

RESEARCH ARTICLE

## Seroprevalence of Hepatitis B, C and HIV/AIDS in Asylum Seekers in Istanbul

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### ABSTRACT

**Objective:** This study aimed to determine prevalence of hepatitis B, C and HIV/AIDS in asylum seekers in Istanbul, Turkey.

**Methods:** The data about asylum seekers who applied in Istanbul between March 2008 and March 2010 were evaluated retrospectively. Demographic features and markers of blood borne infections (HBsAg, anti-HCV and anti-HIV results) of asylum seekers were reviewed.

**Results:** In total 3043 asylum seekers were included into the study. The leading origin countries of the refugees were from Afghanistan, Turkmenistan and Azerbaijan and majority of them (2328 people, 77%) were male. The young adults between 25 and 45 years constituted the most crowded group. Overall prevalence of HCV, HBsAg and HIV/AIDS were 12.2%, 5.9% and 0.7%, respectively. The highest seropositivity rate for anti-HCV, HBsAg and anti-HIV were found in Georgian males (47.1%); in Moldovan males (13.2%) and in Somali males (3.1%), respectively.

**Conclusion:** Mostly asylum seekers who have migrated to our country were young adult males from Asia. The highest prevalence rate of HCV was found in Georgian males. Therefore, the increased potential of migration to our country along the recent years necessitates development of an appropriate health approach concerning asylum seekers. *J Microbiol Infect Dis* 2014;4(1): 20-25

**Key words:** Asylum seeker, refugee, infection, prevalence

### İstanbul'daki sığınmacılarda Hepatit B, C ve HIV seroprevalansı

#### ÖZET

**Amaç:** Bu çalışmanın amacı İstanbul'da bulunan sığınmacıların hepatit B, C ve HIV/AIDS prevalansının belirlenmesidir.

**Yöntemler:** Mart 2008-Mart 2010 arasındaki iki yıllık dönemde İstanbul'da sığınma talebinde bulunan yabancıların verileri geriye doğru değerlendirildi kanla bulaşan enfeksiyonlar tarama verileri retrospektif olarak değerlendirildi. Değerlendirmede sığınmacıların demografik özellikleri ve kanla bulaşan enfeksiyon göstergeleri (HBsAg, anti HCV ve anti HIV testleri) gözden geçirildi.

**Bulgular:** Toplam olarak 3043 sığınmacı çalışmaya dahil edildi. Sığınmacılar en sık Afganistan, Türkmenistan ve Azerbaycan'dan kökenliydi ve çoğunluğu erkekti (2328 kişi, % 77). En kalabalık yaş grubu 25-45 yaş arası ile genç erişkin gruptu. Tüm sığınmacılar içinde anti HCV sıklığı % 12,2, HBsAg % 5,9 ve anti HIV % 0,7 olarak saptandı. Anti-HCV, HBsAg ve anti-HIV için en yüksek seropozitiflik oranları sırasıyla Gürcistanlı (% 47,1), Moldovalı (% 13,2) ve Somalili (% 3,1) erkeklerde saptandı.

**Sonuç:** Ülkemize sıklıkla Asya kıtasından göç eden sığınmacıların çoğu genç erişkin erkeklerdir. Anti-HCV Gürcistanlı; HBsAg Moldovalı ve anti-HIV ise Somalili erkek sığınmacılar arasında en yüksek sıklıktadır. Ülkemiz son yıllarda artan sayıda göç aldığından, sığınmacılar ve mültecilerle ilgili uygun sağlık yaklaşımlarına ihtiyaç vardır.

