ElNoury - Webster bundle: a pre-emptive surgical approach for the management of morbidly low or adherent placenta

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Abstract

Placenta accreta spectrum and placenta praevia are a significant cause of obstetric haemorrhage, maternal morbidity and mortality worldwide. We report a novel surgical technique, which pre-emptively and prophylactically reduces intrapartum bleeding during caesarean sections for these conditions and hence reducing the risk for a caesarean hysterectomy. This technique is particularly useful in low resource healthcare settings where interventional radiology is not readily available and where the woman is keen on uterine preservation. In this report we present the surgical and clinical outcomes of a case series of 16 patients on whom this technique was piloted demonstrating its feasibility and safety.

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 $\label{thm:case series} \textbf{Table 1. Demographic and operative details of the case series participants.}$

Case	Age (years)	Parity	Gestational age	Previous CS	Antenatal diagnosis with intraoperative confirmation	Bladder displacement in (min)	IPL occlusion (min)	placental separation (min)	ElNoury compression suture (Sec)	EBL (ml)	pRBC (Units)	Postoperative hospital stay (days)
1	36	G2P1	37	1	Accreta + PP	20	10	5	60	800	0	2
2	35	G2P1	39	1	Accreta + PP	10	18	8	60	1000	0	2
3	34	G6P5	36	5	Accreta + PP	12	12	6	60	1400	2	2
4	35	G3P2	36	2	Accreta + PP	9	10	5	60	1300	2	2
5	34	G3P2	36	2	Accreta + PP	20	8	3	60	1400	3	1
6	30	G5P3	37	1	Accreta + PP	6	12	2	120	900	0	1
7	24	G2P1	38	1	PP	7	6	3	60	700	0	1
8	30	G6P4	37	4	Percreta + PP	8	10	6	120	1400	5	3
9	36	G3P2	36	2	Accreta + PP	6	6	4	60	700	0	2
10	38	G4P3	36	3	Increta + PP	3	18	5	60	750	0	3
11	38	G5P4	36	4	Accreta + PP	15	15	13	80	750	0	1
12	34	G4P1	36	1	Increta + PP	8	14	6	80	2000	3	2
13	31	G3P2	36	2	Percreta + PP	20	12	3	80	800	0	2
14	36	G5P4	36	4	Accreta + PP	6	18	5	60	2500	4	3
15	30	G3P2	37	2	Accreta + PP	5	9	2	50	2000	4	2
16	31	G2P1	37	1	Accreta + PP	5	15	4	70	800	0	2

*No: Case number; *GA: gestational age (week); *G/P: Gravidity/Parity; *CS: number of previous cesarean section; *PP: placenta praevia; *IPL: infundibulopelvic ligament; *EBL: estimated blood loss; *pRBC: transfused units of packed red blood cells intraoperative and postoperative

Figure 1: Urinary bladder dissection







Figure 2: Temporary occlusion of the blood supply to the uterus



(A) Exteriorization of the uterus and Uterine artery compression by an assistant from behind uterus. (B) Satensky Vascular occluding clamp. (C) Application of Satensky vascular occluding clamp to infundibulo-pelvic ligaments.

