TORCH IN PREGNANCY
LECTURE 2

PARVOVIRUS INFECTION

- It is caused by parvovirus B-19.
- Incubation period- 14-21 days.
- Parvovirus infection is a common and highly contagious childhood ailment — sometimes called slapped-cheek disease because of the distinctive face rash that develops

CLINICAL FEATURES

- Prodromal fever, coryzal symptoms, and a characteristic "slapped- cheek rash", impaired erythropoiesis causing mild anemia and polyarthropathy.
- Trans-placental fetal infection can occur during the first two trimesters of pregnancy with an impact on the fetal bone marrow.
- It cause 10-15% of non-immune (Non-Rhesus related) Hydrops fetalis.

TREATMENT

- Infection is usually self-limiting.
- Symptomatic relief from arthritic symptoms may be required by the use of analgesics.
- Pregnant women should avoid contact with cases of parvovirus B-19 infection.
- If exposed, serology should be done to establish whether they are non- immune.

TREATMENT

- Passive prophylaxis with normal immunoglobin has been suggested.
- The pregnancy should be monitored closely by USG, so that hydrops fetalis can be treated by fetal transfusion

RUBELLA

- It is disease caused by the rubella virus.
- Rubella or German measles is transmitted by respiratory droplet exposure. The virus may also be present in the urine, faeces and on the skin.
- For most immunocompetent children and adults (including pregnant women), the rubella virus causes a mild, insignificant illness spread by droplet infection.

- During pregnancy the virus can have potentially devastating effects on developing fetus.
- Congenital rubella syndromes (CRS) in the newborn however remains a major cause of development anomalies that include blindness and deafness.
- The child may be born with CRS if the mother is infected within the 1st 16 weeks of pregnancy.
- The virus has teratogenic properties.

- After infecting placenta, virus spreads through vascular system of the developing fetus, causing cytopathic damage to blood vessels and ischemia in the developing organs.
- Incubation period- 2-3 weeks.
- Primary rubella infection is most likely to cause problems if it is acquired in the first 12 weeks of pregnancy and in this situation maternal-fetal transmission rates are as high as 80%.

CONGENITAL RUBELLA SYNDROME

CRS characterized by;

- Intrauterine growth restriction.
- Intracranial calcifications
- Microcephaly
- Cataracts
- Cardiac defects
- Neurologic disease
- Osteitis and hepatosplenomegaly

EFFECTS ON PREGNANCY

- First trimester infection can result in spontaneous abortion and in surviving babies, a number of serious and permanent consequences.
- These includes cataracts, sensorineural deafness, congenital heart defect microcephaly, meningocephalitis, dermal erythropoiesis, thrombocytopenia and significant developmental delay.

DIAGNOSIS

- Detection of Rubella virus specific IgM antibodies.
- Rubella specific IgG antibodies are present for life after natural infection or vaccination.
- Prenatal diagnosis of rubella virus infection using PCR can be done from chorionic villi, fetal blood and amniotic fluid samples.

TREATMENT

- Rubella vaccine are given at 9 and 15months.
- Rubella vaccine are not recommended in pregnant women.
- When giving during the childbearing period, pregnancy should be prevented within three months by contraceptive measure.
- However, If pregnancy occurs during the period, termination of pregnancy is not recommended.

TREATMENT

- There is no specific treatment for rubella; however, management is a matter of responding to symptoms to diminished discomfort.
- Treatment of newly born babies is focused on management of the complications.
- Congenital heart and cataracts can be corrected by direct surgery.

Treatment

- Management for ocular congenital rubella syndrome (CRS) is similar to that for age-related macular degeneration, including counseling, regular monitoring, and the provision of low vision devices, if required.
- Rubella infection of children and adults is usually mild, self-limiting and often asymptomatic.
- The prognosis in children born with CRS is poor.

Treatment

- Active immunization programs using live, disabled virus vaccines
- All girls should be vaccinated against rubella before entering the child bearing years.
- Women wishing to conceive should be counseled and encouraged to have their antibody status determined and vaccinated if needed.

CYTOMEGALOVIRUS INFECTION

- Cytomegalovirus (CMV) is a common viral infection.
- It is estimated that 50% of the adult population has had the infection at some point in their life.
- The virus causes the flu like illness and pregnant women have an increased susceptibility to infection during pregnancy.
- However, primary infection in pregnancy is low, at around 1%.

- Possible route of transmission include sexual contact, organ transplantation, transplacental transmission, transmission via breast milk, and blood transfusion (rare).

EFFECTS ON PREGNANCY

- There is 40% chance of transmission to the fetus.
- Transplacental infection can result in intrauterine growth restriction, sensorineural hearing loss, intracranial calcifications, microcephaly, hydrocephalus, hepatosplenomegaly, delayed psychomotor development, thrombocytopenia and/or optic atrophy.

EFFECTS ON PREGNANCY

- Vertical transmission of CMV can occur at any stage of pregnancy; however, severe sequelae are more common with infection in the 1st trimester, while the overall risk of infection is greatest in the 3rd trimester.

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