

# Inferior Epigastric Artery Injury during Vaginal Delivery

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**Abstract:** *Inferior Epigastric Artery (IEA) is at risk of injury in laparoscopic surgery, but is very uncommon following vaginal delivery. A 30 year woman, 3rd gravida had an uneventful vaginal delivery on 15.09.14 at 9:29 am. But developed hypotension and tachycardia along with hematoma in left lateral vaginal wall near the fornix. Rectus sheath hematoma was detected on laparotomy. Severed IEA was detected on the left side with normal right side IEA. Hematoma was drained and artery was ligated. IEA injury is rare but potentially fatal. IEA injury requires prompt diagnosis and urgent intervention if a poor outcome is to be prevented.*

**Keywords:** hematoma, vaginal delivery, laparotomy

## 1. Introduction

Inferior Epigastric Artery (IEA) is at risk of injury in laparoscopic surgery, but is very uncommon following vaginal delivery. We report one case of IEA injury during vaginal delivery leading to Rectus sheath hematoma formation which required exploratory laparotomy.

## 2. Case Report

A 30 year woman, 3rd gravida with 1 living issue and 1 abortion, at period of gestation of 37 weeks was admitted in labour on 14.9.2014. She had an uneventful vaginal delivery on 15.09.14 at 9:29 am. She delivered single live female baby of 2.5 kg. But developed hypotension and tachycardia along with hematoma in left lateral vaginal wall near the fornix which was gradually increasing in size, ultimately involving both upper and middle third of left lateral vaginal wall in immediate postpartum period (4<sup>th</sup> stage). On admission her hemoglobin was 12 gm%, which dropped down to 6 gm% after delivery. An intra abdominal bleeding (broad ligament hematoma) was suspected. Resuscitative measures instituted along with blood transfusion. Rectus sheath hematoma was detected on laparotomy which was extending deep into the pelvis. Surgery opinion was taken intraoperatively. Severed IEA was detected on the left side with normal right side IEA. Hematoma was drained and artery was ligated. Drain was kept for 2 days. 3 units whole blood was transfused. Postoperative period was uneventful and patient was discharged on 5<sup>th</sup> day.

## 3. Discussion

The IEA have its origin from external iliac artery but at any point from inguinal ligament to 6 cm above it. After origin it ascends loosely between rectus abdominis muscle and posterior rectus sheath. The combination of the loose attachment of IEA with the stabilization of its perforating branches fixed to the muscle makes the artery prone to shearing stresses at branching sites during strong muscular contraction or stretching as in vaginal delivery.

IEA injury is rare but potentially fatal and in-hospital mortality is 2-5%. Previous studies of significant intra-abdominal vascular injuries reveal a preponderance of penetrating (>80%) trauma as the etiology. Blunt abdominal trauma is another common cause. IEA is an atypical source of PPH.<sup>1</sup> Massive bleeding into the abdominal wall from the inferior epigastric artery can be difficult to recognise initially and can be misdiagnosed as broad ligament hematoma. However, the inferior epigastric artery should be considered as a possible source of arterial haemorrhage and a selective angiogram should be done if the main haemorrhage is not vaginal bleeding but a haemoperitoneum, if no obvious abnormality is identified during uterine artery angiography, or if obvious abdominal wall haematoma is identified by laparotomy or on ultrasound or CT scan.<sup>2</sup>

IEA injury requires prompt diagnosis and urgent intervention if a poor outcome is to be prevented.

## References

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