A case of Mirror Syndrome; distinct from pre-eclampsia?

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Introduction

Mirror Syndrome is a rare complication of pregnancy, which is life threatening to mother and fetus. It is characterised by maternal oedema in the presence of fetal oedema as hydrops [1]. Many of its features in both pathogenesis and presentation overlap with pre-eclampsia. Its diagnostic criteria vary in literature but can be listed as placentomegaly; fetal hydrops; and maternal oedema [2]. There is often concomitant hypertension; proteinuria; haemodilution alongside non-specific symptoms such as headache and blurred vision. Complications include haemorrhage and pulmonary oedema, improving after delivery [1].

Patient

Demographics:
- 33 year old woman
- Parity three + two
- One prior lower segment caesarean section (LSCS)

Presenting complaint:
- Headache at 25+3

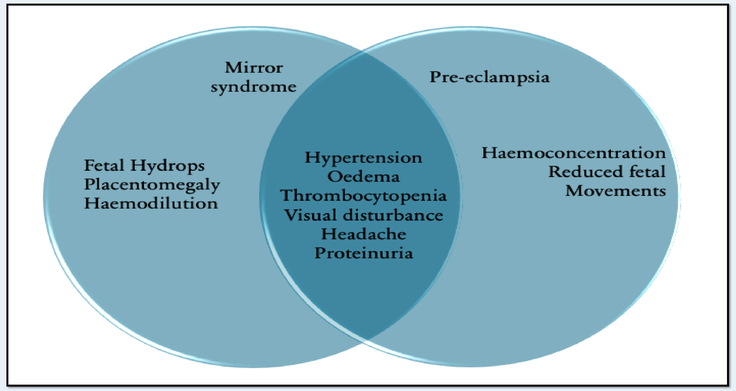
Examination:
- Visual disturbance
- Pedal oedema
- BP 140/100

Investigations:
- Urine protein-creatinine ratio 40.4
- Haematocrit mildly reduced 0.356
- Albumin 27
- Other blood tests normal
- Fetal ultrasound showed fetal hydrops

Diagnosis:
- Pre-eclampsia
- Mirror Syndrome

Treatment:
- Magnesium sulphate infusion
- LSCS under spinal anaesthesia due to worsening symptoms

Outcome:
- Blood loss 1L treated with tranexamic acid & oxytocin infusion
- Post-operative intrabdominal haematoma requiring re-look laparotomy under general anaesthesia
- Ongoing headache post LSCS which spontaneously resolved one week later
- Neonatal palliation immediately after delivery



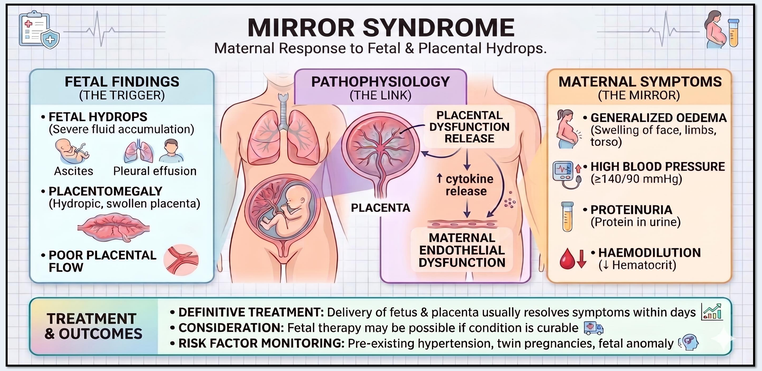
Diagnostic criteria

There is no definitive definition for Mirror Syndrome. The table below includes some of the common diagnostic features listed in the literature. Other features include hypoalbuminaemia, polyhydramnios, thrombocytopenia, hypertension, proteinuria and anaemia.

Features	
Fetal hydrops	Usually defined as excess fluid in two or more body compartments including ascities, pericardial effusion, pulmonary effusion and anasarca [1, 2]
Placentomegaly	Placental thickening
Haemodilution	Generally accepted as <30% [3]
Maternal oedema	This can be both peripheral oedema as well as oedema within body compartments like pleural effusion

Pathophysiology

The pathophysiology of Mirror Syndrome is poorly understood. It is thought fetal hydrops results in placental ischaemia due to villous oedema. There is some evidence to suggest this results in anti-angiogenic factors being released leading to maternal endothelial dysfunction. The mother develops oedema, hypertension, and proteinuria, mirroring the fetus, but with haemodilution, unlike the haemoconcentration typically seen in pre-eclampsia [4].



Management

Mirror Syndrome is incompletely understood and at present no definitive management exists beyond delivery. The decision of timing of this should involve obstetric, anaesthetic, neonatal and possibly intensive care input. Beyond this, management is supportive based on prevention of and treatment of complications:

- Stillbirth/neonatal death
- Heart failure
- Renal failure
- Pulmonary oedema
- Postpartum haemorrhage

References

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