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A CASE OF TORCH SYNDROME

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Abstract

TORCH Syndrome refers to infection of a developing fetus or newborn by any of a group of infectious agents. "TORCH" is an acronym meaning Toxoplasmosis, Other Agents, Rubella Cytomegalovirus, and Herpes Simplex. Infection with any of these agents (i.e. Toxoplasmosis, rubella virus, cytomegalovirus, herpes simplex viruses) may cause a constellation of similar symptoms in affected newborns. These may include fever, difficulties feeding, small areas of bleeding under the skin, causing the appearance of small reddish or purplish spots, enlargement of the liver and spleen (hepatosplenomegaly), yellowish discoloration of the skin, whites of the eyes, and mucous membranes (jaundice), hearing impairment, abnormalities of the eyes, and/or other symptoms and findings. Each infectious agent may also result in additional abnormalities that may be variable, depending upon a number of factors (e.g., stage of fetal development). In this article I report a case of TORCH syndrome in a 30 year old female patient.

Keywords: *Cytomegalovirus; Herpes simplex; Rubella; Syphilis; Toxoplasmosis.*

INTRODUCTION

TORCH Syndrome may sound like a single illness, but actually it stands for a group of infectious Toxoplasmosis, Other agents (including HIV, syphilis, varicella, parvovirus B19) Rubella, Cytomegalovirus, Herpes simplex diseases that can cause some serious problems for unborn baby. During pregnancy TORCH infections spreads through blood to baby. And because fetus developing in uterus, their immune system most likely won't be able to fight it off. If the disease stays in body, their organs might not develop correctly. Sickness of baby get depends on several things, including what the condition is and how far along they are in their development. But a number of problems can happen like jaundice and hearing problems to miscarriage and stillbirth.

ETIOLOGY & RISK FACTORS OF DEVELOPING TORCH SYNDROME

Toxoplasmosis is rare and it's caused by a parasite. The parasite usually gets into the body through mouth, like eating foods such as undercooked meat. Problems your baby can have if they're exposed to toxoplasmosis include: Brain damage, Inflammation of parts of the eye, which can cause blindness, Delays in ability to use muscles (motor) and in other areas of development, Seizures, Too much fluid in the brain (hydrocephalus).

OTHER AGENTS

Among the other agents included in TORCH syndrome are HIV, fifth disease syphilis, and varicella zoster virus. If parents are HIV-positive, tests might not show that your baby has it at birth, but it can show up later, even after they are 6 months old. They might have symptoms like delayed growth, pneumonia, or swollen lymph nodes and abdomen. If you have HIV and are pregnant or planning to become pregnant, anti-retroviral medications can help lower your chances of passing the virus on to your baby.

Syphilis. Pregnant women in the first or second stage of this sexually transmitted disease (STD) pass it to their babies 75% of the time if it's not treated. Syphilis is caused by bacteria and can create serious

problems during a baby's development. Many babies who get it before birth won't survive full term, or will die shortly after they're born. Almost half of babies will be stillborn.

Babies born with syphilis can have misshaped bones, anemia, meningitis, skin rashes, and nerve problems that can cause blindness and deafness. If you're pregnant, you should be tested for syphilis. If you test positive, your doctor can treat it with antibiotics.

Fifth disease. This disease is caused by parvovirus B19. It's seldom a problem for pregnant women or their babies. About half of women are immune to the virus, so their babies won't get fifth disease. Those babies that do can get anemia. Less than 5% of the time, women have problems that cause them to miscarry.

Since there's no vaccine or medication to prevent fifth disease, it's important to wash your hands with soap and water often, and avoid being around sick people. If you're pregnant, talk to your doctor about the risks.

Varicella. Chickenpox is caused by the varicella zoster virus, and it also causes congenital varicella syndrome in babies. It's unlikely you would pass varicella on to your baby. Even if you have chickenpox while you're pregnant, there's still only a 2% chance you'll pass it on.

However, babies born with congenital varicella can have birth defects. If you've never had chickenpox and never been vaccinated, you should get vaccinated at least a month before you plan to get pregnant. And tell your doctor if you think you've been exposed to chickenpox while pregnant.

Rubella

Rubella, which also is known as German measles, is a contagious disease caused by a virus. If you get rubella, you'll likely have a low-grade fever, sore throat, and a rash. If you're pregnant and get rubella in your first trimester, it's likely that you'll pass it on to your baby.

It can be very serious -- you could have a miscarriage, or your baby could have severe birth defects.

