

Rare Delayed Presentation of Post-Appendectomy Incisional Hernia: A Case Report

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Abstract:

Incisional hernia is a considered late complication of abdominal surgery. Post-appendectomy incisional hernia is relatively uncommon. The present case presents 57years old female patient with sudden bulge over right iliac fossa 20 years post-appendectomy with severe pain in abdomen and nausea. Though the bulge reduced afterwords severe tenderness was present at right iliac fossa. Diagnosis of incisional hernia was made and open incisional hernioplasty with polypropylene mesh and negative suction drain placement was done. Post-operative recovery was satisfactory. This case highlights possibility of delayed and rare presentation of incisional hernia two decades after appendectomy even without the clinical bulge thus making it unique. Careful consideration of every probable diagnosis and correlating with previous surgical history is important in such cases. With reliable investigations and surgical expertise any challenging diagnosis can be managed successfully. In *Ayurveda*,

Vruddhi is described in *Sushruta Sanhita* where out of 7 types hernia can be correlated with *Antravruddhi*.

Keywords:

Antravruddhi, Case report, Incisional hernia, Post-appendectomy hernia

Introduction:

वातपित्तश्लेष्मशोणितमेदोमूत्रान्त्रनिमिताः

सप्त वृद्धयो भवन्ति ।

तासां मूत्रान्त्रनिमित्ते वृद्धी वातसमुत्थे,
केवलमुत्पत्तिहेतुरन्यतमः ॥ सु.नि. 12/3

Acharya Sushruta has mentioned 7 types of *vrudhi*- *Vataj*, *Pittaj*, *Kaphaj*, *Raktaj*, *Medoj*, *Mutraj*, *Antravruddi*. *Tridosha prakopa* is the reason for *vrudhi*. *Antravruddhi* can be considered as hernia.¹

भारहरणादिभिः कुपितस्तु अन्त्रवृद्धेः
कारणमित्यर्थः । उल्हण टीका

Bharavahan (Heavy weight lifting) etc., are reason for *vata prakopa* leading to *antravruddhi*.²

Incisional hernia is one of the late complications of abdominal surgery. Commonest incidence is seen after laparotomy occurring in 2% to 20% cases, depending on the incision.³ Although appendectomy is a common surgery, incisional hernia at the appendectomy site is uncommon with prevalence of approximately 0.7%⁴. Following a traditional right iliac fossa McBurney's incision, prevalence ranges less than 0.12%^{5,6}. Presentation of incisional hernia usually occurs within the first few postoperative years, their occurrence may be delayed.⁷ Thus, a remote surgical history remains clinically relevant even decades later. Incisional hernia after *McBurney's* muscle splitting incision is usually due to wound infection or local peritonitis. Other causes includes placement of drain through incision and necrosis of muscle layer⁸. This hernia can pass through all the layers of abdominal wall. But in a less common type hernia passes through defect in transverse abdominis and internal oblique muscles but not through external oblique aponeurosis⁹. Therefore it can be missed on examination. Here ultrasonography is required to confirm the diagnosis.

The present case is a rare occurrence of post-appendectomy incisional hernia with an unusually delayed presentation approximately 20 years after surgery, together with the absence of a demonstrable swelling or cough impulse on examination.

Diagnostic testing:

Investigations	Value	Investigations	Value
Haemoglobin	11.2gm%	Sodium	134 mmol/L
Total leukocyte	7920	Potassium	3.9 mmol/L
Platelet	310x10 ³	Chloride	108 mmol/L
Blood Urea	20.8mg/dl	Urine Pus cells	2-3

Careful clinical assessment, appropriate imaging and consideration of previous operative history was essential for diagnosis. Here surgical repair with appropriate abdominal wall reconstruction and mesh placement is definitive management.¹⁰

Case information:

A 57 years old female patient presented with complaints of pain in abdomen in right iliac fossa, nausea and history of bulge appearance in right iliac fossa. Patient has undergone open appendectomy through *McBurney's* incision 20 years ago. Patient was a known case of hypertension and hyperthyroidism and was under regular medications.

Clinical Findings:

On examination, clinically there was no bulge visible in right iliac fossa but only the faint scar of previous surgery was seen. The absence of bulge persisted even with coughing. However severe tenderness present in right iliac fossa.

