

RECURRENT HAEMORRHAGES FROM LOWER SEGMENT CAESAREAN SCAR AND THE OUTCOME OF ITS MANAGEMENT

by

NIRMAL SEN,* B.Sc., M.B.B.S., D.G.O., M.R.C.O.G.

ARUN KUMAR MITRA,** M.O., F.R.C.O.G., Ph.D. (Lond.)

Clinical experience shows that secondary postpartum haemorrhage is still a hazard in obstetric practice, Tandon *et al* (1969)), more so after caesarean section, because of its late appearance, occurring even long after the patient had left the hospital. Subinvolution, of the uterus is a common clinical finding, as in any case of secondary postpartum haemorrhage, due to factors like retained placental pieces or membranes, rarely haematomas or fibromyomas. Recent observations by Gainey *et al*, (1955), Williams *et al*, (1961), and Dewhurst (1966) are that late postpartum haemorrhages are due to abnormal decidual involution at the placental site or changes like deciduoma or syncytial endometritis. Bleeding from sloughed lower segment scar is another addition to the list.

The incidence of uterine haemorrhage after 24 hours of confinement was 0.51%, or 1 in 198 cases following normal deliveries, as compared to 0.27% or 1 in 365 cases of caesarean section, Treanor (1962).

In this article four cases, are being presented, where the repeated haemorrhages were from dehiscent lower segment caesarean scar, and the plans of management have been reviewed with current literature.

* Clinical Tutor, N.R.S. Medical College & Hospital, Calcutta. Ex-Registrar, Eden Hospital, Calcutta.

** Associate Professor, Eden Hospital, Calcutta.

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Case 1

Mrs. M. G., 26 years, para 2 + 0, Bengali housewife, from a middle income group family, was admitted through Eden Emergency in mid-October 1970, in a collapsed state, with a history of severe bleeding per vaginam since morning. The bleeding was sudden and severe in two bouts. Patient was pale, cold and clammy, with radial pulse imperceptible and blood pressure could not be recorded. There was slight bleeding on admission.

Patient had her second baby by repeat lower segment caesarean section for cephalopelvic disproportion in a private nursing home, 19 days back. She had an uneventful recovery and was discharged home on the 10th post-caesarean day.

The patient was resuscitated by I.V. fluid infusion with corticosteroids and oxytocins. 1800 cc whole blood, Group A, Rh + ve was transfused under pressure.

The patient was examined under general anaesthesia. On vaginal examination, the uterus was 12-14 weeks size and bulky. The cervix was dilated and digital exploration was done. There was a shallow guttering of the lower segment scar with no breach. The uterine cavity was otherwise empty. Thorough curettage produced thin strips of endometrium.

There was no subsequent bleeding and the patient was allowed to go home on the 15th day. On the 21st day of the first bleeding, corresponding to the 40th day post caesarean, there was a second bout of severe vaginal bleeding. Patient was readmitted and resuscitated with fresh blood transfusions. Tight utero-vaginal plugging was done under general anaesthesia to control the haemorrhage. The plug was removed after 48 hours and there was complete haemostasis. She was kept in hospital for 6 weeks. Antianaemic treatment was given and finally discharged well. Blood coagulation mechanism was normal.

Follow-up at 12 weeks, patient was well. Uterus was involuted and adnexae were normal. Hysterosalpingography showed normal contour of the uterine cavity. Patient conceived again and was admitted in the end of October 1972, at 12 weeks gestation with signs of threatened abortion. There were recurrent episodes of vaginal bleeding since and third caesarean section was done at 34 weeks of pregnancy for severe antepartum haemorrhage. The major degree placenta praevia encroached on the previous lower segment scar and hysterectomy was done for uncontrolled haemorrhage from the placental site.

Case 2

Mrs. S. N., 19 years, short statured primigravida, an unbooked case was admitted through Eden Emergency with a history of prolonged labour. Lower segment caesarean section was done for transverse arrest and foetal distress. The postoperative recovery was uneventful till on the 9th postoperative midnight, patient had a severe bout of bleeding per vaginum.

