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# Post caesarean uterine scar hematoma: Managed conservatively

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**Abstract**
Post Caesarean uterine scar hematoma is a postoperative unusual complication. Raising incidence of caesarean section is a global concern, especially in the low resource countries [1, 2]. This is a case report of 26yrs old lady was undergone emergency caesarean section due to foetal distress with breech presentation. Operation was uneventful. From IST postoperative day, mother was complaining of lower abdominal pain. On examination, it was revealed that comparatively sluggish peristoltic sound with mild pallor. Sonographical evaluation showed a localised collection (hematoma) approx. 7cmx4cm in size, just anterior to uterine scar. Mother received conservative management with regular son graphical and pathological evaluation. On 2nd postoperative day, maximum size of collection was approx. 8.cmx5cm, then gradually decreased. On 16th postoperative day USG showed that the size of collection was approx. 2cmx1. 4cm. Mother was discharged with advice to follow up after one week.

**Keywords:** Post caesarean uterine scar hematoma, conservative management

## Introduction
The diagnosis of post caesarean scar hematoma is usually not difficult where sonography facility is available. It can be managed conservatively with close monitoring.

## Case report
A 26-year-old second gravida, who had her first normal vaginal institutional delivery four year back, was admitted at hospital at 38+5 wks. POG for safe confinement. She had no complaint. She attained antenatal clinic three times for present pregnancy and last was at her 33wks POG. There was no evidence of any medical disorders.

## Physical examination
After admission, routine examination showed her vital was normal. Fundal height was 36 cm. Obstetric palpation revealed that the presentation of fetus was breech with good FHS (138bpm, regular; heard best on the right side above the umbilicus.). No sign of labour was present. Clinical assessment of pelvis revealed no evidence of contracted pelvis.

## Investigation
Ultrasonography revealed the single living fetus at 36+4 weeks in breech presentation. The placenta was located at funds with grade 3 changes. The distribution of liquor amnii was adequate. The cervix was closed. The estimated foetal weight was 2.9kg. Routine preoperative investigation including hemogram was done and all were within normal limit. HB% was 11.3gm%.
Plan was made for elective Caesarean Section day after next day after completion of corticosteroid therapy.

## Surgery
Emergency Caesarean section was done under spinal anaesthesia one day before of elective day due to persisting fatal badycardia with decreased foetal movement. A male baby of 2.75kg was delivered and cried after birth, handed over to paediatrician. Operation was uneventful with minimal blood loss.

**Postoperative record**

Mother received medication as per schedule. She was encouraged to breast-feed her baby.

On the first postoperative day: Mother was complaining of persisting lower abdominal pain. On examination it was revealed comparatively very sluggish peristoltic sound with mild to moderate pallor. But her vitals were normal and afebrile. Urine output was adequate and clear. She was examined by concerned Anaesthetist and found that the mother was completely recovered from the effect of anaesthesia.

An urgent departmental Ultrasonography was done at evening and revealed a localised large elliptical collection (hematoma) approx. 7cmx4cm just anterior to uterine scar. Blood was sent for complete hemogram, LFT, Urea, creatinine, electrolytes. All were within normal limit except HB%, 8gm% which was 11.3gm% preoperatively. Three units of blood requisition was done and one unit was transfused on the same day. IV antibiotic was changed from ceftriaxone to pipercillin-tazobactum combination.

On second postoperative day: IV fluid was continued 6 hrly. She was allowed sips of water by mouth. She had no other complaints except lower abdominal pain. Her baby was doing well. On the same day, sonography showed the size of collection was approx. 8cmx5cm and her HB% was 8.2gm%.

On third postoperative day: Her peristaltic sound was better than previous and IV fluid was omitted and allowed for liquid diet. One unit blood was transfused.

On fourth postoperative day: Sonography showed the size of collection was approx. 7.6cmx4.8cm. Mother received IV antibiotic, continuous catheterisation with symptometic treatment as per schedule. She was allowed for semisolid diet followed by normal diet. Ultrasonograghy and routine hemogram were done every alternative day till discharge (two weeks).

Gradually decreased the size of collection which was detected by serial sonography.

On eighth post-operative day: Her HB% was 9gm% and she received one unit whole blood more. Wound dressing was done and wound was healthy.

On twelfth postoperative day: Foleys catheter was removed after 12 hourly clamping. The size of collection reduced to 3.4cmx2cm. Mother received IV antibiotic for two days more. Her bladder, bowel were normal. She was doing well.

From fourteenth post-operative day, she was on oral antibiotic.

On sixteenth post-operative day: Size of localised collection approx 2cmx1.4cm just anterior to scar. Her HB% was 10gm%. Mother was discharged with oral antibiotic for 7 days and called for follow up after 7 days.

On follow up visit: She had no complaint. Scar was healthy. Ultrasonography showed normal post-operative feature. There was no localised collection anterior to uterine scar.

**Discussion**

A lower uterine segment transverse incision is frequently used for caesarean section [3, 4]. In Lower segment caesarean section requires incising the peritoneum covering the upper bladder margin and the anterior uterine wall and separating the bladder from the underlying myometrium [3, 4]. The incised margin is closed along with peritoneum. If hemostasis is not obtained properly after closure of the uterine incision, hematoma may form between the bladder and the lower uterine segment and its spread is limited by the overlying peritoneum [3, 4]. Hematoma may formed extraperitonealy (bladder flap hematoma) or subserosally. A small hematoma can occur up to 50% of the mother undergoing caesarean delivery with a low transverse incision and is considered a normal finding if size is less than 4 cm [1]. Hematoma larger than 5 cm is uncommon. Larger hematoma can be a source of bacterial (both typical and atypical) infection. In case of large hematoma it can spread through the broad ligaments into the retro peritoneum and into the peritoneal cavity with hemoperitoneum. For these reasons, the presence of a hematoma (> 4–6 cm) and sepsis (if present) unresponsive to adequate antibiotherapy would justify relaparotomy.

