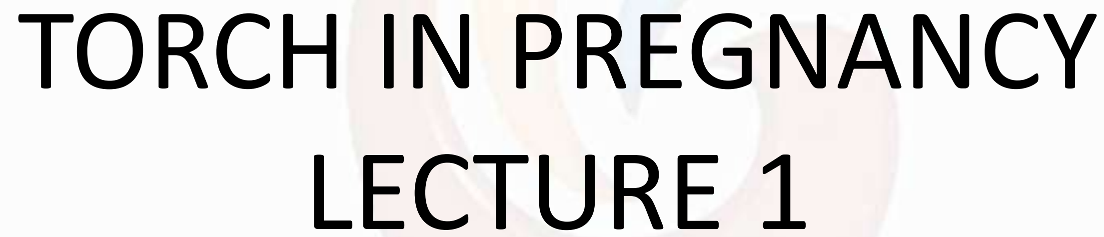

TORCH IN PREGNANCY
LECTURE 1

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- Torch Complex is a medical acronym for a set of peri natal infections, that can lead to severe fetal anomalies or even death.
- They are a group of viral, bacterial and protozoan infections that gain access to the fetal blood stream tranplacentally via chorionic villi.

- T- toxoplasmosis
- O- other infections
- R-rubella
- C-cytomegalovirus
- H-herpes simplex virus.
- Other infections-syphilis, varicella zoaster, parvo virus.

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TOXOPLASMOSIS

- Toxoplasmosis is a protozoan infestation caused by Toxoplasma gondii.

➢ **Human acquisition of the infection occurs by:**

- feco-oral route.
- Oocyte contamination soil, salads, vegetables.
- Ingestion of raw or undercooked meat containing tissue cysts (sheep, pigs and rabbits are the most common meat sources).
- Outbreaks of toxoplasmosis have also been linked to the consumption of unfiltered water.

CLINICAL MANIFESTATION

- In most immunocompetent individuals, including children and pregnant women, the infection goes unnoticed.
- In approximately 10% of the patients it causes a self-limiting illness, most commonly in the 23-35 years age group.
- Painless lymphadenopathy (local or generalized) is the most common presenting feature.
- Other features include- malaise, fever, fatigue.
- Muscle pain, sore throat and headache

The effect on pregnancy is approximately 15%, 30% and 60% in the first, second and third trimester of pregnancy.

- Risks of fetus includes:

✓ intrauterine death.

✓ Low birth weight.

✓ Enlarged liver and spleen.

✓ Jaundice

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EFFECTS ON PREGNANCY

- ✓ Intracranial calcifications.
- ✓ Hydrocephalus
- ✓ Macular lesions.
- ✓ Anemia
- ✓ Infected neonates may be asymptomatic at birth, but can develop retinal and neurological disease.

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DIAGNOSIS

- Serological test is done for toxoplasma specific IgM antibodies.
- Amniocentesis and cordocentesis for detection of IgM antibodies in the amniotic in the amniotic fluid and fetal blood.
- If the fetus is infected and hydrocephalus is present, counseling for termination is to be done.

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MANAGEMENT

- Toxoplasmosis is a self limited illness in an immunocompetent adult and does not require any treatment.
- Pyrimethamine 25mg orally daily and oral sulfadiazine 1gm four times a day is effective.
- Luncovorin is added to minimize toxicity.
- Pyrimethamine is not given in the first trimester.

MANAGEMENT

- Spiromycin (3gm orally daily has also been used as an alternative
- Acute toxoplasmosis during pregnancy is treated with spiromycin.
- Extended courses is needed in an immunocompromised patient to cure infection.
- Treatment to the mother reduces the risk of congenital infection and the late sequelae.

PREVENTION

- Appropriate information includes advising women about washing kitchen surfaces following contact with uncooked meats, avoiding cat and dog faeces

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VARICELLA ZOSTER

- Varicella zoster is a member of the herpes virus family.
- It is also known as ***chickenpox.***
- Varicella zoster virus (VAV) is a highly contagious, self-limiting disease of childhood that is transmitted by respiratory droplets or close contact.
- Incubation period-15 days and is infectious for 48hours before the rash appears until vesicles crust over.

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- It is usually acquired by 90% of the population before the reproductive age, thus most women are immune before they become pregnant .
- After the primary infection the virus remains dormant in the sensory nerve root ganglia and with any recurrent infection can result in herpes zoster (shingles).

EFFECTS ON PREGNANCY

- Primary infection during pregnancy can result in serious adverse outcome.
- Varicella zoster virus does cross the placenta and may cause congenital or neonatal chickenpox.
- Maternal mortality is high due to varicella pneumonia.
- During the first 20 weeks of pregnancy baby has about a 2% risk of fetal varicella syndrome (FVS).

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EFFECTS ON PREGNANCY

- Congenital varicella syndrome is characterized by:

✓ Hypoplasia of limp

✓ Limb deformity

✓ Choroid retinal scarring

✓ Cataracts.

✓ Microcephaly and cutaneous scarring.

The risk of congenital malformations is nearly absent when maternal infection occurs after 20 weeks.

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- About 30% of babies born with skin lesions die in the first months of life.
- Maternal infection after 36 weeks, and particularly in the week before the birth (when cord blood VZV Ig G is low) to 2 days after, can result in infection rates up to 50%.
- About 25% of those infected will develop neonatal clinical varicella

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DIAGNOSIS

- It is primarily clinical, ***by recognition of the rash***. If necessary, it can be confirmed by detection of antigen (Direct Immunofluorescence), PCR or by viral culture of the aspirated vesicular fluid.

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TREATMENT

- Oral acyclovir (800mg 5 times daily for 5 days) or IV acyclovir 10 mg/kg every 8 hours, although higher doses (12–15 mg/kg) are sometimes used for life-threatening infections, especially in immunocompromised patients.
- Women infected during the first 20 weeks may request termination of pregnancy.

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