



الجامعة السورية الخاصة
SYRIAN PRIVATE UNIVERSITY

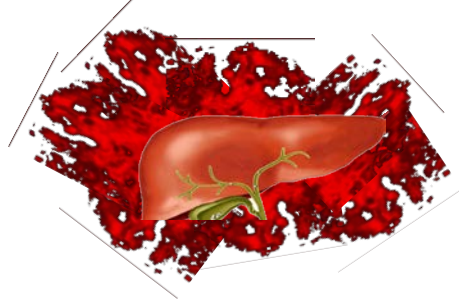
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Fourth lecture 2019 -2020

Chronic viral hepatitis general



**NASH-
Wilson
haemosidro
sis**



AIH



P.B.C

Viral hepatitis

AIC

**Metabolic
liver disease**

Auto Immune

P.S.C

Liver diseases

**Toxic
hepatitis**

**Non viral
Infection**



**cholestatic
&
Others**

**Bact. Parasit.
Spirochet.
others**

Background

- In addition, **HEV** can occasionally cause :
chronic infection among immunosuppressed persons.

Epidemiology

2015 :

- The global prevalence of HBV infection was
:
estimated at 3.5%
257 million persons living with chronic
HBV.

Facts about viral hepatitis

- There are usually few physical signs
- The plasma bilirubin reflects the degree of liver damage
- Prolongation of the prothrombin time indicates the severity of the hepatitis
The white cell count is usually normal with a relative lymphocytosis

- **HEPATITIS B**
- Humans are the only source of infection
- (HBcAg) is a protein which makes up the capsid or core part of the virus (found in the liver but not in blood)
- Hepatitis B e antigen (HBeAg) is part of the HBcAg which can be found in the blood and indicates infectivity
- Many individuals with chronic hepatitis B are also asymptomatic.

HBsAg

- appears in the blood late in the incubation period and before the prodromal phase of acute type B hepatitis.
it may be present for only a few days, disappearing even before jaundice has developed
but usually lasts for 3-4 weeks and can persist for up to 5 months.

Epidemiology

- Most of the burden of HBV-related disease results from:
infections acquired in infancy through perinatal
early childhood exposure to HBV

Note All body fluids are potentially infectious, although some (e.g. urine) are less infectious than others

Chronic hepatitis B (CHB) :
The persistence of HBsAg for
longer than
6 months indicates chronic
infection.

Infectivity

Like AIDS but

Hep B 100 times more concentrated in blood
(10^8 -- 10^{10} virion per ml in serum)

Infective concentration of HBV have been detective
on environmental surfaces in the absence of
visible blood

It is ability to remain stable outside and infective in
dried blood at room temperature for more than a
week

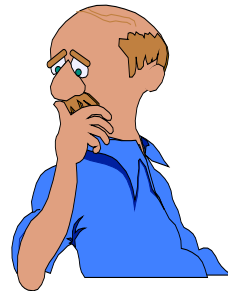
HCV

It is ability to remain stable outside and infective in dried blood at room temperature for 16 hours

- Overall , the risk of HCV transmission after percutaneous exposure is low, approximately 1.8 (<3%)



The risk of HBV seroconversion after a percutaneous injury ranges from **32% to 62%** in unvaccinated person and is dependent on the hepatitis B e antigen status of the source ,DNA ---



