The ROP Epidemic

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PTB TWG-ICS, November 16 2016
Disclosure

Some salary support from the Queen Elizabeth Diamond Jubilee Trust
Epidemics of blindness due to ROP

1st
1940s and 1950s
USA/Western Europe: Introduction of neonatal care + unmonitored supplemental oxygen
Relatively large, mature preterm babies affected

2nd
1980s
USA/Western Europe: Increased survival of extremely LBW babies; Minimal screening and treatment
Extremely preterm babies affected

3rd
1990s onwards
Latin America/E Europe: … now Asia
… Africa in the future if lessons are not learnt
Mixture of mature and immature preterm babies affected
$3^{rd}$ epidemic of ROP blindness is spreading

In 2010: 32,300 new cases of blindness / visual impairment

Blencowe, Gilbert et al. Ped Res 2013
Characteristics of babies treated for ROP in UK, USA and Canada

UK screening criteria
Characteristics of babies treated for ROP in low/middle income countries
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Potential strategies for the control of blindness from ROP

Primary prevention:
• prevent preterm birth (assisted fertilization)
• antenatal steroids
• excellent neonatal care from immediately after birth

Secondary prevention:
• screening of premature babies at risk by ophthalmologists going to units / digital imaging
• treat those with advanced disease by laser
• follow up to detect and treat other eye conditions e.g., short sightedness, squint

Tertiary prevention:
• sight cannot usually be restored once lost
• rehab / low vision / education
Initiatives for control: Latin America

Pre 1997
• Only 2 ophthalmologists providing services

Now
• A PAHO priority for blindness control in the region;
• All countries have ROP services, which vary in terms of coverage and quality
• Some have national technical guidelines; in some ROP screening is mandatory
• Change brought about by leadership; advocacy based on evidence; support from NGOs and UNICEF (Argentina);
• Planning supported by national and regional multi-disciplinary workshops
• Top level PAHO meeting in Bogota (Nov 16 and 17th 2016), to support national guideline development and implementation

Challenges
• Complex health systems and hence policies
• Improving neonatal care; lack of willing ophthalmologists
Initiatives for control: India

Early 1990s
• Only 3 ophthalmologists providing services
• Limited facilities for preterm babies

2005-2013
• Massive expansion in neonatal care in government district level Special Newborn Care Units (now >650; target 1000); expansion of private NICUs,
• Limited policies for control of complications of preterm birth
  • ROP briefly mentioned in guidelines for neonatal care
• Dramatic increase in ROP blind infants; successful litigation
• Several not-for-profit eye hospitals have expertise in ROP, but provide limited services in government units
Initiatives for control: India

2013-2018
UK’s Queen Elizabeth Diamond Jubilee Trust’s 5 year programme:
• Advocacy for policy change and to implement policy in government sector
  • National ROP Task Force established by Ministry of Health
• Quality improvement initiative by senior neonatologists & nurses
• Developing model programmes in SNCUs and eye departments in 5 States through public-private partnerships
• Technical Expert Groups x5 providing inputs e.g., IEC materials; competency based training; guideline development; M&E
• Wide collaboration with different professional groups and agencies e.g., UNICEF

Challenges
• Improving the quality of neonatal care
• Lack of ophthalmologists at District level