

HBV AND HCV PREVALENCE IN WESTERN ARGENTINA: IMPORTANCE OF HEPATITIS B VACCINATION.

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BACKGROUND

Viral hepatitis has a significant cost in lives, communities and health systems, with an estimated 1.4 million deaths per year due to acute infections and because of the complications of the chronicity of some viruses such as cirrhosis and Hepatocellular carcinoma.

Argentina has a population of 40,091,359 inhabitants, according to the population census of the year 2010, emphasizing that its population is composed of descendants of two main migratory flows, such as the Spanish and Italian of the early 20th century (National Population Census: www.censo2010.indec.gov.ar). Mendoza province has a population of 1,738,929 inhabitants and is located geographically in the central west of the Argentine Republic (www.censo2010.indec.gov.ar).

To determine preventive measures is important to evaluate the prevalence of HBV and HCV infection. However, there is a paucity of studies regarding epidemiology of these viruses in Argentina due to difficulty to obtain serum samples and to recruit general population. Most of studies are conducted in blood donors or specific groups, such as coinfecting to HIV (Flichman et al., 2014; Ré et al., 2008; Quarleri et al., 2007).

OBJECTIVES

This study aims to estimate the prevalence rates of HBV and HCV in different populations of Mendoza province, Argentina.

METHODS

A cross-sectional study included 622 patients recruited in three different counties of Mendoza city Province. Mendoza Province is in west part of Argentina, has 18 departments, more than 900,000 inhabitants and it is the fourth largest city of Argentina and an important region of wine production in Argentina.

All participants had more than 18 years old and gave written informed consent to participate in this study.

A total of 252 subjects were recruited in Junín department during a campaign for hepatitis testing and counselling from October 20 to 24th 2014; 205 individuals recruited in San Martín department during December 10 to 13th 2014 previous to a rock festival. A total of 165 suspected cases of viral hepatitis admitted to public health service of Central Hospital of Mendoza during October to December 2014.

Serum samples were tested for HBsAg, anti-HBc, anti-HBs, anti-HCV using commercial enzyme immunoassay (ELISA) kits (Diasorin, Pomezia, Italy) according to the manufacturer's guidelines.

CONCLUSIONS

- This study demonstrates low prevalence of HBsAg, anti-HBc and anti-HCV markers in general population compared to hospital setting (Mendoza city), probably due to the number of suspected cases referred to the center.
- More than 60% of individuals in each setting were not immune to HBV infection showing the importance of vaccination campaigns in Mendoza Province. Hepatitis B virus immunization is a critical intervention for the elimination of hepatitis B virus epidemics.

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RESULTS

There was a predominance of female in Junin (69.84%) and Mendoza settings (66.06%) and male predominance in San Martín setting (70.73%). Mean age was: 29.57 10.98, 40.47 14.16, 39.65 14.95 in San Martín, Junin and Mendoza. Majority of respondents had primary school in all settings. HBsAg, anti-HBc, anti-HBs and anti-HCV prevalences were: 0.48%, 4.39%, 31.70%, 0.48% at San Martín; 1.98%, 3.57%, 35.71%, 1.98% at Junin; 3.03%, 9.09%, 37.57%, 6.06% at Mendoza city, respectively.

Table 1 . Main Characteristics of population studied.

Variable	San Martín (n=205)	Junin (n=252)	Mendoza (n=165)
Age, years, mean±SD	29.57±10.98	40.47±14.16	39.65±14.95
Gender			
Female (%)	60	176	109
Male (%)	145	76	56
Marital Status, married	18	143	68
Scholarity			
Illiterary	07	36	28
Primary Education	103	91	61
Secondary Education	90	79	57
College	5	46	19
History of Blood transfusion	18	37	20
HBV Vaccine	28	90	111
History of Haemodialysis	01	00	02
Toothbrush sharing	11	03	20
Tattoo history	141	32	38
Use of illicit narcotic substances	152	11	16
Sharing nail pliers	155	201	91
Depilation	43	81	29
History of intravenous medicine	NA	139	70

Table 2 . HBV and HCV markers according population settings.

Variable	San Martín (n=205)	Junin (n=252)	Mendoza (n=165)	p value
HBsAg				0.172
Reactive	01	05	05	
Non Reactive	204	247	160	
Anti-HBc				0.038
Reactive	09	09	15	
Non Reactive	196	243	150	
Anti-HBs				0.469
Reactive	65	90	62	
Non Reactive	140	162	103	
Anti-HCV				0.003
Reactive	01	05	10	
Non Reactive	204	247	155	

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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