(30.7%), daily laborers (22.7%) and students (20%). All were first time donors, and 75% of the donations were replacement donations. The prevalence of HIV, Hepatitis B surface antigen (HBsAg) and Hepatitis C virus (HCV) infections were 4.5% (95CI: 3.0–6.6), 8.2% (95CI: 6.2–10.7) and 5.8% (95CI: 4.2–8.1) respectively. In univariate analysis, HCV and HIV infections were associated (OR: 5.36, 95CI: 2–14.3).
Conclusion: The prevalence of TTIs among blood donors is very high and the majorities of blood donors are replacement or paid donors with one or more of the risk factors for TTIs implying that blood transfusion is unsafe. These findings call for the urgent implementation of the national strategy of safe blood transfusion in Ethiopia.

Poster Presentation – Diagnosis & Laboratory Systems Development

PP-068 Survey of Anti-HBc and Anti-HBs prevalence in HBsAg-negative blood donors in Tehran

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Background: Current serological screening for blood-borne hepatitis viruses has reduced the risk of post-transfusion hepatitis dramatically. Occult hepatitis B virus (HBV) infection might allow the release of viremic units into the blood supply network if blood is tested only for hepatitis B surface antigen (HBsAg). The screening for antibody to HBc (anti-HBc) has been shown as an alternative test for the detection of HBV infection.
Objective: The aim of this study was to evaluate HBV infection markers prevalence in HBsAg-negative blood donors.
Methods: In this descriptive cross-sectional study (in 2007), 2000 HBsAg-negative samples were collected from blood transfusion centers in Tehran. All HBsAg-negative samples were tested for anti-HBc using ELISA method. Then all HBsAg-negative and anti-HBc-positive samples were tested for anti-HBs by the same method. Data were analyzed statistically using chi-square test.
Results: 199 out of the 2000 HBsAg-negative blood donors (9.95%) were anti-HBc-positive. Out of the 199 anti-HBc-positive samples tested for anti-HBs, 149 were anti-HBs-positive (75%), and 100 had an antibody titer greater than 100 IU/mL (50.3%).
Conclusion: In our study, the prevalence of anti-HBc in HBsAg-negative blood donors was high. While anti-HBc-positive blood may be a potential source of HBV transmission, routine application of anti-HBc screening is not feasible in our country, as it would seriously limit the blood supply. Therefore more sensitive techniques such as Minipool PCR testing after virus enrichment is essential for detecting HBV DNA in HBsAg-negative chronic HBV carriers.

PP-069 Development of RFLP-PCR assay to identify *Aspergillus* species isolated from clinical and environmental specimens

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Aspergillus species are most abundant and widely distributed in soil, water, air, seed and food. These species are associated with allergic bronchopulmonary disease, mycotic keratitis, otomycosis, nasal sinusitis and invasive infection.In this study we attempted to set up a PCR-RFLP for identification of the most common *Aspergillus* species. Test samples were collected from clinical specimens including sputum, sinus discharge, bronchoalveolar lavage, nail scrapped and environmental specimens including hospital wards and outdoors. PCR products ITS regions in rDNA gene were digested directly and individually by the restriction enzyme *Mwo*I by incubation at 37ºC, then subjected to electrophoresis in a 2% agarose gel and then were visualized with a UV System Gel Document. Totally 205 *Aspergillus* isolates of our study included; 153 (75%) environmental and 52 (25%) clinical isolates. *A. flavus* isolated more frequently from environmental samples 112 (55%) followed by *A. niger* 65 (31.7%), *A. fumigatus* 18 (8.7%), *A. nidulans* and *A. parasiticus* 2 (1%). RFLP method using restriction enzyme *Mwo*I was successful to discriminate eight medically important *Aspergillus* species. We concluded that our PCR-RFLP method using the restriction enzyme *Mwo*I is a rapid (during 8–10 hours) and reliable test for colony identification of at least the most important *Aspergillus* species.

Table 1: The fragment size of ITS1-ITS2 PCR products after digestion with the enzyme *Mwo*I for various *Aspergillus* species

Species	cutting size
A. fumigatus	207, 125, 108, 29, 21, 9
A. flavus	325, 98, 65, 40, 20
A. niger	192, 175, 120, 108, 30, 21, 9
A. terreus	220, 109, 106, 96, 29, 9
A. nidulans	162, 135, 104, 31, 29, 9
A. clavatus	210, 125, 106
A. ochraceus	420, 90, 39, 9
A. amstelloidami	286, 106, 100, 29, 9
A. ficheri	200, 140, 120

Table 2. The frequency of *Aspergillus* species isolated from clinical and environmental sources

Species	No Aspergillus strains identified by RFLP					
	Total no. of specimens		Environmental specimens		Clinical specimens	
	No.	%	No.	%	No.	%
A. flavus	36	69.2	76	49.7	112	55
A. niger	4	7.6	61	39.8	65	31.7
A. fumigatus	7	13.5	11	7.2	18	8.7
A. nidulans	1	1.9	1	0.6	2	1.0
A. tereus	1	1.9	0	0	1	0.5
A. parasiticus	1	1.9	1	0.6	2	1.0
A. penicilloid	0	0	1	0.6	1	0.1
A. tamarii	0	0	1	0.6	1	0.5
A. ochraceus	1	1.9	0	0	1	0.5
A. sojae	1	1.9	0	0	1	0.5
A. niveus	0	0	1	0.6	1	0.5
Total	52	100	153	100	205	100

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