AGAINST THE ODDS : Successful expectant management of early onset stage II Fetal Growth Restriction

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THE CHALLENGE

INTRODUCTION:

Early-onset fetal growth restriction (FGR) is associated with increased perinatal morbidity and mortality due to placental insufficiency and chronic fetal hypoxia. **The principal challenge lies in balancing the risks of prematurity against progressive fetal compromise**. Contemporary management relies on colour Doppler, non-stress testing, and serial fetal growth assessment to guide the optimal timing of delivery.

This case demonstrates how vigilant surveillance and individualized expectant management can improve neonatal outcomes in a high-risk pregnancy.

PATIENT PROFILE :

AGE: 23 years / Female

OBSTETRIC HISTORY:
G4 P2 A1 L0 D2 with previous 2 LSCS

G1D1- Fch/FTLSCS due to fetal distress/2.4kg / expired after 6 months due to heart abnormality
G2A1- Spontaneous abortion at 2 MOA / not followed by D and E
G3D2 - Mch/ FTLSCS for scar tenderness/2.2kg/ died after 3 hrs of life due to bilateral absent kidneys.
G4- Present Pregnancy

PRESENTATION: 23y female with 28 weeks plus 3 days with bad obstetrics history and previous 2 LSCS came with USG suggestive of FGR stage 1.

ULTRASOUND: AUA :25 weeks 3 days
Stage I fetal growth restriction;
EFW < 1 percentile (725 gms);
Liqour - 9.2cm;
MCA PI - 1.34; CPR index - 0.95.

WATCHFUL WAITING

SERIAL FETAL SURVEILLANCE : Patient was kept indoor for 9 weeks with daily thrice a day CTG monitoring, serial colour doppler every 15 days, nutritional optimization with a high-protein diet, and supportive antenatal care.

GESTATION AGE	AUA	EFW	MCA PI	CPR	LIQOUR (AFI)	FGR STAGE
27 weeks 5 days	25 weeks 3 days	725 gms	1.34	0.95	9.2 cm	
30 weeks 1 days	27 weeks 1 day	920 gms	1.06	1.48	9.2 cm	
31 weeks 4 days	28 weeks 6 days	1134 gms	1.08	1.09	10.5 cm	Stage I
33 weeks 4 days	30 weeks 2 days	1420 gms	1.31	1.45	8.5 cm	Stage I
35 weeks 4 days	32 weeks 0 days	1726 gms	1.40	1.50	9.7 cm	Stage II
37 weeks 2 days	33 weeks 5 days	1920 gms	1.07	1.84	11.3	Stage II

"Every additional week in utero, when supported by reassuring fetal surveillance, can make a meaningful difference in neonatal outcome."

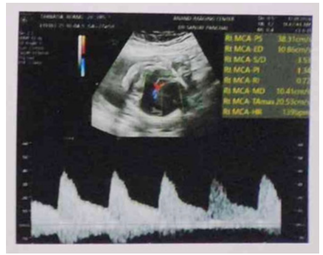


Fig 1 : MCA PI index abnormal - 2 percentile at 27 weeks 5 days

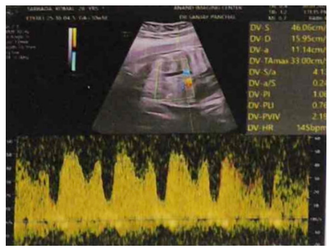


Fig 2: Ductus venuous PI is abnormal at 30 weeks 1 day

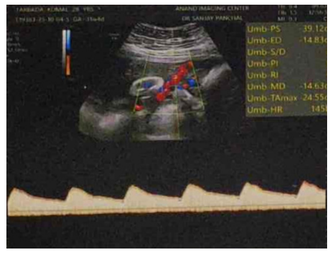


Fig 3 : Umbilical PI index normal - 0.99 at 31 weeks 4 day



Fig 4 : MCA PI index abnormal - 5 percentile at 33 weeks 4 day



Fig 5 : Routine NST of patient in the ward at 35 weeks 4 day

BARCELONA CLASSIFICATION FOR FETAL GROWTH RESTRICTION :

STAGE	DOPPLER FINDINGS	SUGGESTED DELIVERY
I	EFW/AC <3rd percentile or UA PI >95th percentile or MCA PI <5th percentile or CPR <5th percentile	37 weeks
II	**Absent End-Diastolic Flow (AEDF)** in Umbilical Artery	34 weeks
III	**Reversed End-Diastolic Flow (REDF)** in Umbilical Artery **or** Ductus Venosus PI >95th percentile	30 - 32 weeks
IV	Absent/Reversed 'a' wave in Ductus Venosus, pathological CTG, spontaneous fetal heart rate decelerations	26- 39 weeks or immediately.



Fig 6 : 33 weeks 5 days parameters with 1.9kg weight with FGR stage II

A VICTORY OF SURVEILLANCE

OUTCOME :

An **Elective lower segment caesarean section** was performed at **37 weeks 3 days**, resulting in the delivery of a live **male child** weighting **1.825kg.** Following a 6-day NICU stay for low birth weight and FGR, the neonate was successfully given mother side, and **both mother and baby were discharged** in stable condition on postpartum day 12.

CLINICAL INSIGHT:

- **Serial colour doppler** is a useful way of taking a decision of continuing pregnancy vs termination of pregnancy.
- **Daily CTG** complements doppler surveillance by providing real time assessment of fetal wellbeing, enabling safe prolongation of pregnancy until fetal or maternal indications for delivery arise.

CONCLUSION:

This case highlights the importance of early diagnosis, intensive Doppler-guided fetal surveillance, and individualized decision-making in the management of early-onset Stage II FGR. Careful expectant management enabled safe prolongation of pregnancy from 28 to 37+3 weeks, culminating in a favorable maternal and neonatal outcome despite a poor obstetric history.

It reinforces that the goal in FGR is not simply to prolong pregnancy, but to prolong it safely until the optimal time for delivery.