**Anahtar kelimeler:** Sığınmacı, mülteci, enfeksiyon, prevalans

#### INTRODUCTION

Millions of people on earth are forced to leave their native lands because of wars, famine, political, financial and social issues and to seek right to asy-

lum in foreign countries. The lexical meaning of a refugee is the person who has escaped to a foreign country because of any danger or persecution.<sup>1</sup> Legally a refugee is a stateless person in law since he has left his country because of political, social, reli-

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Received: 20.06.2013, Accepted: 06.08.2013

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gious or economic reasons and can not avail from the benefit of diplomatic protection by his native country in the citizenship status. The asylum seeker is a resident alien person who migrates to a third country because of same reasons since he was not accepted as a citizen by the first country.<sup>2</sup>

According to official records, there are approximately ten thousands of asylum seekers in Turkey and this amount is supposed to reach 50.000 with the unregistered residents.<sup>3</sup> As though, there are some literature concerns the social rights and problems of asylum seekers in Turkey, however, there is no paper on their health problems. This study has aimed to (1) obtain demographic data in terms of İstanbul where most of the asylum seekers are found in Turkey (2) to determine the prevalence of hepatitis B, hepatitis C and HIV/AIDS in these asylum seekers, and (3) to contribute to the establishment of an appropriate health approach in our country by attracting attention to the health issues of asylum seekers based on infectious diseases.

## METHODS

All asylum seekers in İstanbul are collected in the İstanbul Police Headquarters Foreigners Department and then they transfer to Haseki Training and Research Hospital. Serological results for asylum

seekers in İstanbul between the years March 2008 and March 2010 have been evaluated retrospectively. Serological indicators of hepatitis B and C virus (HBsAg, anti HCV) and HIV antibodies were investigated using a microelisa method (Bio-Rad-France, Murex-UK, Innogenetics-Belgium). Demographic and serological results of cases were obtained from hospital files and laboratory records retrospectively.

## RESULTS

The study included the 3043 asylum seekers who were residents in İstanbul in two-year period between March 2008 and March 2010. Of those 3043 asylum seekers, 2328 were male (77%) and 715 were female (23%). Their ages ranged between 0-73 years with mean value of 30 years. Of the cases, 2774, 186 and 46 had the age-ranges 15-44 (91.2%), 45-55 (6.1%) and 55 years or more (1.5%) whereas only 37 asylum seekers were younger than 15 years (1.2%). A significant part of the asylum seekers were young males between the ages of 25 and 45 (44%).

The asylum seekers included 736 Afghanis (24%), 699 Turkmen (23%), 200 Azerbaijanis (7%), 193 Georgians (6%), 148 Pakistani (5%) and while the remaining 1067 had various origins (35%) (Figure 1).

**Table 1.** Serological results of asylum seekers.

Countries	HBsAg positivity, n (%)			anti HCV positivity, n (%)			anti HIV positivity, n (%)		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
AFG (n=736)	0	31 (4.6)	31 (4.2)	2 (3.4)	33 (4.9)	35 (4.8)	0	1 (0.15)	1 (0.14)
TM (n=699)	6 (3.8)	61 (11.3)	67 (9.6)	23 (14.5)	129 (23.9)	152 (21.8)	0	4 (0.74)	4 (0.57)
AZ (n=200)	5 (4.8)	6 (6.3)	11 (5.5)	8 (7.6)	27 (28.4)	35 (17.5)	0	2 (2.1)	2 (1)
GE (n=193)	2 (3.6)	11 (8)	13 (6.7)	13 (23.6)	65 (47.1)	78 (40.4)	0	3 (2.17)	3 (1.55)
PK (n=148)	0	4(2.8)	4 (2.7)	2/5	16 (11.2)	18 (12.2)	0	0	0
MD (n=129)	10 (10.5)	7 (20.6)	17 (13.2)	2 (2.1)	2 (5.9)	4 (3.1)	1 (1.05)	2 (5.88)	3 (2.32)
IR (n= 121)	0	0	0	0	7 (6.4)	7 (5.8)	0	1 (0.92)	1 (0.83)
IRQ (n=107)	0	2 (2.1)	2 (1.9)	0	3 (3.2)	3 (2.8)	0	0	0
PS (n= 87)	0	3 (3.7)	3 (3.4)	1/5	4 (4.9)	5 (5.8)	0	0	0
UZ (n= 70)	2 (6)	2 (5.4)	4 (5.7)	0	2 (5.4)	2 (2.9)	0	1 (2.7)	1 (1.43)
RO (n= 66)	3 (7.5)	2 (7.7)	5 (7.6)	2 (5)	3 (11.5)	5 (7.6)	0	0	0
ARM (n= 43)	1 (7.7)	0	1 (2.3)	2 (15.4)	3 (10)	5 (11.6)	0	0	0
SO (n= 40)	0	5 (15.6)	5 (12.5)	0	0	0	0	1 (3.13)	1 (2.5)
Others (n=404)	7 (6)	9 (3.1)	16 (4)	5 (4.3)	18 (6.3)	23 (5.7)	0	5 (1.74)	5 (1.24)
<b>Total (n=3043)</b>	<b>36 (1.2)</b>	<b>143 (4.7)</b>	<b>179 (5.9)</b>	<b>60 (8.4)</b>	<b>312 (10.3)</b>	<b>372 (12.2)</b>	<b>1 (0.3)</b>	<b>20 (0.66)</b>	<b>21 (0.69)</b>

