

Mirror Syndrome: A Diagnostic Challenge even to an Astute Clinician

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Introduction

Mirror syndrome/ Ballantyne's syndrome is a rare disorder associated with the development of maternal and placental oedema secondary to foetal hydrops.

Objectives

We present a case of late onset mirror syndrome. We take the opportunity to create awareness of the syndrome for an early diagnosis.

Presentation

A 34yr old G2P0 at 33wks6d presented to A&E with 5-day history of progressive dyspnoea, orthopnoea, low grade temperature and ascending oedema over legs and abdomen.

Differential diagnosis was heart failure secondary to viral myocarditis or pulmonary embolism. She had received 2 doses of COVID vaccine.

Her clinical parameters were normal and investigations showed raised liver enzymes (see table) There was worsening of liver enzymes and creatinine in 12 hrs with gradual increase in blood pressure. She was transferred to delivery suite with a diagnosis of severe preeclampsia and started on Labetalol and MgSO4 infusion.

Bedside USS showed foetal hydrops. However, in view of pathological CTG, intra uterine transfer to unit with level 3 neonatal facilities was deemed inappropriate and baby was delivered by caesarean section. Patient's symptoms and blood parameters showed significant improvement within 48 hours of delivery.

Date	Preop		Day 0				Day 1
	06:52	23:53	05:30	10:16	17:46	22:18	03:57
Na	135	132	132	134		135	135
K	5.3	4.9	5.3	4.4		5.5	5.0
Urea	9.1	10.7	11.2	10.2		8.9	8.5
Creat	78	89	95	78		74	67
Hb	139	124	125	102	89	83	75
Plts	275	259	284	234	235	216	213
CRP	21	39		36			
ALT	85	100	104	85		89	82
GGT	57	48	48	41		34	31
Alb	34	31	32	25		23	22

Investigations

COVID screen negative
Uric Acid and D-Dimer raised. Chest X-ray and CTPA normal
Bedside ECHO appeared normal.
Computerised CTG analysis did not meet criteria and short term variability was two.
Bedside USS: severe polyhydramnios with foetal ascites, pleural and pericardial effusion and subcutaneous oedema suggesting foetal hydrops. Middle cerebral artery peak systolic velocity was within normal range.

Neonatal

A severely hydropic baby was delivered by caesarean section. The baby was intubated and transferred to neonatal unit and further to tertiary unit where she progressively made a good recovery.

Discussion

Mirror syndrome can be caused by parvovirus infection, erythroblastosis, foetal alloimmune thrombocytopenia, high output cardiac failure associated with shunting and foetal arrhythmias¹. It is associated with a high incidence of maternal and foetal morbidity and mortality and if undetected and left untreated, foetal or neonatal mortality is as high as 62.67%².

In our case, the cause of foetal hydrops is still under investigation with a suspicion of genetic cause leading to abnormality in liver enzymes and raised bilirubin.

Conclusion

A high index of suspicion is required in women who present with these symptoms. Increased awareness of this syndrome in the medical community including emergency services will help in earlier detection and intervention leading to an improved outcome.

References.

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