
بسم الله الرحمن الرحيم

Study of subclinical hepatitis A infection in ambulatory patients, with nonspecific abdominal complaints in Mofid hospital of Tehran Iran

Shirvani F., Taslimi N., Karimi A., Rahbar M. Study of subclinical Hepatitis A infection inambulatory patients, with nonspecific abdominal complaints in Mofid hospital of Tehran Iran.HealthMED.*Journal of Society for development in new net environment in B&H*.2012;6(10):3302-7

Background

- Over the last two decades, the epidemiology of Hepatitis A virus (HAV) has changed in many Asian and Middle Eastern countries.

In areas with poor water and sanitary conditions, HAV transmission occurs at earlier age.

Acquisition of acute infection in lower age has milder clinical symptoms and may be subclinical.

Lower antibody level at higher age may result in higher proportion of susceptible individuals and ends to more sever mortality and morbidity of Hepatits A in community.

Improvements in socioeconomic and health status leads to delay acquisition of infection from childhood to adulthood.

Increase in SGPT more than twice normal level can be a laboratory sign for subclinical Hepatitis A.

In this study we investigated Hepatitis A seropositivity in children with nonspecific gastrointestinal symptoms in a referral Children Hospital Mofid 2009-2010(TEHRAN-IRAN)

Materials and methods

Three hundred and ten children with nonspecific gastrointestinal complaints from (October 2009-June2010) came to emergency department of Mofid Hospital were subject of our study.

Materials and methods

Selection criteria:

were clinical symptoms more commonly found in patients with subclinical Hepatitis A infections.

Ten sign and symptoms which were

1- abdominal Pain

2-fever

3-fatigue

4- anorexia

5- nausea

6-vomiting

7- pain and tenderness on Right Upper Quadrant

8- history of hepatitis in one of family members or day care or school

9- dark colored urine and light colored stool

10- hepatomegaly

***having 4 criteria was enough to entre the study**

Exclusion Critrtia

Cases with known hepatic disease or any known infectious disease with hepatic involvement and patients with hepatic drug reactions were excluded from study.

(Panel 1)

CBC, DIFF and PLATELET, Bill Total and Direct, SGPT, Anti HAV IgG and IgM were performed for all study cases.

- CBC test was performed with Calibrated Kα21N system, SGPT was performed with Parsazmon Kit, and RA – 1000 SYSTEM,
- HAV IgG and IgM, were performed by DIALAB Kit (Enzyme Linked Immunosorbent Assay, Microwell Method, Technischen Produkten und Laborinstrumenten, Geselisschaft Geselisschaft M.b.h. office@dialab.at.

All data results entered and analyzed in SPSS 18 software (SPSS Inc Chicaggo)

Descriptive analysis was done by bivariate analysis using chi-square with 5% significance level and Multivariate regression analysis used for independent predictors of seropositivity and 95% CI was calculated.

Results

Three hundred-and-ten patients (184 boys and 126 girls) with mean age of 7.45±4.13 years were investigated.Age Range(1-15 yr)

130 cases (41.5%) were under 5 years old.

Results

- Out of 310 patients
- 40 (12.9%) patients were IgM positive and 103(33.2%) were IgG positive.
- 54 patients (17.5%) had SGPT>90 IU/Land 26 patients out of them(48.1%) were IgM positive.
- 90% of HAV IgM positive patients were IgG Positive

IgM and IgG seropositivity in different laboratory and epidemiologic groups

variables		positive	negative	95%CI	P value
gender	IgM seropositivity	Male 21	163	-	NS
		Female 19	107	-	NS
	IgG seropositivity	Male 38	68	-	NS
		Female 68	139	-	NS
Clinical criteria	IgM seropositivity	4.4±0.9	4.3±0.6	-0.2-3	NS
	IgG seropositivity	4.3±0.7	4.3±0.6	-0. -2-1	NS
bilirubin	IgM seropositivity	1.5±0.7	1.1±0.5	0.22-0.69	0.000
	IgG seropositivity	1.27±0.6	1.15±0.5	0.15-0.2	0.08
SGPT	IgM seropositivity	91.7±47	37±41	38.3-69.9	0.000
	IgG seropositivity	58.3±47.1	37.7±43	9.7-31.5	0.000
Total WBC	IgM seropositivity	8939±4138	7686±2896	-112.2-2618.2	0.07
	IgG seropositivity	8768±3669	7286±2673	578-2185	0.001
Lymph%	IgM seropositivity	57±13	49±16	2.7-11.9	0.002
	IgG seropositivity	52±14	49±16	-0.3-6.8	0.07
Hct	IgM seropositivity	40±6	38±5	-0.3-3.7	0.09
	IgG seropositivity	38±5	38±5	01.9-0.6	0.3