Quick resuscitation with fluids, infusion and 600 cc whole blood, Group B, Rh + ve was done. Exploration of the uterus was done under general anaesthesia with gas, oxygen and ether. The uterus was bulky, almost 14 weeks of pregnancy size, external os was patulous. After dilatation of the cervix, on digital exploration, the lower segment scar did show complete dehiscence. The uterus was otherwise empty. Laparotomy was done. The visceral peritoneum was intact and with a transverse incision the bladder was pushed down. The lower segment scar was completely open showing slough on both lips, with strands of degenerated catgut and active ooze from small sites.

Considering the teenage of the patient, a conservative attempt of management was decided upon. The sloughed areas were scraped and trimmed, and the wound was resutured with one layer through and through suture with a different brand of catgut. The visceral peritoneum was reposed and the abdomen was closed in layers.

Patient recovered from the initial shock and had a smart bout of vaginal bleeding on the 8th day again, corresponding to the 17th post-caesarean day. The bleeding stopped spontaneously. Measures were taken to replace the blood loss, with no other exploration. The patient was discharged well after six weeks.

Follow-up after 12 weeks—Patient was doing well. Abdominal scar was healthy and uterus was well involuted. Hystero-graphy showed normal uterine cavity contour. Patient had her second elective caesarean section at 39 weeks of pregnancy in January 1973 in Eden Hospital. No adhesions were encountered during repeat caesarean section.

Case 3

Mrs. R. P., 32 years, para 1 + 0, a booked case of postcaesarean pregnancy was admitted at 38 weeks' of gestation on 21-4-1969 in early labour through Eden Emergency. The first caesarean was performed in Eden Hospital in 1964 for cephalopelvic disproportion and the birth weight of the baby was 7 lbs. Repeat lower segment caesarean section was done delivering a female baby 7 lbs. 12 oz. The post-operative recovery was uneventful and the patient was discharged well with the baby on the 11th postoperative morning.

On 15-5-69, the 25th postcaesarean day patient was readmitted in a low general condition after a bout of severe vaginal bleeding. After primary resuscitation exploration of the uterus was done under general anaesthesia. The uterus was bulky 8 weeks' size of pregnancy and on digital exploration the uterus was found empty and the lower segment scar intact. Curettage was done. A tight uterovaginal plugging was done to control the haemorrhage which persisted in spite of the thorough curettage. The pack was removed after 24 hours and haemostasis was complete. There was a reactionary temperature which was controlled with antibiotics.

On 29-5-69 that is, on the 38th postcaesarean day patient had a smart vaginal bleeding necessitating a laparotomy. The uterus was found bulky 8 weeks' size and no adhesions were encountered. While the bladder peritoneum was separated, a portion of the lower segment scar gave way, discharging a small quantity of a purulent fluid. After exploration of the cavity the rent was sutured with a different brand of catgut. Bilateral tubal sterilisation was done. Peritonisation was done and the abdomen was closed in layers. The patient recovered steadily.

On 14-6-69—corresponding to the 53rd post-caesarean day patient had another severe bout of vaginal bleeding and collapsed. Patient was resuscitated with massive blood transfusion. Laparotomy revealed omental adhesions. The

bladder peritoneum was adherent. A total hysterectomy was done sparing both ovaries.

The patient recovered and was well at check up at 8 weeks.

Case 4

Mrs. M. N., 28 years, para 1 + 0 was admitted through Eden Emergency on 20th September 1971, with a history of sudden severe vaginal bleeding on the 29th postcaesarean day. On admission patient was pale, with radial pulse imperceptible and blood pressure could not be recorded. Vaginal bleeding was a trickle.

Patient had a lower segment caesarean section at 38 weeks of gestation on 22nd August 1971, in a private nursing home for foetal distress, and had an uneventful recovery. Patient had a history of infective hepatitis at early third trimester.

Resuscitation was started with intravenous fluids with corticosteroid and oxytocin. 1800 cc whole blood. Group A, Rh + ve was pumped under positive pressure. Exploration of the uterus was done under general anaesthesia. The uterus was bulky, almost 10 weeks' size pregnancy with the external os open. After dilatation a digital exploration did not reveal anything, thorough curettage brought out strips of decidua. Tight uterovaginal packing was done, the pack was removed after 24 hours. Patient made a smooth recovery. A complete haemogram and haematological study showed no defect in platelets and coagulation factors.

