

The prevalence of anti-HBc Ab in blood donors: The importance of screening kits

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Introduction

HBV infection is associated with a variety of clinical manifestations including ; acute hepatitis and Hepatocellular carcinoma.

Nearly 250 million people are infected with the virus in the world.

Occult Hepatitis B infection (OBI) is a state of hepatitis where the virus can be detected with **low loading** in the serum and the **anti-HBc positive** serologic marker but **HBsAg is negative**

Objective

In this study:

Dia-pro diagnostic bio probes HBC-AB and Enzygnost[®] Anti_HBC monoclonal simense kits have been compared with the emphasis on the screening of occult hepatitis B virus infection.



method

The population study was blood donors in Golestan province. The donors were negative for HBs Ag.

SPSS 16.0 software was used for data analysis and paired sample t-test was used to compare two kits.

method

Enzygnost[®] Anti_HBc monoclonal simense

sensitivity	specificity	Cut-off	LOT
99% (with using a total of 413 anti-HBc positive)	99.6% (with using a total of 31813 anti-HBc negative)	Mean neg control \times 0.2	47203

dia-pro diagnostic bio probes HBC-AB kit

sensitivity	specificity	Cut-off	LOT
100% (with using a total of 262 anti-HBc positive)	100% (with using a total of 5179 anti-HBc negative)	(Neg control+ Pos control) / 5	c6t4/3

**Enzygnost[®]
Anti_HBC
simense**

4000 (Blood donor)



409 (10.2%) anti-HBc positive

**compare mean by Pair t-test for
anti-HBc positive**

498 (11.5%) for dia-pro

Pair t-test
:P>0.05

384 (8.5%) for simense

498 (11.5%) for dia-pro

Pair t-test
:P>0.05

409 (10.2%) simense

4313 (Blood donor)



498 (11.5%) anti-HBc positive



**dia-pro diagnostic bio
probes HBC-AB kit**



**Repeat with
simense kit**

384 (8.5%) anti-HBc positive



**Enzygnost[®]
Anti_HBC simense**

Result

discussion

Obi in Iranian blood center (important of study)				
Blood center/ date of study	OBI (%)	Sample	Anti - HBc Frequency(%)	Author
Shiraz/2015	0.08	2000	6.5	Kasraie
Kerman/2010	2.36	1525	8	Bayat
Bandar abbas/2012	0	1000	2.3	Khorani.etal
Tehran/2016	0	2031	4.9	Karimi.etal
Ahvaz/2016	0	184	1	Abassi.etal
Tehran/2015	4	1000	8	JAllali.etal
Arak/2009	0	531	2.3	Sofian.etal
Ahvaz/2010	1.5	3700	9.5	Arab abadi.etal
Tehran/2013	0	531	2	Ramezani.etal
Esfehan/2009	0.004	5000	9.8	Alizadeh.etal
Boshehr/2013	0.09	2041	3.8	Khomisipour.e tal
Tehran	0.08	545	8	Alizadeh.etal

Conclusion

Using anti_HBC monoclonal simense Causes a lower prevalence of antiHBc Ab. As a result, the use of different screening kits may cause a different report of the anti-HBc Ab test.

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