Clinical criteria= FEVER+anorexia+vomiting+nausea+RUQtenderness+darkUrine+paleStool+hepatomegally+fatigue+AbdominaPain+arthritis

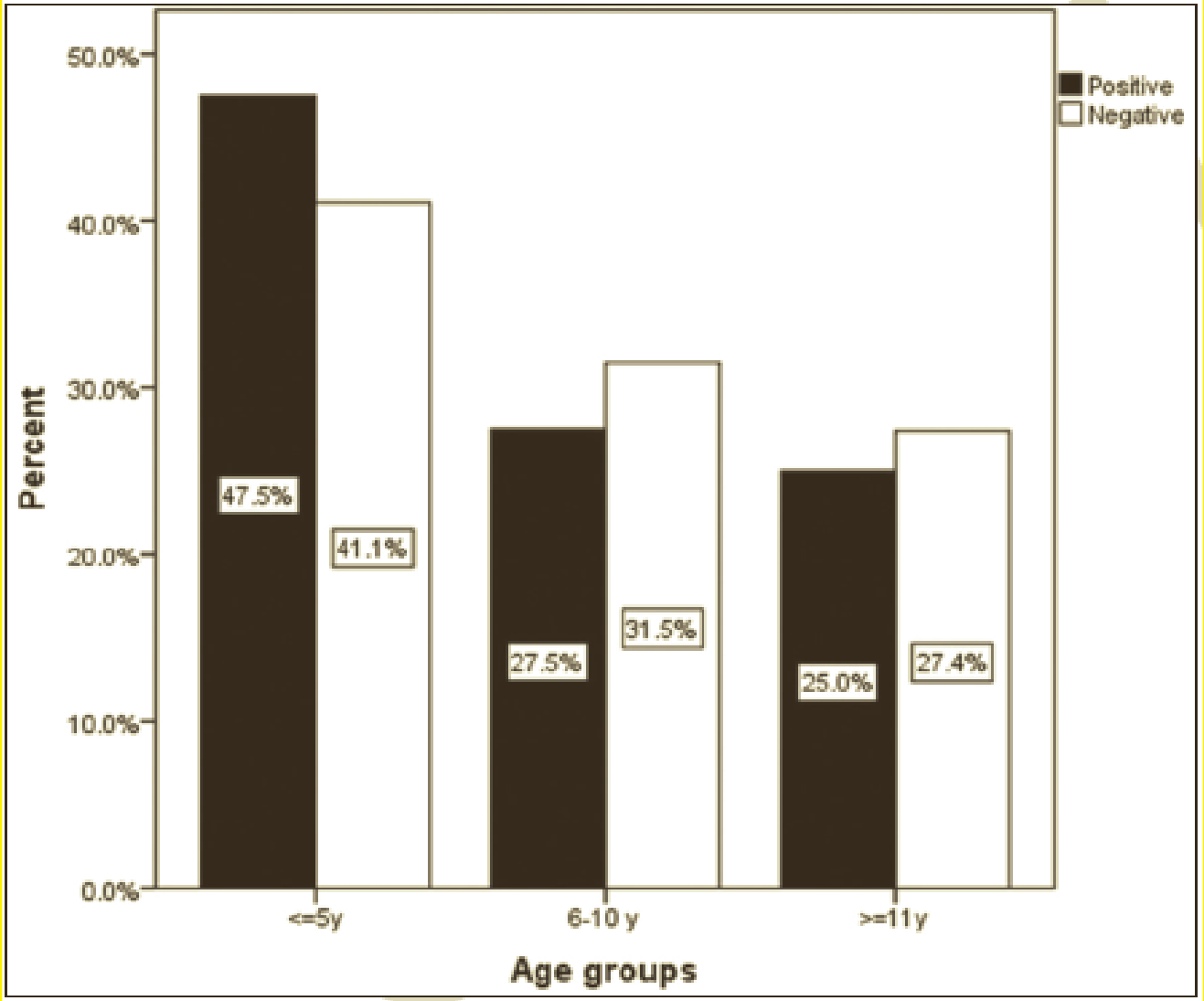

Figure 1. IgM Positive and Negative patints with different age groups in children with nonspecific Gastrointestinal signs and symptoms (Mofid Children Hospital 2009-2010))

