ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

KEY WORDS:

A CASE REPORT ON MASSIVE SPLENOMEGALY IN PREGNANCY

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INTRODUCTION

- Pregnancy with massive splenomegaly is a rare entity and is associated with increased risk to both mother and fetus.

- There is a vast amount of information on the specific management of diseases causing splenomegaly and other splenic disorders during pregnancy,but there is little information regarding the obstetric aspects of pregnant women with splenomegaly.

CASE

- A 28 year old, booked case,G2P1L1 with 3 months of amenorrhoea with bicornuate uterus,with spelnomegaly with portal hypertension with secondary pancytopenia.
- LMP 28/7/18
- EDD 5/5/19
- S.EDD 19/5/19 (5w4d scan)

Investigations At First Visit

1/11/2018

Hb=6.7gm
Total count=2030
DC:N70L25E2M3
PCV=21.8%
PLATELET COUNT:70,000
TOTAL RBC:3.65millions/cumm
MCV:59.9fl
MCH:18.3pg
MCHC:30.7%
Reticulocyte count:0.5%
PERIPHERAL SMEAR: PANCYTOPENIA
IDCT : negative
Hb electrophoresis Normal

BGT : Opositive
TSH:0.58
S.creatinine:0.8
S.urea:18mg%
Spot p/c 0.1
Serum ferritin 3.61
Vit B12 29.31
OGTT FBS:91
1st HR:162
2nd HR:125
3rd HR:115

On Examination :
Patient conscious, cohorent
GC Pallor +
PR 60/min
Bp 100/60mmHg CVS/RS NAD
RR 16/min
P/A:Hypopigmented patches seen on abdominal wall with palpable spleen.

Upper GI endoscopy Normal

- **Early pregnancy scan : gestational sac is noted in left cornua ,where as right cornua is filled with decidual reaction .**
- CRL 4.8cm corresponding to 11w5d,EDD 17/5/19
- NT 1.3mm
- Ductus venosus shows normal wave pattern
- Bicornuate uterus with single regular sac with live fetal pole corresponding to 11+5wk POG
- **U/S abdomen pelvis :**
- Liver : size,shape,echopattern appears normal,No IHBD.PV measures 1.6cm
- Gall bladder : partially distended
- Spleen : enlarged in size.Measures 20cm,shape and echopattern normal,No focal lesions noted.Splenic vein is dilated and tortuous,splenic vein measures 15mm.
- Impression : splenomegaly with dilated splenic and portal veins.
- 1st trimester : she was given 1 PRBC in v/o Hb 6.7g,T.Folic acid given.NT scan done.
- Gastroenterology referral was done in the view of splenomegaly. Advised no active intervention.
- Physician refferal was taken for splenomegaly. Advised no active intervention
- **2nd trimester** : Quickening felt at 5th month 2 doses of TT given **OBS H/O** : G1 pt conceived after using ovulation induction drugs for 2 cycles after 11 yr of marital life
- Boy child/wt 1.75kg/preterm vaginal delivery in 7th month at private hospital. Present age 3yr.Breast fed for 3 yrs. Lactational amenorrhoea 7months.
- Baby was admitted in NICU for 1 month due to low birth wt
- **Menstural H/o :** Age of menarche 13yrs,3/30 days,regular cycles,normal flow no clots,no dysmenorrhea .
- **Past history :** h/o of typhoid fever 5yr back, Dengue fever 1yr before present pregnancy. No H/o of DM/HTN/CVA/THYROID/EPILEPSY/cardiac disease, asthma, TB. **she was diagnosed as having splenomegaly in first pregnancy.**

Date (wks)	HB	TC	Platelet count	PT	APTT	INR	BT	CT
1/11	6.7	2030	0.7					
2/4	6.4	2000	1	13.1	30.2	1.23		
6/4	8.3	2800	1.5					
8/4	7.9							
2/1	11							
3/1	11.1			12.2	31	1.14		
2/2	11.7	3700						
16/2			1 lakh					
20/2	11.4	3300	0.6					
6/3			0.8					

DATE	WKS	PORTAL VEIN	SPLEEN	SPLENIC VEIN
31/10	20	1.6cm	20cm	15mm
21/3	31	1.7cm	22.5cm	20mm
29/3	32	1.1cm	20.8cm	20mm
16/4	34	1.1cm	22.3cm	22mm

MATERNAL AND FETAL SURVEILLANC

- Patient was admitted at 31w5d for Inj Betnasol.
- Medicine referral was taken. Advised platelet transfusion if plaetelet count is <20,000 or if bleeding manifestations are present and gastroenterology referral
- **Gastroenterology referral : Diagnosed as having portal HTN ? Non cirrhotic portal fibrosis.**
- LFTs were repeated which was normal.
- Platelet count,BT,CT,PT,aPTT,INR were repeated every 3 days
- U/S doppler was taken to rule out portal vein thrombosis which showed no evidence of thrombus but massive splenomegaly(20.8cm) with dilated splenic vein(2cm)
- During her inpatient period,fetal surveillance was done by taking weekly ultrasound,NST biweekly since 32 weeks POG, Daily fetal movement count.

