at age 70-79, p trend = 0.5) (Graphic).

Conclusion: HCC mortality has shown a decreasing but not significant trend in Albania during 2006-2010. However, these findings indicate that thanks to hepatitis B vaccination program a decline began with the more favourable significant trend in the youngest age group. Furthermore, our results suggest that public health strategies for HCC screening should differ by age-groups in an endemic area of hepatitis B virus.