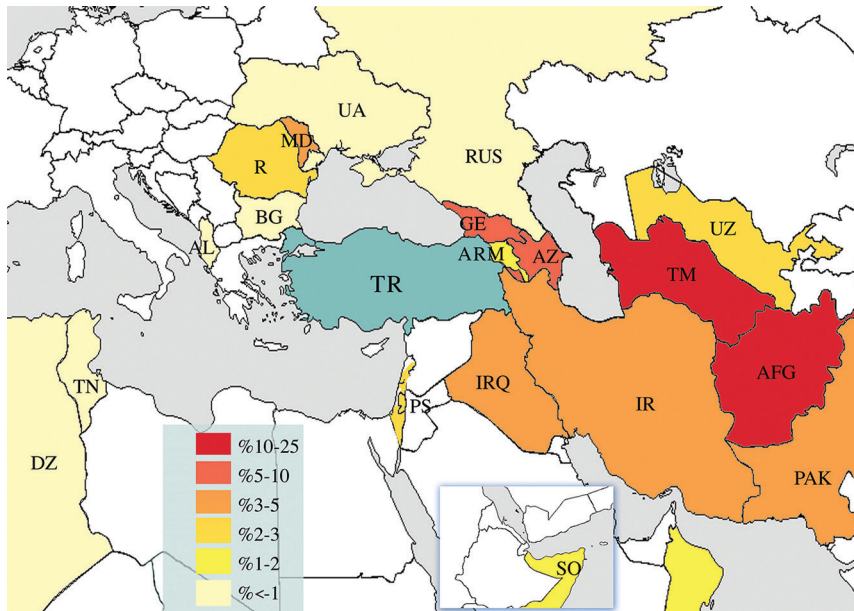
AFG=Afghanistan, TM=Turkmenistan, AZ=Azerbaijan, GE=Georgia, PK=Pakistan, MD=Moldova, IR=Iran, IRQ=Iraq, PS=Palestine, UZ=Uzbekistan, RO=Romania, ARM=Armenia, SO=Somali

While most of 3043 asylum seekers included into this study were Asian such as Afghanis, Turkmen, Azerbaijanis, etc.(61%), whereas rest of them were from countries of Middle East (15%), Russia, The Balkan Region, The Black Sea coast line (11%) and Africa (8%). The serological results of each origin groups were shown in the Table 1.

While, seropositivity rates for HBsAg and anti-HCV were detected as 4% and 5% respectively in Afghan asylum seekers, rate of anti-HIV antibodies was positive in only one case. Anti-HCV rate was found higher in Georgians than all groups and mean value (40.7%). Moldovan asylum seekers had the