DATE	HB	TC	PLATELET COUNT	PT	APTT	INR	BT	CT
20/3	12.6		0.7	12.6	27	1.19	2 min	4:30

26/3	11	4700	0.5					
28/3			0.5					
29/3				11.9	26	1.11		
5/4	12.2	4170	0.5	11.7	27.2	1.10		
7/4			0.4					
9/4			1					
12/4			1.2					

- Patient was absolutely normal till 36+6 POG when she had a seizure episode of generalised tonic clonic type lasting for 3min.
- a/c postictal drowsiness,tongue bite,involuntary passage of urine. Patient was shifted to LR
- O/E BP 120/90mmHg,PR 102/min,RR 20/min,Spo2 98% on RA She was given Inj MgSo4 loading dose, PIH profile was sent.
- P/A Ut 36wk size,massive splenomegaly, breech, relaxed, FHR 150/min.
- P/V : Cervix 1cmL,S,MP,
- os 2cm dilated
- pp breech at -2 to -1
- membranes absent.
- Hb 14.3g%,platelet count 65,000 PT 11.4,apTT 25,INR 1.07
- LFTs Total Bilirubin 1.5 D 0.5,I 1 CUE protein Trace
- Spot p/c 1.4 Posted for emergency LSCS with bilateral tubal ligation
- Baby was presented as frank breech and delviered by breech extraction
- Baby details : ALIVE | GIRL CHILD | 2.58kg on 27/4/19 at 6:57am
- APGAR 1min 7 and 5 min 9,liquor meconium stained, bicornuate uterus seen
- Placental details wt 500mg,all membranes and cotyledons were intact
- No complications occurred during surgery and blood loss was also moderate which did not warrant any need for blood transfusion.
- The possibility of performing a concomitant splenectomy during the cesarean section, which could increase the risk of maternal morbidity but might be necessary, was discussed with the surgical team.
- The general surgeons were therefore present in the operating room during the cesarean section, but the splenectomy was not necessary as the patient had no significant bleeding during the surgical procedure.
- Post operative period was uneventful and the patient was discharged on POD 7
- **FollowUp**: The patient returned 2 weeks after being discharged.
- She was instructed to continue an oupatient investigation of the etiology of her splenomegaly with the hematology team as there was no final diagnosis.

DISCUSSION

- There are many known causes of splenomegaly during pregnancy, which do not differ much from those in the general population.
- However, the management of a patient with a voluminous splenomegaly of unknown etiology can be challenging, especially when it involves a pregnant woman, as it may bring a series of risks and complications for both the mother and the fetus.
- In the general population, an enlarged spleen may increase the risk of infections, bleeding secondary to splenic sequestration of platelets and traumatic or spontaneous splenic rupture, complications that can also affect pregnant women with splenomegaly.
- In addition, some authors believe pregnancy itself may be a risk factor for splenic rupture, an event that can be fatal for both the mother and the child if misdiagnosed
- Despite being extremely rare, there are reported cases of spontaneous splenic rupture during pregnancy with no underlying pathology or trauma history that could explain this event, but trauma continues to be the major cause of splenic rupture

Remarkable Findings In This Case

- First is the mother's chronic morbidity, given that she had a long history of anaemia,pancytopenia and splenomegaly of unknown etiology.
- The patient has got bicornuate uterus with persistent breech presentation
- Massive splenomegaly assosciated with pancytopenia
- The antenatal period is complicated by eclampsia which was sudden in onset and unexplained.
- The patient had no history of elevated BP recordings or no imminent signs and symptoms
- Her urine routine was also within normal limits.
- Despite the potential complications during delivery due to splenomegaly, the best mode of delivery in patients with this finding is not yet established.
- In a recent prospective cohort study from the United Kingdom that evaluated pregnancy outcomes in patients with myeloproliferative neoplasms who have splenomegaly as a relatively frequent finding, the rate of cesarean delivery was 45%.
- The study does not point to splenomegaly itself as a deciding factor in the mode of delivery; therefore, it is not known whether this finding might have played a role in choosing the route of birth.
- This case also highlights the importance of a multi disciplinary team to discuss the best approach to patients with a clinical finding with no defined etiology and a series of clinical complications.
- In our patient's case, a group formed by doctors from different specialities had to weigh the risks and benefits.
- The patient participated actively in all the clinical decisions and was continuously informed about her clinical status

CONCLUSION

- Splenomegaly, regardless of its etiology, may be an issue during pregnancy,representing risks for both the mother and the child.
- We lack evidence regarding the best obstetric approach for pregnant patients with splenomegaly.
- In order to offer the best medical care for these patients, they should be evaluated by a multidisciplinary team.