Hepatitis C Testing in the Muslim Community

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Grampian Hepatitis Stakeholder Conference
16th June 2011
Background

- Hepatitis C (HCV) is a leading cause of Liver disease
- W.H.O estimates 2.2% of the world population is infected
- Vast geographic variations in prevalence
- Major risk factors are blood transfusion and injecting drug use (IDU)
- Since the advent of routine blood screening and identification of this reservoir
- This has led to a shift in epidemiology of HCV over the last two decades
- Currently IDU is the cardinal risk factor in the western world
- Migration means society is not homogenous
- In UK 0.4% of the population is infected with HCV
- Scotland estimates are higher at 1%
- Pakistanis are the largest ethnic minority in Scotland as per 2001 census estimates
- Two main periods for economic migration from Pakistan are 1950-1960 and another wave in 1990-2000
- Dundee in East of Scotland has third largest Pakistani sub population of 1700
- In Pakistan the prevalence is estimated at 6%
- Work done in England on south Asian population
  Found 2.7% Pakistanis to be Anti HCV positive
- Testing and treating HCV is cost effective
Hypothesis

Immigrant Pakistanis retain higher level of HCV infectivity as compared to native population of their adopted homeland

Aim

We intended to investigate this sub population
Method

- Collaborated with community representatives to organise HCV awareness program.
- Spoke at city's Mosques on Friday just prior to prayers and Pakistan women's association.
- Message was delivered bilingually (English & Urdu).
- Thereafter we set up outreach testing clinics in three Mosques and a women’s centre on consecutive weeks.
- Venous blood samples were taken for testing of HCV IgG and HBsAg, using the Abbott Architect system.
- Relevant medical, family, travel history was recorded as well as history of risk factors for HCV.
- Consent obtained regarding results being mailed to address provided.
Results

- 177 Individuals were tested, 7 were excluded from calculation because country of ancestral origin was not Pakistan.
- Only 11 were born in U.K (6.5 %)
- They were predominantly males 145 (85.2%)
- Average age and SD was 45.11 (16.7)
- 74.5% have been resident in UK for >5 years
- Length of residency varied from a minimum of 1 to a maximum of 59 years

- A minority 29 (17%) had not revisited the country of origin

- Most (86%) had visited the General Practice in the preceding two years

- None admitted to using in IDU

- All males had circumcision performed and 31 had this as the only risk factor identified
## Risk category

<table>
<thead>
<tr>
<th>Gender</th>
<th>Transfusion</th>
<th>Surgery</th>
<th>Family history HCV</th>
<th>Dental care</th>
<th>Child birth</th>
<th>Injection therapy</th>
<th>Circumcision only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (145)</td>
<td>5</td>
<td>18</td>
<td>21</td>
<td>25</td>
<td>N/A</td>
<td>45</td>
<td>31</td>
</tr>
<tr>
<td>Female (25)</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>12</td>
<td>N/A</td>
</tr>
<tr>
<td>Total %</td>
<td>3.5</td>
<td>11.7</td>
<td>14.7</td>
<td>15.8</td>
<td>2.3</td>
<td>33.5</td>
<td>18.2</td>
</tr>
</tbody>
</table>
Seven males tested anti HCV positive (4%)

Average age and SD was 40 (18.7)

The length of residency varied from 3 to 49 years with average of 21 years

Risk factors profile shows all underwent circumcision, two had injections and one had a family history of HCV

Five tested HCV RNA PCR positive (2.9%)
PCR positive patients were Genotype 3 with elevated ALT none were found to be cirrhotic

All have been started on treatment
We have tested 10% of the Pakistani population of Dundee (census estimates).

The project demonstrates high risk population can be target tested by outreach clinics.

Our results are lower than prevalence reported in Pakistan and could be secondary to the healthy migrant effect.

Guidelines from SIGN need to be updated to encompass Pakistani origin as risk factor and to offer testing.

Our project has selection bias as we chose sites to test and also individuals self selected by volunteering.

Female and UK born Pakistani participation was low hence it is difficult to infer the prevalence in these two groups.