

A rare case of polyhydramnios during pregnancy with a sequel of hydrops fetalis complicated by prematurity

Background

Polyhydramnios is a condition of excess amniotic fluid volume during pregnancy diagnosed by ultrasound. There are various causes from gestational diabetes, to fetal infection or excessive ingestion of fluid – with the former being the most common. If discovered early there can be a prevention of symptoms such as preterm labour and complications of hydrops fetalis. Polyhydramnios can be treated with amnioreduction and non-steroidal anti-inflammatory steroids if detected in time¹.

Hydrops fetalis is a symptoms of an underlying problem in a newborn that consists of fluid accumulation in more than two compartments in the body².

Prematurity is the birth of a child prior to 37 weeks gestation. It is a major risk factor for death in the first year of life with various causes ranging from chronic health problems, infections, genetics and multiple pregnancies³.

Purpose

To enact routine ultrasound screenings for polyhydramnios in pregnant women to prevent a snowball detrimental impact on the health of the foetus. To particularly uphold frequent sessions in high risk pregnant women such as those with prior and current TORCHH* infection

* (T)oxoplasmosis, (O)ther Agents, (R)ubella (also known as German Measles), (C)ytomegalovirus, and (H)erpes Simplex.

Figures a, b, c are Ultrasounds portraying Baby X during pregnancy

Figure a is suggestive of polyhydramnios

Figure b and c include a cardiocotograph to assess Baby X heartbeat along with the contractions during labour

Timeline

Pre-Admission	Day 1	Day 2	Day 4	Day 12	Day 14
<ul style="list-style-type: none">29-year-old pregnant lady with epigastric pain and vomiting	<ul style="list-style-type: none">Mother had an UTI and placental infarction & hypoxic featuresMother has been administered IV Augmentin and HartmannsUltrasound showed polyhydramnios, ascites, paroxysmal SVTEmergency C-Section	<ul style="list-style-type: none">Baby had hydrops fetalisBaby had DC cardioversion due to AFBaby has pleural effusion, pericardial effusion & acyanotic heart defectsUrinary catheter for baby's anuria	<ul style="list-style-type: none">SpO2 18% treated with immediate bagging and improvedCXR showed bilateral pleural effusion which was treated with furosemide	<ul style="list-style-type: none">Jaundice treated with phototherapy	<ul style="list-style-type: none">All observations are fineBaby has recovered



Figure a

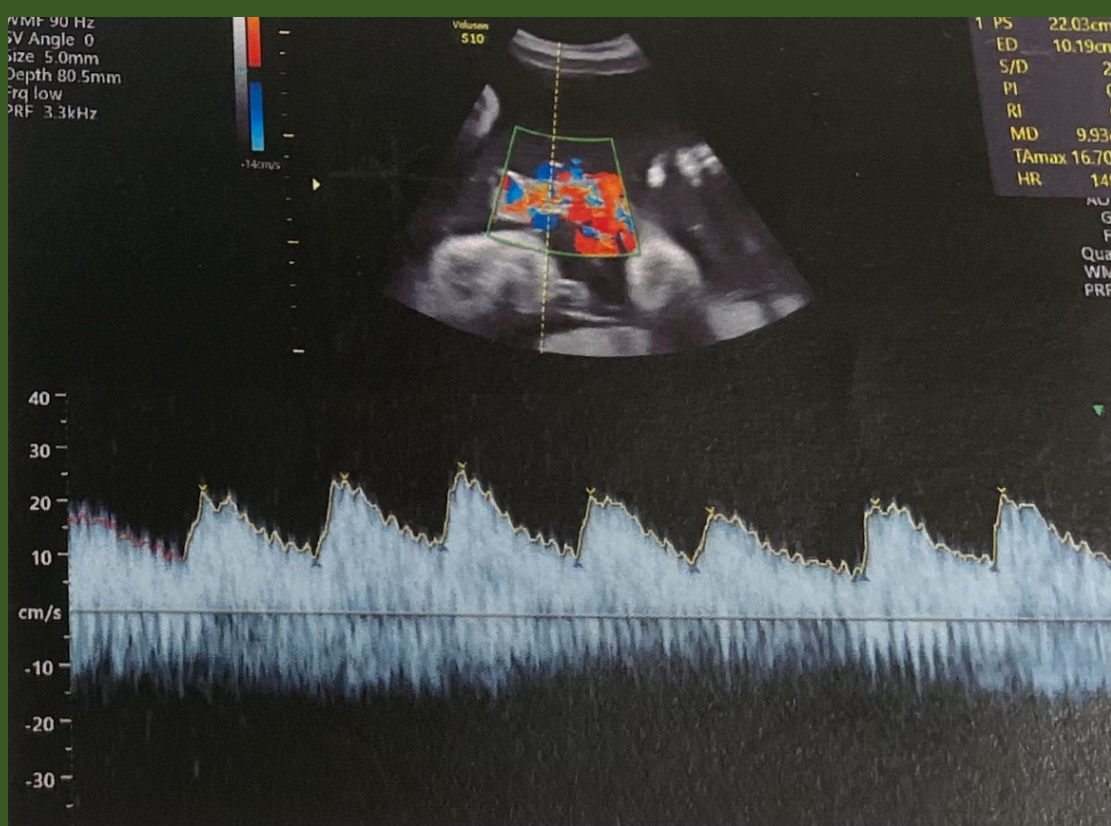


Figure b



Figure c

Discussion

- The baby is now stable and is currently on Carvedilol due to prompt management in neonatal pediatric intensive unit.
- The cause of polyhydramnios remains unknown. Various theories include:
 - A weakened immune status during pregnancy enabling a re-occurrence of the mother's cytomegalovirus or;
 - Hydrops fetalis as a result of placental infarction
 - Idiopathic
- Screening for polyhydramnios during pregnancy may have resulted in a healthy baby free from interventions and medication

Case Report

- A 29 year-old female had a caesarean section thirty-four weeks pre-term to a supposedly healthy baby girl. The following day the neonate developed atrial flutter and hydrops fetalis. The mother developed a urinary tract infection (UTI) during pregnancy and developed placental infarction.
- The mother was then administered IV Augmentin and Hartmann's for her UTI. An ultrasound from the mother showed polyhydramnios, ascites and paroxysmal supraventricular tachycardia and was then sent for an emergency C-section.
- The baby was delivered at 00:15 on the 24th of March and an ultrasound was performed on the neonate which showed that the baby had hydrops fetalis, pleural effusion and pericardial effusion which the neonate was treated with furosemide.
- At day 4 the baby was extremely hypoxic with a SpO2 of 18% and was immediately treated with immediate bagging and improved significantly.
- At day 5 the baby was found to have jaundice and was treated with phototherapy.
- Pharmacological and electrical cardioversion therapy was used on the baby to control the atrial flutter. A year later, the baby has recovered from the atrial flutter and hydrops fetalis.

References

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3964358/>
- <https://www.ncbi.nlm.nih.gov/books/NBK563214/>
- <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>