Diagnostic assessment:

An ultrasonography report dated 02/09/2026 showed small anterior abdominal wall defect at right iliac fossa likely at the site of previous incisional scar with defect of approx size 2.5cm showing herniation of small bowel loop and omental fat. Likely suggestive of incarcerated incisional hernia.

Creatinine	0.58mg/dl	Urine Epithelial cells	3-4
T3	99.7	<i>Prothombin</i> time	13.6
T4	9.42	INR	0.99
TSH	10.4	2D echo	EF-60%
ECG	WNL	Chest x-ray	NAD

Diagnostic challenges:

The main diagnostic challenge was due to discrepancy between patient's reported bulging in right iliac fossa and absence of bulge during the examination. The ultrasonographic findings were suggestive of incarcerated incisional hernia with which clinical co-relation cannot be made.

Differentials diagnosis:

- Inguinal hernia (as possibility of patient demonstrating the different site of bulge cannot be dismissed)
- Due to the absence of bulge but presence of severe pain and nausea Intestinal obstruction due to adhesions from previous surgery was a possibility.
- Other including – *Typhilitis*, mesenteric lymphadenopathy, right ovarian cyst can be considered

Diagnosis:

Final diagnosis of post-appendectomy incisional hernia with defect of approx size 2.5cm and *omentum* as content was made based on laboratory and operative findings.

Therapeutic intervention:

All pre-operative work done and patient posted for incisional hernioplasty under spinal anesthesia. In supine position under all aseptic precautions painting and *drapping* done at operative site. An incision taken over previous scar. Skin, subcutaneous tissue, external oblique

aponeurosis cut along the line of incision. Fibres of internal oblique muscle split to reveal hernia sac. The said sac was adherent to the internal oblique and transverse abdominis muscles. Careful dissection carried out and content (*omentum*) reduced. Defect sutured with polypropylene 0 in simple interrupted manner. Muscle layers approximated with *vicryl 2.0* in simple interrupted manner. External oblique aponeurosis sutured with *vicryl 2.0* in continuous interlocking manner. Polypropylene mesh placed above external oblique aponeurosis and fixed with *prolene 2.0*. Negative suction drain placed over mesh. Subcutaneous layer sutured with *vicryl 2.0* in simple interrupted manner. Skin sutured with *ethilon 2.0* in vertical mattress manner. Sterile dressing applied.