Mode of Transmission of HBV

Infected blood transfusion or blood products

Needle stick injuries: HCW - injection drug users

Hemodialysis

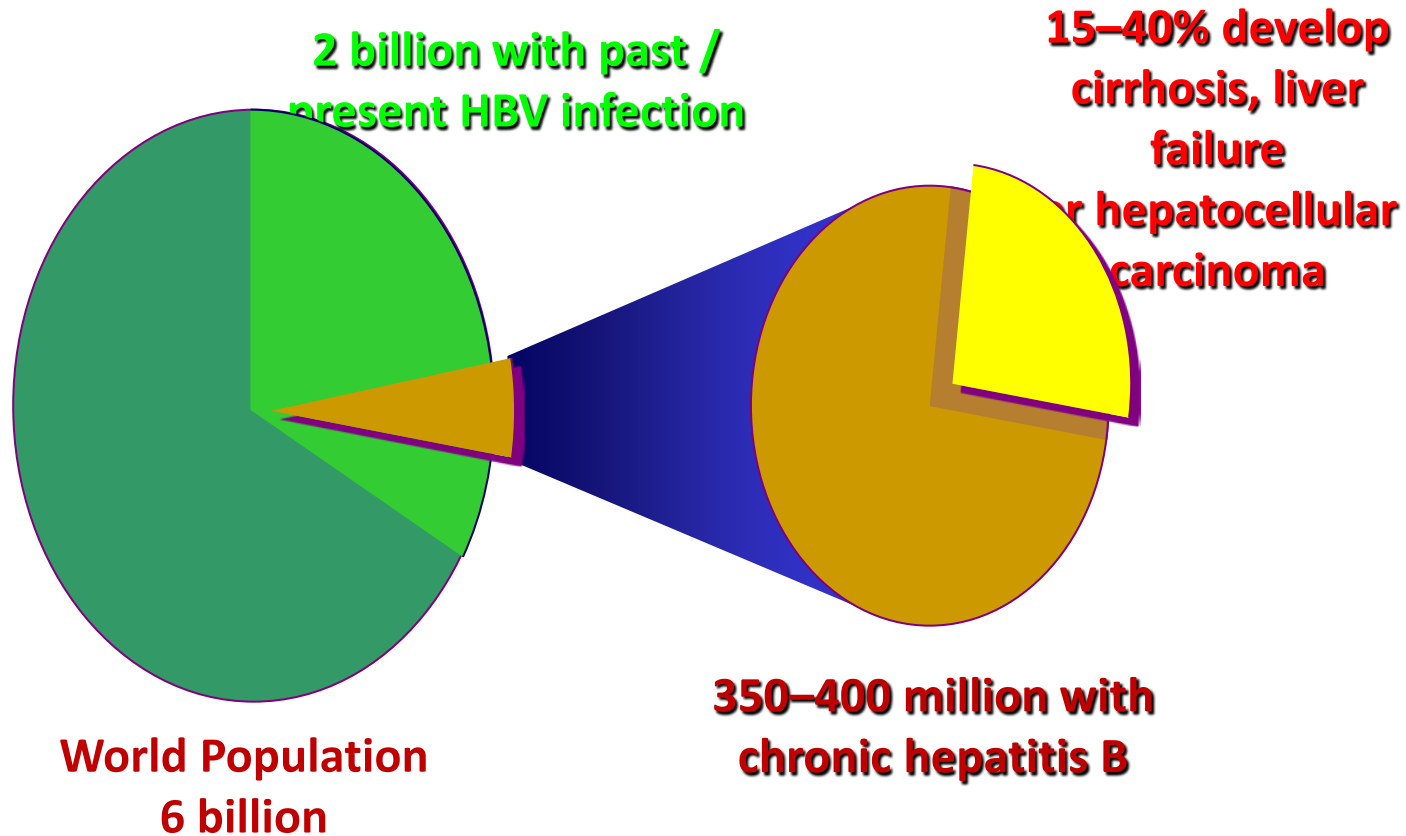
Sexual transmission: heterosexual - homosexual

Horizontal transmission: childhood - family member

Vertical Transmission (mother to newborn)

Unsafe Procedures: ear piercing - tattooing - barbering

Global Impact Of Hepatitis B Infection





World Health
Organization

Seroprevalence of Hepatitis B and C among selected population groups in Syria

Seroprevalence of Hepatitis B and C among
selected population groups in Syria



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Acknowledgment



**World Health
Organization**

Seroprevalence of Hepatitis B and C among
selected population groups in Syria



THE GRAPEVINE
Hepatitis B Infection High Among Unvaccinated
Refugees;
Germany Faces 'Public Health Concern'