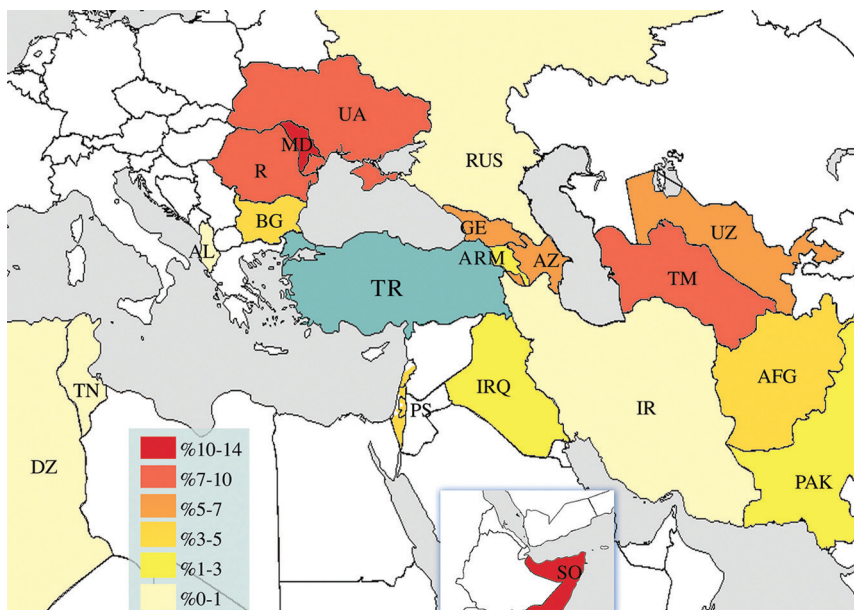
highest rate of HBsAg (13.2%), whereas the Somalis has the highest rate of anti-HIV antibodies (2.5%). Anti-HIV was positive in one of the 27 Russian cases (3.7%). Although, the highest indicator in Pakistani asylum seekers was anti-HCV positivity (13%), this rate was found much lower when compared with Georgians and Turkmen (Figure 2-4).

In the group including asylum seekers from other countries, the serologic indicators for HIV/AIDS spreading through sexual contact as well as blood and blood-products, which is a sexually transmitted and blood-borne disease, were found significantly higher.



**Figure 1.** The distribution of the asylum seekers by home country

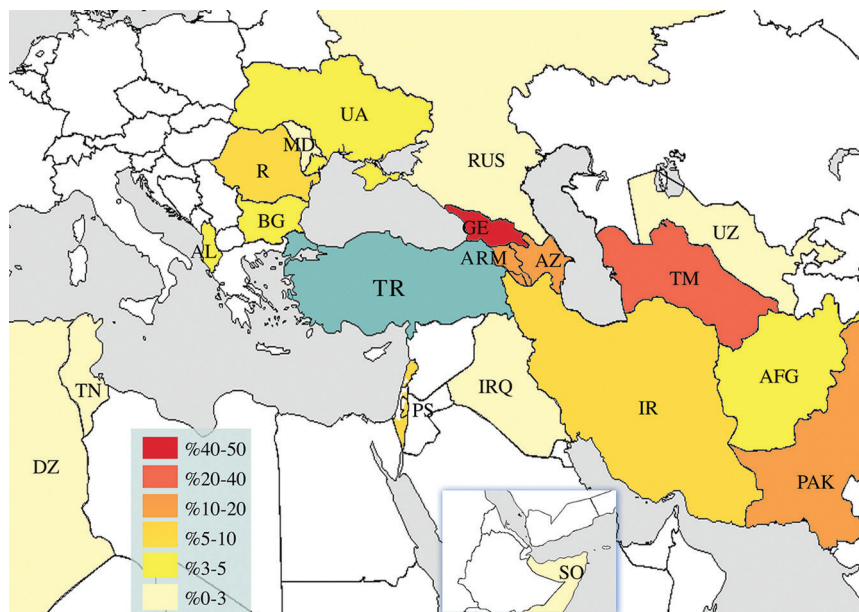
AFG: %24, TM: %23, AZ: %6.6, GE: %6.3, PK: %4.9, MD: %4.2, IR: %4, IRQ: %3.5, PS: %2.9, UZ: %2.3, RO: %2.2, ARM: %1.4, SO: %1.3, UA: 0.9, RUS: %0.9, DZ: %0.7, MA: %0.5, AL: 0.5, BG: 0.4, TN: 0.4, WAN: 0.3.