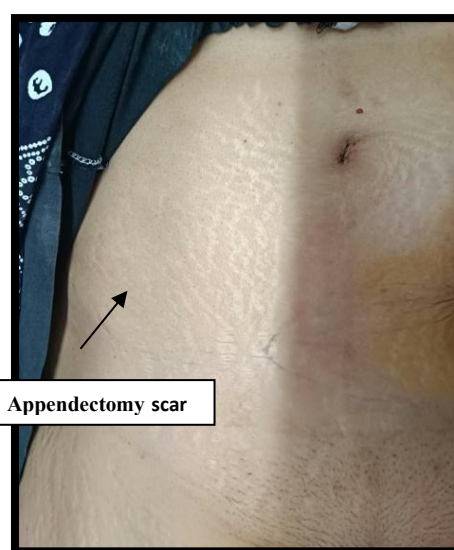


Figure 1: Pre-operative faint scar

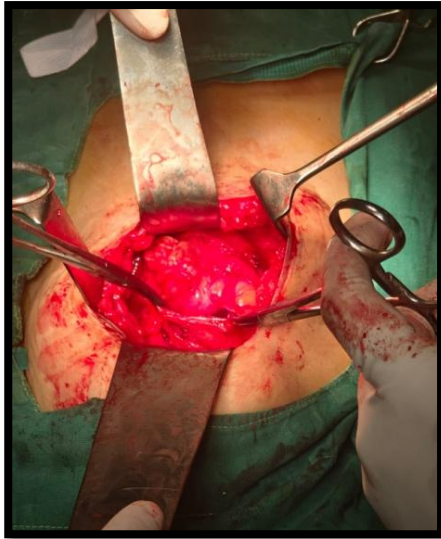


Figure 2: Hernia below external oblique aponeurosis

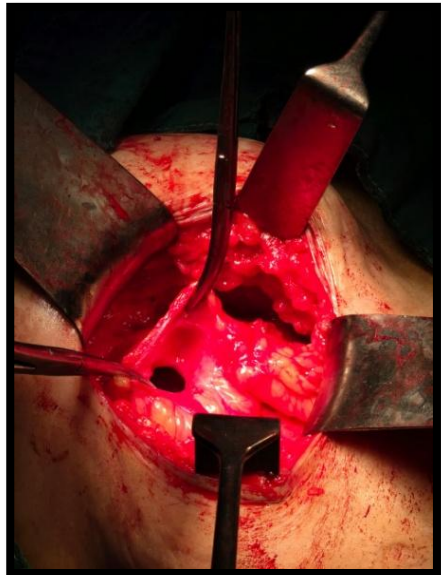


Figure 3: Defect



Figure 4: Closure of defect

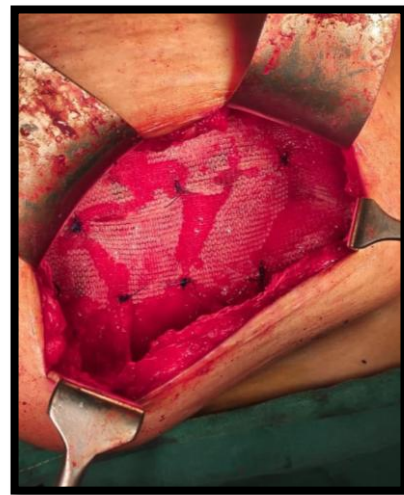


Figure 5: Polypropylene mesh placement



Figure 6: Wound Closure with drain placement

Timeline:

Time	Clinical event
2006	Appendectomy
02/09/2026	Severe pain in abdomen , appearance of bulge in right iliac fossa, nausea
03/09/2026	Admission in hospital, Investigations and planning surgery
04/09/2026	Incisional hernioplasty done under spinal anesthesia
06/09/2026	Post operative day 2 Wound healthy Drain approx. 40cc, serosanguinous Mild tenderness at operative site
08/09/2026	Post operative day 4 Discharged with drain approx. 20cc, serosanguinous
14/09/2026	Post operative day 10 Wound healthy Drain removed
16/09/2026	Post operative day 12 All sutures removed Mild pain at operative site Resuming day to day life
28/09/2026	General follow-up No fresh complaints

Follow-up and outcomes:

Post-operative course was satisfactory. Wound recovery was healthy without any complications. Drain was serosanguinous in nature and was in reducing manner. Drain was removed on post-operative day 10 and sutures removed on post-operative day 12. There were no any other abdominal complaints. Pain was minimal not affecting day to day life.

Discussion:

Development of incisional hernia is influenced by patient-related factors,

wound healing, infection, surgical technique, incision characteristics and mechanical stress on the abdominal wall. Incisional hernia after appendectomy is relatively uncommon. The present case is clinically significant because the patient presented approximately 20 years after appendectomy. Such a long interval can make recognition of the previous operation as a possible cause of current abdominal wall symptoms more difficult. The most unusual feature was the absence of an externally visible swelling during examination. The patient reported sudden

bulging, but neither a visible swelling nor cough impulse could be demonstrated. Localized tenderness was the principal positive clinical finding. This atypical presentation emphasizes that clinical assessment of a patient with previous abdominal surgery should not depend exclusively on the presence of an obvious swelling. A postoperative abdominal wall defect may occasionally present with pain or intermittent symptoms without a persistent clinically demonstrable bulge. Clinical examination remains important however in such atypical cases ultrasonography or computed tomography is required for further management. The two given types of post-appendectomy incisional hernia this case is of interstitial type making it more difficult and rare. The intraoperative finding of contents adherent to the muscle layer was another important feature. Adhesions can make identification of the defect and separation of the contents technically challenging. Careful dissection is therefore important to avoid injury to adherent structures. *Polypropylene* Mesh placement is widely used for repair of incisional hernias because it provides additional strength to the abdominal wall. The negative suction drain helps to avoid any wound or mesh related complications.

Conclusion:

Strength: This case successfully demonstrates management of rare and delayed complication after appendectomy even with the diagnostic challenges.

Limitations: This is a single case study hence larger study population is required for further evaluation. Furthermore, long term follow up is required to assess the recurrence.

Patient perspective: The patient came to the hospital worried due to the sudden

swelling over abdomen, pain and nausea. After examination, she was explained about her condition and admitted and surgery was planned. At first patient was concerned to undergo another surgery but she was happy and satisfied with treatment.

Informed consent: Written informed consent was taken from the patient for publication of clinical data and images. The patient was reassured about confidentiality of any personal identity.

Conflict of interest: The authors declare that there is no conflict of interest.

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