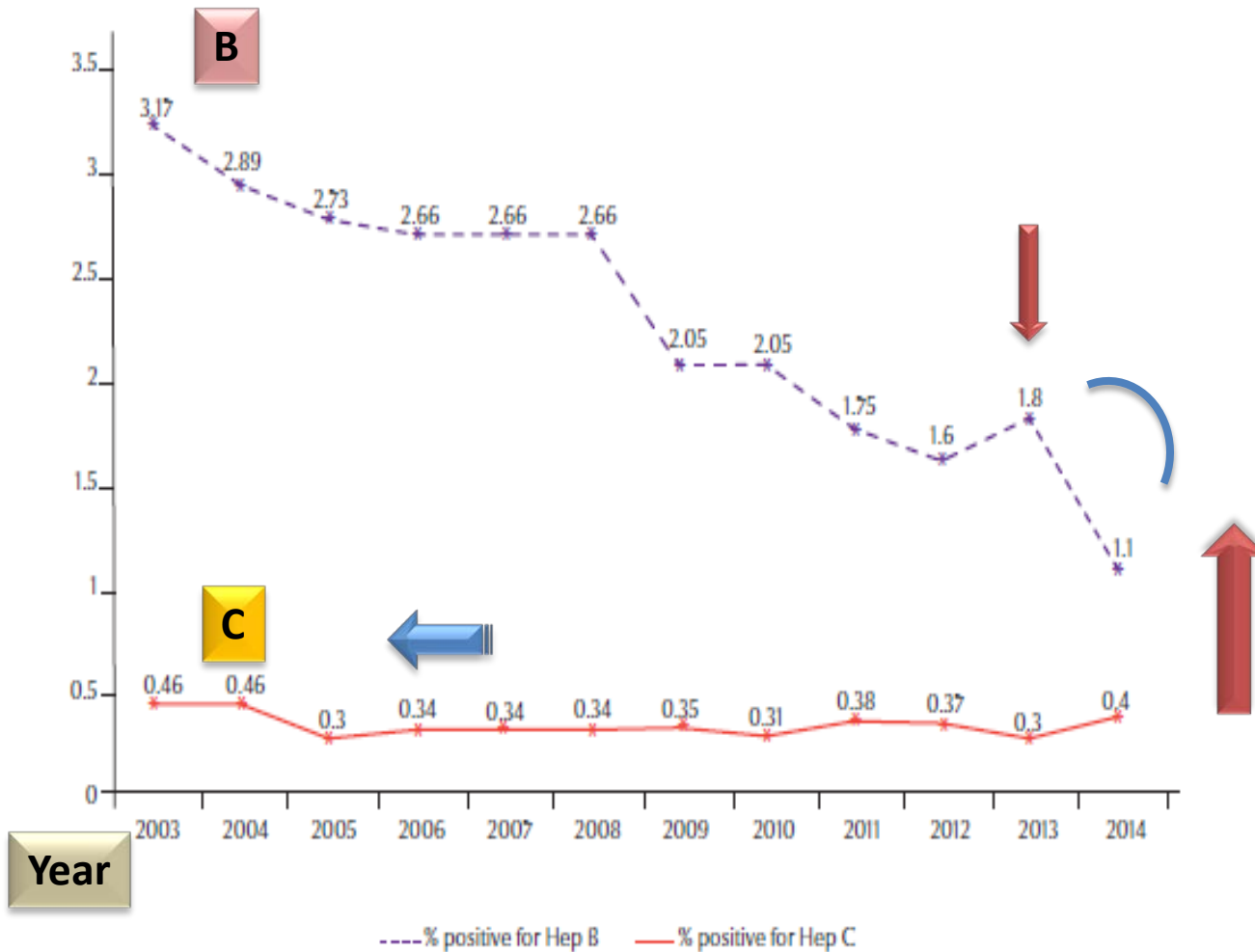


Solbach P, et al. PS137, Hepatitis B seroprevalence and immunization status of refugees seeking asylum in Germany in the current Middle-East crisis. EASL.
Apr 16, 2016

Seroprevalence of Hepatitis B and C among selected population groups in Syria; 2016

- The highest prevalence of HBsAg was seen among elderly group (3.1%) while the lowest was seen among the preschool and schoolchildren (0.6%)
- The positivity of HCV infection was very high among hemodialysis patients (14.4%) while it was low among blood donors (0.4%).
- The highest prevalence of HBsAg was reported in Aleppo (4.8%) followed by Hama (4%).
- Aleppo and Lattakia reported the highest prevalence of Anti-HCV (4.8% and 4.6% respectively).

