

Introduction

Obstetric haemorrhage is the third most important cause of direct maternal death (19,1% of all maternal deaths) in South Africa. Placenta praevia (PP) is a major cause of obstetric haemorrhage and carries risks for antepartum haemorrhage, intrapartum haemorrhage, and postpartum haemorrhage. PP represents a complex clinical challenge due to the prolonged antenatal in-patient management. Additionally, patients are at increased risk for hysterectomy and blood transfusions as well as perinatal morbidity and mortality mainly due to indicated premature delivery.

Methods

A retrospective audit of all cases of major placenta praevia (MPP) managed and delivered at Tygerberg Hospital, Cape Town, South Africa from January 2015 to December 2016. All patients with placenta praevia in the drainage region are referred to this hospital.

Baseline characteristics

	Mean	Median	Range
Age	31.1	31.1	14.9-43
Gravidity	3	3	1-9
Parity	1.7	2	0-8
BMI (kg/m²)	29.5	28.6	16-47
Haemoglobin (Hb) at booking	11.5	11.5	7-15

Results

The total number of deliveries during the study period was 15 780, of which 121 were diagnosed with MPP, giving a hospital incidence of 0.4%. Of the 121 patients in the study, complete data was available for 119 patients (98%). Thirty one percent of the patients had a previous caesarean delivery and 19.8% had a morbidly adherent placenta (MAP). Intraoperative interventions used to control bleeding were multiple haemostatic sutures (MHS) in 11.6%, followed by compression sutures 5.8% and uterine artery ligation 2.5%. The hysterectomy rate was 16.5%. Of all the mothers, 24.8% required a high dependency unit: 1.7% to intensive care unit, 8.6% to a step-down acute post-natal ward and the majority 16.5% to the obstetric critical care unit. Relook laparotomy was required in 2.5% of the cases. There were no maternal deaths. There were 62.8% preterm deliveries, 5.8% required admission to neonatal intensive care unit. The majority (79%) of babies had good APGAR scores. The overall hospital still birth rate during the study period was 63 per 1000 births, and MPP accounted for 0.2% (16 per 1000 births) of all the still births.

Indications for admission

	Number of women (n)	Percentage of group (%)
APH	74/121	61.2%
Bedrest only	35/121	28.9%
PPROM + PTL	6/121	5.0%
Preeclampsia	2/121	1.7%
IOL (late diagnosis)	1/121	0.8%

Maternal outcomes in terms of mode of delivery

	ELCD	EMCD	P value
Blood units transfused	49/141	92/141	
Antenatally	2/25	23/25	
Intrapartum	27/76	49/76	0.0083
Postpartum	20/40	20/40	0.13
Total length of stay			
<30 days	28/70	42/70	
≥30 days	33/49	16/49	0.0033
Hysterectomies	14/20	6/20	0.1
Intraoperative intervention			
MHS	11/14	3/14	
Compression sutures	2/7	5/7	
Uterine artery ligation	1/3	2/3	0.77
Total nr of days postpartum:			
<4	48/87	39/87	
>3	13/32	19/32	0.16

Fetal outcomes in terms of mode of delivery

	ELCD	EMCD	P value
Birth weight (grams)			
<1000	0/3	3/3	
1000-1499	2/12	10/12	
1500-2499	11/36	25/36	0.00187
>2500	47/67	20/67	<0.00001
5 min Apgar score			
<7	9/24	15/24	
≥7	52/93	41/93	0.1
Days in hospital			
≤3	51/75	24/75	
>3	9/43	34/43	<0.00001
NICU admission	0/6	6/6	-
Perinatal death	0/3	3/3	-

Maternal outcomes when comparing symptoms at presentation

	Symptomatic	Asymptomatic	P value
Blood units transfused	88/141	53/141	
Antenatally	20/25	5/25	
Intrapartum	44/76	32/76	0.047
Postpartum	24/40	16/40	0.83
Total nr of days in hospital			
<7	10/16	6/16	
7-30	35/54	19/54	
31-60	28/40	12/40	0.56
>60	6/9	3/9	
Hysterectomies	8/20	12/20	0.77
Intraoperative intervention			
MHS	8/14	6/14	
Compression sutures	5/7	2/7	
Uterine artery ligation	3/3	0/3	0.24
Total nr of days postpartum:			
<4	60/87	27/87	
>3	19/32	13/32	0.33

Fetal outcomes when comparing symptoms at admission

	Symptomatic	Asymptomatic	P value
BW (grams)			
<1000	2/3	1/3	
1000-1499	11/12	1/12	
1500-2499	26/36	10/36	0.038
>2500	39/67	28/67	
5 min Apgar's			
<4	2/2	0/2	
4 – 6	13/22	9/22	
>6	63/93	30/93	0.63
Days in hospital			
<4	44/75	31/75	0.012
>3	35/43	8/43	
NICU admission	5/6	1/6	
Perinatal death	3/3	0/3	N/A

Conclusion

The incidence of MPP was 0.4% which is comparable to other studies. MPP is one of the leading causes of fetal-maternal mortality and morbidity. The prematurity rate was very high, however the majority (79%) of the babies had good 5-minute APGAR scores. Effective management protocols help to identify high risk patients, thus improving management and outcomes of both the mother and the neonate. Referral to a tertiary centre and inpatient management until scheduled delivery at 36-37 weeks should remain the current standard of management in this setting. Reducing the number of unnecessary caesarean sections is one of the main avoidable factors for MPP. This audit can be used as a valuable tool in counselling woman on what to expect after a diagnosis of MPP.