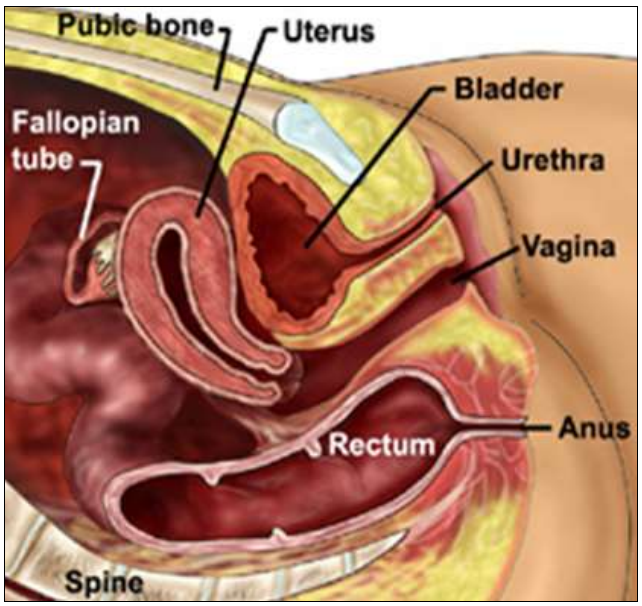


**Fig 1:** Anatomy of female reproductive system (sectional view)

By ultrasonograghy (first basic investigation), it is visualized as a hypoechogenic, heterogeneous collection between the bladder and the inferior uterine segment. In case of superadded abscess formation, gas bubbles, internal septa, and peripheral vascularization are present in USG. It is important to differentiate significant bladder flap hematomas from subfascial hematomas because only the first ones require incision of the peritoneum.

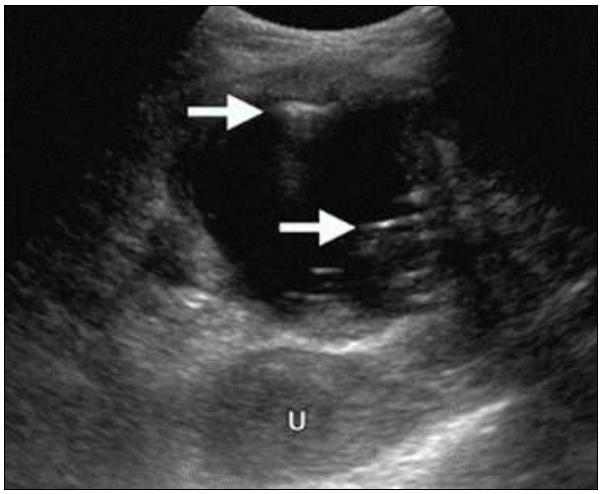


**Fig 2:** Sonographic finding of Post caesarean uterine scar hematoma

In this reported case, on first postoperative day, hematoma was detected by sonograghy after complaining of persisting abdominal pain with sign of pallor. Ultrasonograghy showed a large elliptical hypoechoic, heterogenous localised collection

(hematoma) approx. 7cmx4cm in size, just anterior to uterine scar. There was no gas bubbles, internal septa or peripheral vascularization were present in serial sonography. Mother's preoperative haemoglobin was 11.3 gm% which came down 8gm% within 24 hours of caesarean section. It was alarming as intraoperative blood loss was minimal. Mother was afebrile throughout her postoperative period at hospital. There was no significant rise of total count. She was on strong intravenous antibiotic coverage for two weeks. Mother received total three unit's whole blood. Serial sonograghy with regular routine blood investigation were done. Close monitoring was performed by obstreticians, departmental sonologist, anaesthetist and the physician. Prolonged catheterisation was done for movement restriction.

Burger *et al.* [5] sonographically examined the post caesarean uterine scar in 48 mothers but did not explain any clinical confirmation. They speculated that a mass interposed between the bladder and uterus at the site of incision could be secondary to tissue reaction or edema, blood or serous fluid, or partial wound separation. Madrazo [6] reported that in her experience it is normal to see a small, rounded area at the incisional site during the first postoperative week, but did not give any size criteria. Both these reports described the difficulty in distinguishing expected or normal postoperative change at the uterine wound from a significant change. Previously sonography could not accurately distinguish among a hematoma, infected hematoma, and abscess [7].

Later, the type and size of the post caesarean uterine scar hematoma were classified [8, 9, 10].

In a proper clinical setting the presence of a large amount of sonographically detected air is highly suspicious for an infected hematoma/abscess.

A mother presenting with fever or significant blood loss after caesarean section is at risk for a hematoma. The presence of fever in a post-caesarean-section mother does not mean infection always as hematomas can cause fever. Now Sonography can diagnose this complication accurately and easily and it helps the obstetricians for early diagnosis and treatment. Furthermore, follow-up evaluation showing size changes can help in decisions concerning discharge and further surgery if needed.

In conclusion, post caesarean uterine scar hematoma are an unusual complication of a low transverse caesarean section. Early detection helps to focus and guide the therapy of the mother. Sonography can identify easily and accurately. Most of mothers are already on postoperative antibiotics routinely in low resource country. After recognition, if blood loss does not continue and abscess formation is not clinically evident, these mothers are treated conservatively with close monitoring.

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