City	NO.	HBS Ag	Prevalence rate	HCV	Prevalence rate
Damascus	366		5.19		0.55
 R . Damascus	384		3.12		1.04
Aleppo	720		10.55		10.14
Latakia	210		3.8		0
Tartous	142		2.1		0.7
Idlib	186		4.3		1.07
Homs	281		3.9		1
Hama	216		2.24		0.46
AL Raka	108		3.7		0.9
 Deer Al Zour	132		3.78		0.75
AL Hsaka	198		10.6		0.5
Dara	120		1.66		0
AL Swidea	78		2.56		0
AL kownetra	24		0		0
Total Laham 2004	3165		5.62		2.8



proportion positive for hepatitis B virus and hepatitis C virus in the blood banks (2003-2014) as reported to the Syrian ministry of health

Study Sample

- All targeted **22000**
- Each Target Group **2000**
- Random selection of some target groups but convenience sample of others

Seroprevalence of Hepatitis B and C among selected population groups in Syria

Target group
University and graduate students (20-29 years)
Users of health centers (30-59 years)
Retired (60+ years)
Preschool children (less or equal 6 year)
School children (7-19 years)
Blood donors
Pregnant women
Health Care Workers
High Risk groups
Frequent blood transfusions and hemodialysis patients
Internally Displaced Populations



الجمهورية العربية السورية
وزارة الصحة

Prevalence of HCV infection By Governorate



منظمة
الصحة العالمية

Governorate	Anti HCV+	
	No	%
Damascus	66/2929	2.3
Rural Damascus	89/3528	2.5
Daraa	9/975	0.9
Sweida	32/990	3.2
Quneitra	10/889	1.1
Homs	49/2065	2.4
Hama	93/3099	3
Lattakia	153/3317	4.6
Tartous	45/1772	2.5
Hassakeh	32/1984	1.6
Aleppo	15/310	4.8

Prevalence of HBV and HCV infections By Target Group



Pre School children (6 years or less)

School children (7-16 years)

University and graduate students (20-29 years)

Users of health centres (30-59 years)

Elderly (60 years and more)

Anti HCV

+

0.7%

0.8%

0.8%

0.5%

1.7%

Prevalence of HCV infections By Target Group



Anti HCV
+

Blood donors

0.4%

Pregnant women

0.5%

Health care workers

0.8%

Special high risk groups

7.6%

Frequent blood transfusion or haemodialysis

14.4%

Internally displaced populations

1.7%

Conclusions on HCV infection: Target Groups

- The sero prevalence of HCV infection is **low** (Less than 1.5%) among all apparently healthy groups
- The sero prevalence of HCV infection is **moderate** (1.5-3.5%) among elderly populations

Seroprevalence of Hepatitis B and
C among selected population
groups in Syria

Conclusions on HCV infection:

- **very high (> 3.5%)** among patients of:
- **Haemodialysis** & those with frequent blood transfusions
- **High risk groups**
(IV drug users and individuals in correctional facilities)

