Incidence of severe congenital heart disease in Qassim Province, Saudi Arabia

Dr Abdulrahman Almesned, MD, Dr Maha Alsayed
• The incidence of CHD varies from 12 to 14 /1,000 live births

The incidence of congenital heart disease
Julien .E.Hoffman ,and Samuel Kaplan
J.Am.Coll.Cardiol.2002;39;1890-1900
Definition

• Severe CHD?
— **Severe CHD:**

- All those with cyanotic heart disease:
  - d-transposition of the great arteries.
  - Tetralogy of Fallot, including pulmonary atresia and absent pulmonary valve.
  - Hypoplastic right heart.
  - Tricuspid atresia.
  - Pulmonary atresia with an intact ventricular septum.
  - Ebstein anomaly.
  - Hypoplastic left heart.
  - Aortic atresia.
  - Mitral atresia.
  - Single ventricle.
  - Double outlet right ventricle.
  - Truncus arteriosus.
  - Total anomalous pulmonary venous connection.
  - Critical pulmonary valve stenosis.
  - Miscellaneous uncommon lesions like double outlet left ventricle, certain unusual malpositions and some forms of 1-transposition of the great arteries.
• Acyanotic lesions:
  • AVSD.
  • Large VSD.
  • Large PDA.
  • Critical or severe AS.
  • Severe PS.
  • Critical coarctation.

The incidence of congenital heart disease
Julien E.Hoffman, and Samuel Kaplan
J.Am.Coll.Cardiol.2002;39;1890-1900
MATERIALS AND METHODS
PRINCE SULTAN CARDIAC CENTER: AL QASSIM
• Start date :01-01-1429 (10-01-2008)
• End date : 01-01-1431 (18-12-2009)
## Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of live birth Years</th>
<th>Number of severe CHD</th>
<th>Incidence / 1,000 live birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1429</td>
<td>19,852</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>1430</td>
<td>19,457</td>
<td>107</td>
<td>5.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39,309</td>
<td>207</td>
<td>5.3</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Our study</td>
<td>Hoffman and Kaplan</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>--------------------</td>
<td></td>
</tr>
<tr>
<td>AVSD</td>
<td>330</td>
<td>348</td>
<td></td>
</tr>
<tr>
<td>Tetralogy</td>
<td>407</td>
<td>421</td>
<td></td>
</tr>
<tr>
<td>d-TGA</td>
<td>381</td>
<td>315</td>
<td></td>
</tr>
<tr>
<td>HLS</td>
<td>203</td>
<td>266</td>
<td></td>
</tr>
<tr>
<td>Truncus</td>
<td>76</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>TAPVC</td>
<td>28</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Tricuspid atresiasia</td>
<td>178</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>
24 cases account for 11% of the total number of cases.
Discussion

- Flyer et al 1980 reported the results of the New England regional Infant Care program (NERICP)
- Ill infants + 2/1000 live births
- Hoffman conclude 3/1000 live births
- Our study 5.3/1000 live births
SAUDI ARABIA

• 350,000 LIVE BIRTHS
• = 1855 PATIENTS WITH SEVERE CHD
• Personal communication
• Total no of pediatric cardiac surgery (- redo) = 1600 – moderate CHD (ASD+ moderate coarct) = ?
• SO ONLY around 60%
Conclusion

• Incidence of severe CHD is

• 5.3 per 1000 live births
THANK YOU