Bleeding time—(Ivy et al)—4 min. 30 sec., (Normal 2'-6' min.); coagulation time (Lee and White)—4 min. 30 sec. (Normal 6'-12'); plasma prothrombin activity—100% (Normal 70%-120%).

Patient was discharged well on the 15th day since uterine exploration and was readmitted on 10-10-71, that is on the 49th postcaesarean day with another severe bout of vaginal bleeding. Active resuscitation was done. Active bleeding persisted in spite of repacking. The general condition was low. On 11-10-71 laparotomy was done under general anaesthesia with gas, oxygen and ether. The uterus was bulky, size of 8 weeks' pregnancy and the adnexae were normal. The left corner of the lower segment scar did show necrosis with evidence of old haematoma formation. Total hysterectomy was done and the abdomen was closed in layers. The patient recovered steadily and was discharged well.

Macroscopic examination: The uterus was bulky. On dividing the left corner of the lower

segment scar did show a double ended haematoma, filled with old blood clots and necrotic debris.

Histology: The area of sutures of the uterus showed patchy areas of necrosis and hyalinization of myometrium with foreign body granulomatous reaction, containing giant cells, plasma cells, lymphocytes and histocytes. The endometrium was poorly regenerated and contained chronic inflammatory cells. In several sections through the granulomatous area, evidence of foreign body (? catgut) granuloma of the uterus was seen.

Discussion

In all the cases presented, the haemorrhage was from the lower segment scar where the extent of dehiscence varied from minor to massive. It sounds reasonable that if the uterus is thoroughly explored, minor healing defects may more commonly be seen, which are usually overlooked when the delayed haemorrhage is small and ceases spontaneously, after lower segment caesarean section, Poidevin and Bochner (1958). The aetiology of the haemorrhage was necrosis of the wound margins with subsequent slough formation, Fitzgerald (1962 quoted by Heys). The slough separates piecemeal or gets dissolved by phagocytic action and the underlying fresh granulation tissue bleeds, or the excess granulation under the slough may be too vascular or even may erode into any adjacent feeding vessel, causing massive blood loss.

The management was always conservative, which on occasions necessitated a hysterectomy was well outlined by Heys (1963) on the basis of Hansford and Weed's postulations (1953). (a) uterine exploration and curettage reveals no other likely source of bleeding. (b) a necrotic defect is palpable at the site of lower of segment incision.

In the first case reported, repeated uterovaginal plugging secured haemo-

stasis as was in the case reported by Hansford & Weed 1963, and subsequently uterus involuted normally supported by hystero-graphic findings.

In the second case considering the teenage of the patient a conservative plan of treatment was risked, in spite of the fact that the dehiscence was complete. Manson (1966) has recommended exploratory hysterotomy in young subjects when conservative treatment fails, before undertaking hysterectomy.

If however, severe haemorrhage recurs as in cases 3 and 4, where temporisation by tight uterovaginal plugging failed, radical treatment was indicated. Attempts to maintain the reproductive function by conserving the uterus after tying the internal iliac vessels as an alternative to hysterectomy has been recommended, but a total hysterectomy is more reliable in these cases.

Summary

Four cases of repeated haemorrhages from the dehiscent lower segment caesarean section scar is presented, with reference to the severity of haemorrhage and the varied management. Hansford and Weed (1953) suggested that the sloughing was due to placing the transverse incision on the uterus too low, or on the relatively avascular cervix. Alternatively, it could have been due to temporary devitalisation caused by the direct pressure and compression of the presenting part on the lower segment in a case of prolonged labour. The foreign body reaction and the granuloma as seen in the last case, hysterectomy specimen,

may be suggestive of sensitivity to certain catgut by some individuals. Use of thin catgut for suturing may deviate local necrosis.

A routine hysterosalpingogram after conservative management is imperative to assess the scar integrity. In spite of no contra-indication a vaginal delivery should never be risked in subsequent labour and an elective caesarean section should be performed.

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