Seroprevalence of Hepatitis B and C among selected population groups in Syria

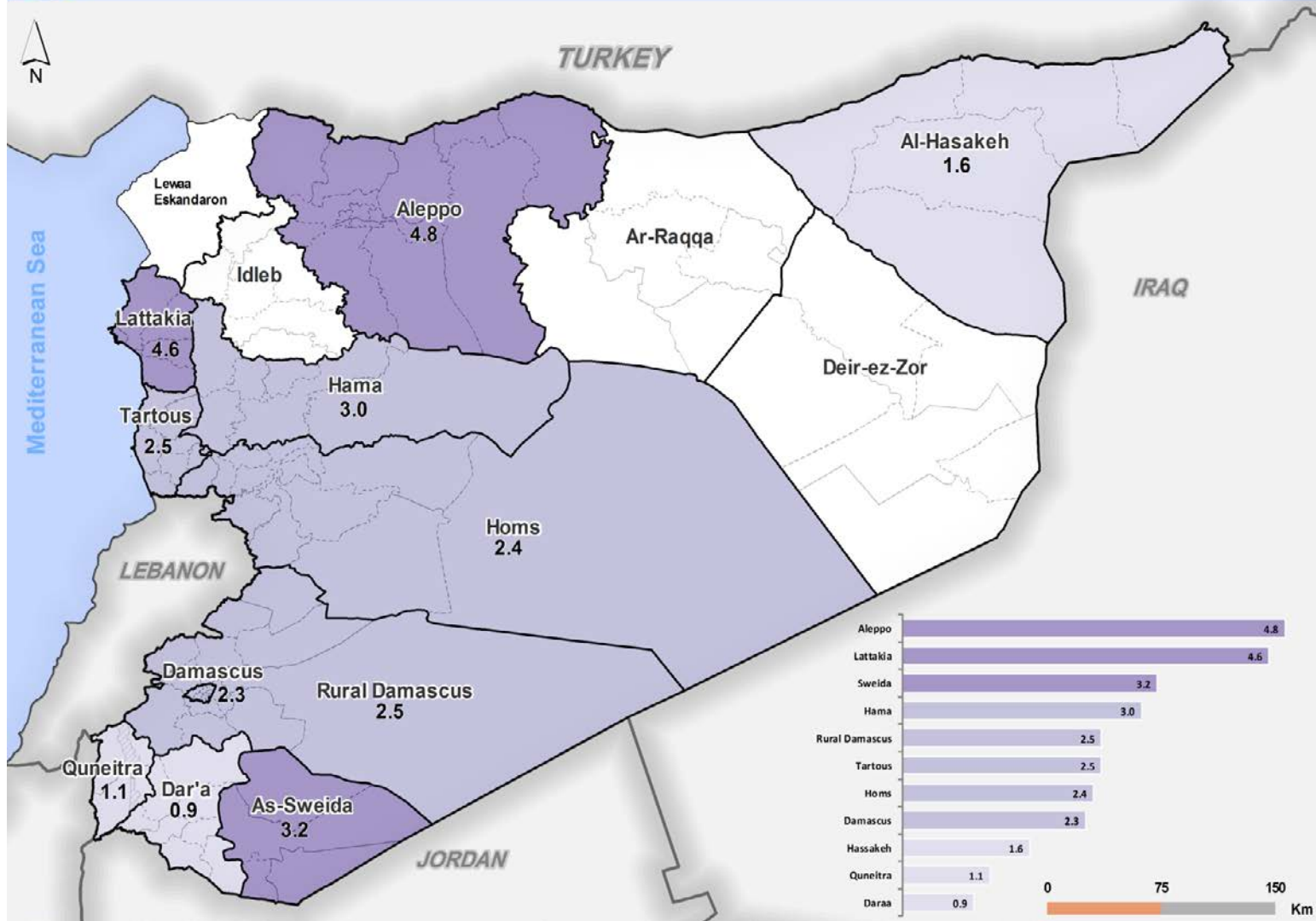
Conclusions on HCV infection: Geography

- The seroprevalence of HCV infection is moderate (1.5-3.5%) in all governorates **except Lattakia (4.6%) and Aleppo (5%).**

Seroprevalence of Hepatitis B and C among selected population groups in Syria



Syrian Arab Republic: The prevalence of Hepatitis C infection by Governorate



نسبة المعدل الوطني للإصابات المكتشفة
بالفحوص بالنسبة للحمى B و C ومقارنتها
مع نسبة الإصابات المكتشفة بالدم لبقية
الأمراض

السنة	1996	1998	1999	2000	2001	2002	2016
B	7.01 %	4.46 %	3.94 %	3.85 %	3.69 %	%3.61	<1
C	2.53 %	1.77 %	1.74 %	1.19 %	0.74 %	%0.46	>1.3
HIV	0.0 %7	0.15 %	0.13 %	0.1 %0	0.10 %	%0.16	

THANK YOU FOR YOUR TIME .

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