**Figure 2.** The distribution of HBsAg prevalence by home countries of the asylum seekers

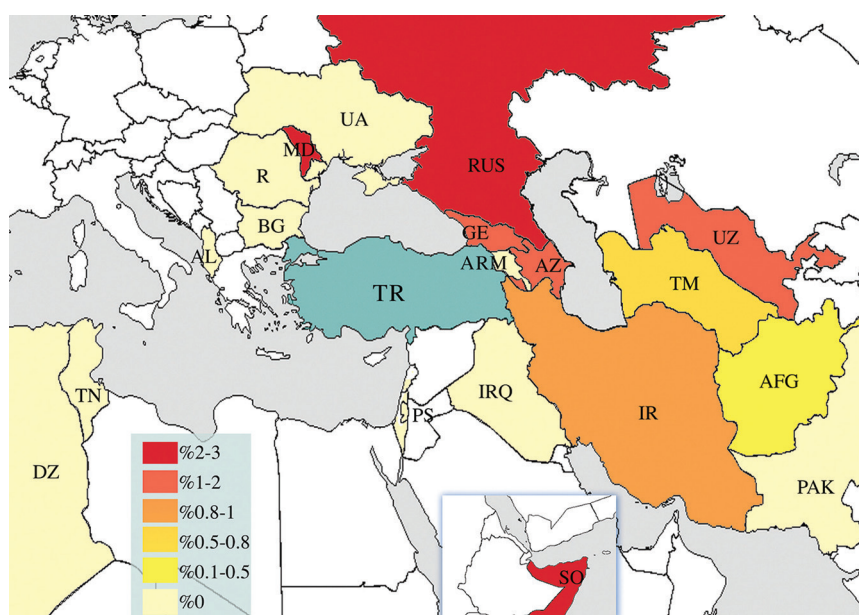
MD: %13.2, SO: %12.5, TM: %9.6, RO: %7.6, GE: 6.7, UZ: %5.7, AZ: %5.5, AFG: %4.2, PS: %3.9, PK: %2.7, ARM: %2.3, IRQ: %1.9, IR: %0.





**Figure 3.** The distribution of anti-HCV prevalence by home countries of the asylum seekers

GE: %40.7, TM: %22.4, AZ: %17.6, PK: %12.8, ARM: %11.6, RO: %7.6, IR: %5.8, PS: %5.8, AFG: %4.8, UZ: %2.9, IRQ: %2.9, MD: %2.8.



**Figure 4.** The distribution of anti-HIV prevalence by home countries of the asylum seekers

SO: %2.5, MD: %2.3, GE: %1.6, UZ: %1.43, AZ: %1, IR: %0.8, TM: %0.6, AFG: %0.1, PK: %0, PS: %0, IRQ: %0.

**DISCUSSION**

Turkey has become a migration-receiving country again in the recent years. This is resulting from two facts that Turkey is a bridge between Asia and Europe and the shortest route to Europe. Consequently, an increasing number of asylum seekers with all kinds of health issues enter Turkey. However, Turkey is applying no legislation for refugees and asylum seekers yet due to legal deficiencies.<sup>3</sup> Since the related legislations do not accept refugees especially from Asian and Middle Eastern countries, their number is actually much higher than registered counts.<sup>4</sup> This brings out new social and health is-

sues of the asylum seekers unless there is any apparent solution.

According to results of this study, the great majority (61%) of the asylum seekers were from Asian countries such as Afghanistan, Turkmenistan and Azerbaijan. These countries were followed by those from Russia, and the countries of Middle East Region the Black Sea coastline, and North Africa, respectively. The majority of the refugees and asylum seekers migrating to Europe and North America had African origin.<sup>4-6</sup> Currently the asylum seekers are migrating frequently from Asia and Middle East through Turkey, representing a transit route to Eu-

rope from Asia and a geographical location near countries with civil wars and dire living conditions such as Iraq, Afghanistan. Relatively less asylum seekers enter Turkey from Black Sea region and African countries for same reasons. When the distribution of the asylum seekers was evaluated in terms of countries, Afghanistan (24%), Turkmenistan (23%) and Azerbaijan (7%) are the top three emigrant countries. The low rate of women (20%) in those countries is striking.

