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Prevalence of Hepatitis C Virus (HCV) Infection and its related risk factors among chronic carriers in Southern Italy

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Introduction and purpose

Hepatitis C virus (HCV) infection is a major public health problem worldwide. An estimated 170 million persons have been infected with HCV globally and persistent HCV infection is a leading cause of serious liver disease, including cirrhosis and hepatocellular carcinoma (HCC), especially in HCV endemic areas, like Southern Italy. The aim of this study was to determine the prevalence of anti-HCV antibodies and the viremic rate in Southern Italy in three different periods 2006-2008, 2009-2011 and 2012-2014 and the association between these changes and risk factors.

Methods

We retrospectively studied 16275 sera collected between 2006 and 2008, 21108 from 2009 to 2011 and 25672 in the period ranging between 2012-14. Anti-HCV was performed using a Chemiluminescence assay (Ortho Vitros) and all the positive samples were confirmed using a third generation RIBA assay (Inno-Lia HCV score, Fujirebio). Only seropositive samples were tested by Polymerase Chain Reaction (Ampliprep/Taqman 48, Roche Inc.) in order to evaluate HCV RNA viremia. Pearson chi-square test and t-test were used to statistically analyse the results.

Results

The overall weighted prevalence of hepatitis C antibodies showed a decrease from 2006-2008 (8.0%) to 2012-2014 (6.4%) showing an increase in the viremia (54,0% in 2006-2008 vs 61,4% in 2012-14). Prevalence of infection increased in older groups but was similar for both sexes. The analysis of the main risk factors associated with HCV infection showed a significant change among the three periods studied. Dental therapy that was the predominant risk factor before 2012 (40,7%) showed a significant decrease (24,9% in 2012-14), whereas infections related to surgery and intravenous drug use increased (from 11,8% and 6,3% respectively in 2009-11 to 36,9% and 9,0% in 2012-14).

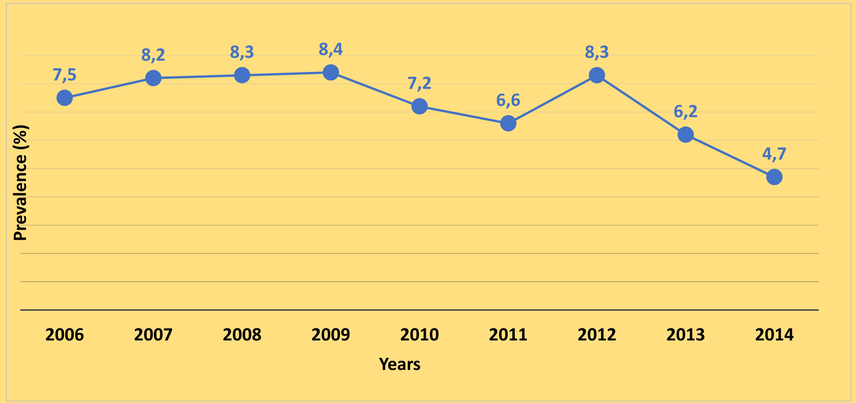

Figure 1 : Anti-HCV prevalence from 2006 to 2014

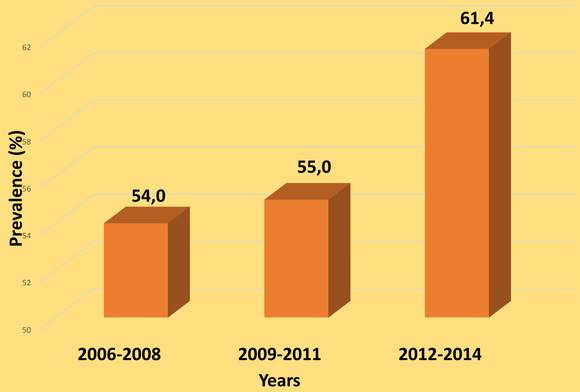

Figure 2: HCV viraemic rate from 2006 to 2014

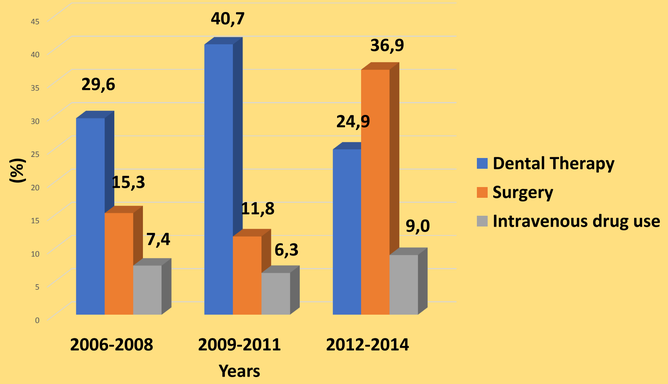

Figure 3: Risk factors among HCV carriers from 2006 to 2014

Conclusions

Anti-HCV prevalence in the Southern Italy population showed a significant decrease from 2006 to 2014, although we observed a change in the transmission routes.