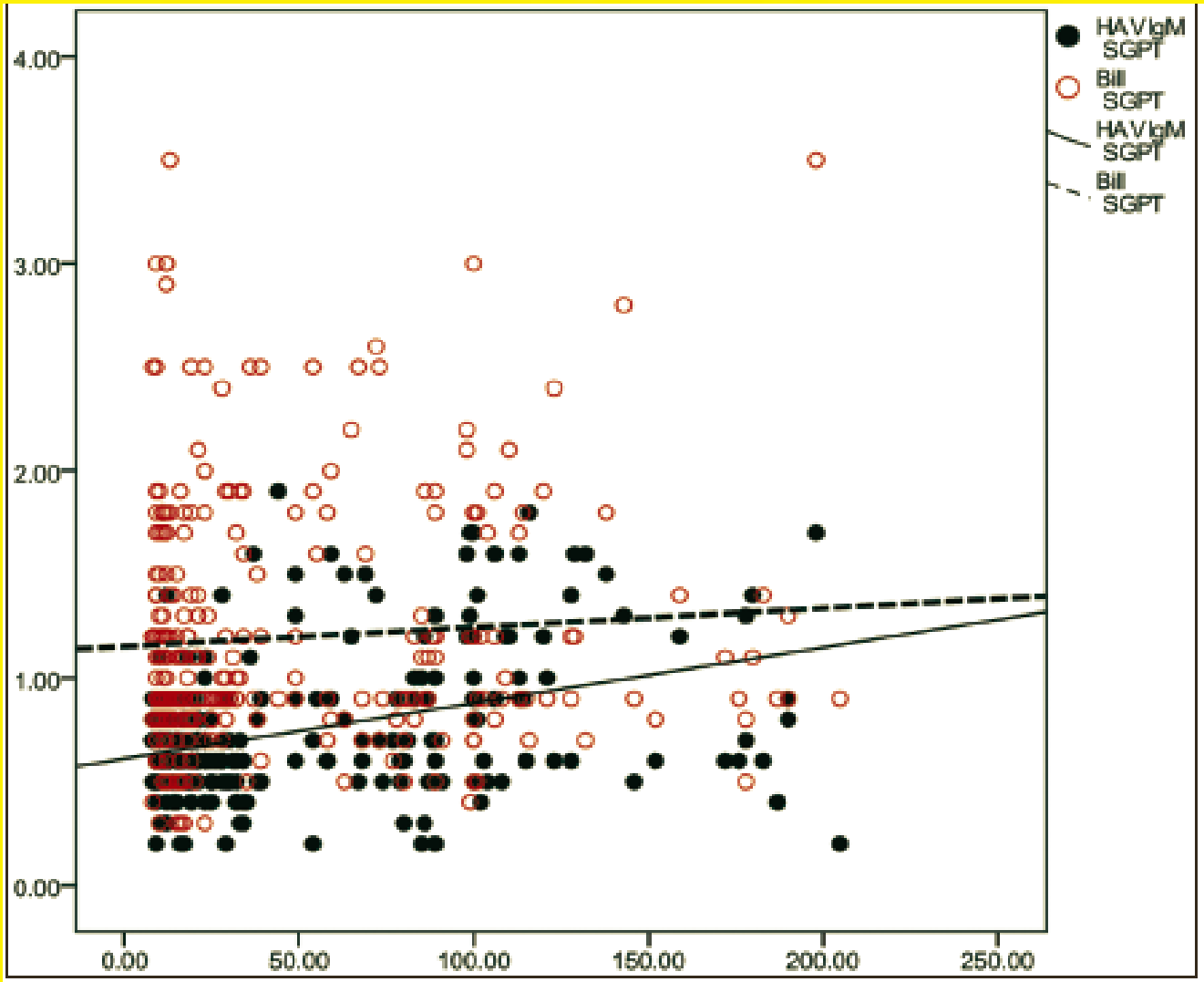

Figure 2. Relation between SGPT value and Bilirubin or HAV IgM in children with nonspecific gastrointestinal signs and symptoms (Mofid Children Hospital 2009-2010)

One fourth of cases with positive results for Hepatitis A are children over 10 years old,
This is an indication of more susceptible patients at higher age to this infectious disease.

Conclusion

More precise investigation of hepatitis A is mandatory to show the changing epidemiology of this disease.


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