We noticed that female asylum seekers relatively higher than male asylum seekers in Turkmen, Azerbaijanis and Moldovans. The female asylum seekers are particularly higher from those countries because of financial difficulties and working as caretakers, cleaning ladies and moreover commercial sex workers. When evaluated in terms of countries, it is striking that most of Afghani and Pakistani asylum seekers are young males. Most of the asylum seekers above 45 years were Georgians and Moldovans.

According to the Turkish Ministry of Health, the incidences of hepatitis B, C and HIV/AIDS in 2006 were 10/100.000, 1.62/100.000 and 0.44/100.000, respectively, being much lower than the rates detected in our study.<sup>7</sup> With respect to the serological indicators, the Afghan and Pakistani asylum seekers has noticeably lower seroprevalence. This might be associated with the high rate of young adults, the existence of vaccination programs and the routine screening of the blood donors since 1990s. Nevertheless, hepatitis B and C are endemic in Pakistan and Afghanistan. In these countries where unfavorable life conditions and wars are widespread, the prevalence of hepatitis B and C is high due to infection through natural reasons and to transfusion of untested infected blood in emergency services.<sup>8,9</sup> All infection indicators, particularly hepatitis C, were found high in Georgian asylum seekers. The prevalence of hepatitis C was reported to be 7-8% in the general population and approximately 50-70% in those tested HIV-positive and IV-drug users according to some studies from Georgia.<sup>10,11</sup> Sharing injectors was the major reason behind the high rates of anti-HCV in IV drug users. Hepatitis B and C are more common in some populations such as IV drug users, hemophiliac, dialysis patients and prisoners.<sup>12</sup>

The high rates of hepatitis C in Georgian, Turkmen and Azerbaijani asylum seekers that we investigated in our study may be associated with the high prevalence of IV drug users in those countries that were the parts of former Soviet Union. Similarly, the excessive frequency of female gender and

the relatively higher rate of seropositivity for HIV/AIDS may be associated with factors such as using IV drugs or working in the sex industry because of financial difficulties. The serologic indicators for HIV/AIDS transmitted sexually rather than through blood and blood products were significantly higher in the group including asylum seekers from Eastern Europe countries. On the other hand, Somalia has the highest rate of anti-HIV antibodies even though they had low frequency in the whole group, might be attributed to the high prevalence of HIV/AIDS in Africa.

The rate of anti-HIV was relatively higher in Russian cases than other groups. In the Asia, the two countries that have an HIV prevalence higher than 1% were Russia and Ukraine, followed by Uzbekistan. These countries have highest prevalence of epidemic HIV in Middle Asia.<sup>13</sup> In our study, the male asylum seekers from Russia, Moldova, Somali and Uzbekistan had the highest prevalence of HIV. The higher rate of HBsAg positivity in Moldavian asylum seekers, comparatively the other groups was noticeable. Hepatitis B is an endemic infection in Moldova and its incidence decreased significantly after the vaccination programs started in the 1990s. In our study, majority the Moldavian cases above 25 years with high rate of HBsAg was associated with the endemicity in Moldova.<sup>14</sup>

As a conclusion, İstanbul faced an intensive migration since it is the shortest route from Asia to Europe. Increasing number of refugees and asylum seekers with various health issues enter to Turkey. In Turkey, the prevalence of infectious diseases such as hepatitis B, C, and HIV in asylum seeker population is still unclear like some developed countries.<sup>15</sup> According to the results of this study which is the first report from our country on this issue, the majority of asylum seekers are from Central Asia, Middle East and Eastern Europe countries bordering the Black Sea. Young male Afghanis comprise the highest number of asylum seekers in İstanbul. The incidences of HIV/AIDS, hepatitis B and C were found significantly higher in asylum seekers when compared to Turkey's seroprevalence rates. The HIV/AIDS rates of women from Balkan countries were higher among asylum seekers. Since the guidelines of literature aiming to establish certain approaches are prepared according to the relevant population, we should establish guidelines with appropriate health approaches focusing the asylum seekers. Therefore, there is a necessity of more comprehensive studies that were conducted addressing the prevalence of particularly infectious diseases in Turkey.

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