Vertically transmissible infections

rubella, syphilis,
toxoplasmosis
parovirus
Listeria
CMV, varicella
HIV, hepatitis B.
herpes simplex 1&2
chlamydia, gonorrhoea,
group B streptococcus (GBS)

INFECTIONS IN PREGNANCY

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Case 1
- 30 yr old woman; 2nd pregnancy - 12 wks
- D1 - her 5 year old child - varicella rash
- No past history of varicella (~85% immune)
- D2 - “urgent” varicella IgG - negative
- D3 - Rx (next day) - ZIG
- 10 days later - mild varicella rash
- ?Management

Congenital varicella
- Maternal varicella - variable severity
  * early consider aciclovir
- Fetal infection ?10% - most self-limiting
  * fetal varicella syndrome <3%
  * postnatal zoster ~2%
- Amniocentesis - PCR
  * cannot distinguish fetal infection vs disease
  * negative result excludes fetal infection

Perinatal varicella
- Maternal infection near term
  * <7d before; >28d after delivery
  * increased risk of severe neonatal infection
  * Rx ZIG to infant (ASAP <72 hr)
  * discharge from hospital ASAP
  * breast feeding not contraindicated

Case 2
- 18 year old, unmarried women (1995)
- 1st pregnant; first presentation 18 weeks
- c/o: painful genital ulcers;
  * no systemic symptoms;
  * no inguinal lymphadenopathy
- o/e: vesicular lesions on vulva;
  * c/w primary or initial genital HSV
- ? Management ?investigations
Case 2 (cont)
- TORCH screen ordered! - results:
  - IgG  IgM
  - Toxoplasma +ve -ve
  - Rubella +ve -ve
  - CMV +ve +ve
  - HSV +ve +ve
- Viral culture: positive for HSV2;
- (RPR & HBsAg not requested)

Case 2 (cont) - lessons
- Risks of inappropriate tests
- IgG avidity would have helped
  - high avidity index - long past infection
  - low avidity - possible recent infection
- ?Management of primary HSV infection
  - role of ACV, Caesarean section

Genital herpes in pregnancy
- Primary - 1st, 2nd trimester
  - Rx ACV if indicated - no evidence of fetal risk
  - Frequent recurrence
    - ? ACV prophylaxis 400 mg tds
- Recurrences (<3% transmission)
  - no active lesions at term - vaginal delivery
  - active lesions - LUSCS (unless MR >6 hr)
- Primary - 3rd trimester
  - Risk of preterm delivery; transmission (40%)
  - LUSCS (investigate +/- treat infant)

Case 3
- Jun 2001 - KD - primigravida 7 weeks
- Husband - lymphadenopathy, malaise
  - Toxoplasma IgM +ve
- KD - asymptomatic; routine antenatal visit
  - Toxoplasma IgG low +ve and IgM +ve
- Recent visit to NZ with in-laws - April 2001
  - all ate rare venison; all toxoplasma IgM +ve

Toxoplasma IgG, IgM - recent infection

Toxoplasma IgG avidity, IgM - recent infection
Case 4
- 25 year old school teacher; 1st pregnancy
- Presents at 10 weeks gestation
- Current epidemic of “fifth disease”
- Wants certificate for sick leave to avoid exposure
- ?Appropriate - if so for how long
- ? Contact PHU - ? advice

Human parvovirus infection
- Erythema infectiosum
  - “5th disease”; “slapped cheek” syndrome
- ~40-60% women susceptible
- seroconversion 1-13% infected p.a.
  - Contact: household 50%; occupational 20-60%
- Rash, fever, arthralgia
- Infection in pregnancy (9-20w)
  - fetal loss 10%; benign fetal infection ~50%
  - hydrops <3%; no excess malformations

Parvovirus infection - diagnosis
- Seroconversion or IgM
- If mother infected
  - follow-up ultrasound ? hydrops
- [Hydrops unknown causes ?parvovirus -
  - amniotic fluid PCR]

Hydrops due to parvovirus
- Average 5w after maternal infection
  - ? weekly for U/S 6-7 w after proven infection
  - ? ~5-15% of nonimmune hydrops
- Severe anaemia - oedema, effusions
  - +/- thrombocytopenia; myocardial lesions
- Spontaneous remission occurs
- High mortality if severe

Case 4
- Parvovirus IgG -ve
- Advice:
  - 20-30% risk of infection
  - epidemic could last > 1 yr
  - risk of fetal damage (if infected) - 10-15%
  - = 2-5% overall
- Continue working
- Repeat IgG if symptoms or at 14-16/40

Infections in Pregnancy
Summary
- Most uncommon but effects often serious
- Suspected infection causes great anxiety
  - +/- inappropriate investigation & intervention
- Some preventable - safe, cost-effective
  - routine or selective immunization
  - antenatal screening & treatment
  - appropriate investigation of symptoms