The first 3 months of your pregnancy is when rubella can cause the most problems in your baby's development. That's why it's important to tell your doctor right away if you think you might have gotten it.

Because of the measles-mumps-rubella (MMR) vaccine, the disease is rare in children. There are only about 30 to 60 known cases of it each year in the United States, and fewer than five babies a year are born with it.

There's no cure for congenital rubella syndrome, so prevention is key. If you're thinking of becoming pregnant and you haven't already had the MMR vaccine, you should get it at least 28 days before you conceive.

Cytomegalovirus

Also known as CMV, cytomegalovirus is an infection in the herpes virus group. And it's estimated that 50% of adults have it by the time they're 30. There is no cure for CMV, but it gets better on its own very quickly and doesn't cause serious problems -- unless you're pregnant.

About 1 in 5 babies born with congenital CMV will get sick or have long-term issues from it, including:

- Hearing and vision loss
- Jaundice
- Small birth size
- Lung problems
- Seizures

- Muscle weakness
- Mental disabilities

Herpes Simplex

Like CMV, herpes is a lifelong infection, but it can be inactive for periods of time. There are two kinds of herpes: HSV-1, which can causes blisters around the mouth, but can also be passed to the genitals. HSV-2 is an STD that causes genital herpes, and can cause blisters or open sores on the genitals or anus. It can also cause oral herpes

Epidemiology

The incidence of maternal CMV and toxoplasmosis are 2 to 10 per 1000 births. Rubella is common in countries where mothers are unvaccinated. Humans are the natural hosts for the herpes virus, and the newborns usually get HSV-2 as it predominantly causes genital infections. Risk factors for toxoplasmosis include exposure to cats and the ingestion of improperly prepared foods such as undercooked meat or unpasteurized dairy products. Raw vegetables served in the restaurant probably caused toxoplasmosis.

Pathophysiology

Toxoplasma gondii oocysts transmission occurs by ingesting the infected tissue or inhaling the fecal particles. Transplacental transmission causes congenital toxoplasmosis. This is most commonly occurs in the third trimester of pregnancy. However, earlier the infection, more severe will be the congenital malformations.

Syphilis is transmitted through the placenta or vertically in the birth canal. The transmission rate is more than 80% in recently infected mothers.

Rubella is transmitted to the mother by aerosols and to the fetus through the placenta.

CMV transmits to the mother by blood transfusion, organ transplants, or most commonly through the mucus membrane exposure. It then passes either through the placenta, birth canal, or breast milk to the fetus or neonate. CMV infection rates in primary infection have long been proposed to be greater than secondary infection, but there has been some recent analysis that this may not be as significant as previously thought.

HSV transmits to the mother by sexual contact and later to the fetus via either ascending infection or exposure during parturition. Maternal primary infection during the third trimester has the highest percentage of neonatal infection. Secondary reactivation of HSV is 10 to 30 times less likely to result in transmission to the infant.

HIV transmission to infants can occur either in transplacentally in utero, during parturition, or via post-natal maternal exposures like breast milk.

CASE REPORT

An 30 year old female patient, suffering with diabetes and hypothyroidism since 06 years visited OPD with the chief complaints of Urinary Tract Infection and micturition. In the past history she got abortion in 8 month twins pregnancy in the year of 2021. There was no history of hypertension. Generally, patient history and risk factors guide testing for TORCH organisms. She found positive

during TORCH screening. Report shows Rubella,IgG = 111.00 IU/ml, Cytomegalovirus, IgG =134.00 U/ml and Herpes Simplex Virus 1+2, IgG =11.80.All these results are higher than normal value. Currently she is suffering with this infectious diseases.

Medical Management: Symptomatic patients often experience clinically significant improvements in symptoms from TORCH treatment such as Acyclovir, Treponema Pallidum, Acetaminophen and Ibuprofen. Rubella vaccination is provided to the patient. The dosage and duration of the medication was as prescribed by the concerned Medical Practioner. The patient was educated regarding the action of each medication and the side effects were monitored. The patient was also advised to take plenty of water.

DISCUSSION

Untreated TORCH syndrome was highly affected her pregnancy period by the loss of twins in the 8th month of Antenatal period. Conformation of the diagnosis before planning for her next baby is a good step for her health and future.

CONCLUSION

In conclusion, this case exemplifies the importance of diagnosis the TORCH syndrome and providing the required attention in preventing the complications. In this case the presence of TORCH syndrome confirmed by blood sampling. The given treatment improved the quality of life of the patient.

CONSENT

Consent was obtained from the patient and she was assured about the confidentiality of the data obtained from her.

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