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Research

## INFECTED SUTURE GRANULOMA



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	<b>Abstract</b>
Published on: 29 Oct 2025	A suture granuloma is a localized inflammatory lesion that develops as a tissue reaction to residual suture material following surgery. It represents a foreign-body response and typically appears as a small, painful swelling, firm nodule, or sometimes as a sinus discharging from the surgical site. This case involves a 27-year-old woman who presented with pain, swelling, and purulent discharge over the infra umbilical scar, six months after multiple abdominal operations. Clinical assessment and ultrasonography confirmed the diagnosis of an infected suture granuloma. The condition was successfully managed through surgical removal of the granulomatous tissue and the retained sutures, followed by appropriate antibiotic treatment. Timely diagnosis and intervention are crucial to avoid further infection, complications, or recurrence.
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	<b>Keywords:</b> Suture granuloma, foreign body reaction, postoperative complication, excision, wound infection.

## **INTRODUCTION:**

An **infected suture granuloma** is a localized inflammatory mass that forms at the site of retained surgical sutures, specifically when a bacterial infection occurs alongside the body's foreign body reaction to the suture material.



## **CASE PRESENTATION:**

A 27-year-old female was admitted to the Department of General Surgery, on 10th October 2025, presenting with a swelling over her surgical scar that had persisted for six months. The swelling was accompanied by pain and serous discharge for the past three days. It was located in the infraumbilical region, corresponding to the site of a previous surgical incision.

## **SURGICAL HISTORY:**

The patient had a notable surgical history, including three lower segment caesarean sections performed in 2016, 2018, and 2021, followed by a tubectomy and hernioplasty in 2021. She also recalled experiencing a similar episode of swelling and discomfort at the same site earlier, which subsided on its own.

**2016 LSCS**

**2018 LSCS**

**2021 LSCS +Tubectomy+ Hernioplasty**

On examination, the patient was alert, cooperative, and hemodynamically stable. Vital parameters were within normal limits. Local examination of the abdomen revealed a firm, tender swelling with mild induration and serous discharge at the infraumbilical scar site.

## **INVESTIGATIONS:**

Routine hematological and biochemical investigations were conducted. The laboratory results revealed a hemoglobin level of 10.1 g/dL, indicating mild anemia. The erythrocyte sedimentation rate (ESR) was mildly elevated at 14 mm/hr.

Urine examination showed pale yellow, clear urine with a specific gravity of 1.005 and pH 6.0. Calcium oxalate crystals were observed.

Ultrasonography (USG) of the abdomen and pelvis demonstrated a superficial granuloma in the right infraumbilical region, measuring approximately 9 × 9 mm, along with multiple granulomas and fibrous tracts extending up to 13 mm within the subcutaneous tissue -findings consistent with an infected suture granuloma.



**SURGICAL MANAGEMENT:**

On 16th October 2025, the patient underwent excision and secondary suturing under spinal anesthesia. Intraoperatively, multiple infected granulomatous lesions were found within the subcutaneous plane along the previous surgical scar. The retained non-absorbable suture material, along with necrotic and infected tissue, was carefully removed. The wound was thoroughly irrigated with antiseptic solution, and hemostasis was achieved. Closure was done using 2-0 Vicryl sutures in layers. The patient tolerated the procedure well and was shifted to the postoperative ward in stable condition.

**PRE AND POST OPERATIVE TREATMENT AND RECOVERY:**

TRADE NAME	GENERIC NAME	ROA	DOSE	FRQY	D1	D2	D3	D4
TAB.DOXI	DOXYCYCLINE	PO	100mg	BD	✓	✓	✓	✓
TAB.PAN	PANTOPRAZOLE	PO	40mg	OD	✓	✓	✓	✓
TAB.ZERODOL-SP	ACECLOFENAC, SERRATOPEPTIDASE, PARACETAMOL	PO	100mg+ 15mg+ 325mg	BD	✓	✓	✓	✓
TAB.MVT	MULTIVITAMIN	PO	Itab	OD	✓	✓	✓	✓
TAB.LIMCEE	VITAMIN C	PO	500mg	OD			✓	✓

**PRE OP:**

TRADE NAME	GENERIC NAME	ROA	DOSE	FRQY
INJ.XYLOCAINE	LIDOCAINE	TEST DOSE		
INJ.TT	TETANUS TOXOID	IM	0.5cc	STAT
TAB.RESTYL	ALPRAZOLAM	PO	0.5mg	STAT

**POST OP:**

<b>TRADE NAME</b>	<b>GENERIC NAME</b>	<b>ROA</b>	<b>DOSE</b>	<b>FRQY</b>	<b>THERAPETIC ACTION</b>
INJ.MONOCEF	ceftriaxone	IV	1gm	BD	Cephalosporin
INJ.PAN	pantoprazole	IV	40mg	OD	Proton pump inhibitor
INJ.DYNAPAR	Diclofenac and paracetamol	IV	75mg	BD	NSAID
INJ.PCM	paracetamol	IV	1gm	SOS	Analgesic
TAB.CHYMORAL FORTE	Trypsin and chymotrypsin	PO	1tab	TID	Proteolytic enzyme

Daily wound dressing was done under aseptic precautions. The patient showed steady improvement and was discharged on 23rd October 2025 with oral antibiotics and instructions for local hygiene and follow-up.

### **DISCUSSION:**

Suture granuloma is a chronic inflammatory reaction that occurs when non-absorbable suture material remains in the tissue after surgery. It usually appears weeks or months after the procedure and may look like an abscess or small lump. The condition develops as the immune system reacts to the retained suture, leading to granuloma formation around it. Common contributing factors include the use of non-absorbable sutures, repeated surgeries, and postoperative infections. Ultrasound helps detect retained sutures in suture granuloma. Treatment involves removing the granuloma and suture, followed by antibiotics and proper wound care.

### **CONCLUSION:**

An infected suture granuloma is a rare yet significant complication that can occur after surgery. Prompt identification and timely treatment, including surgical removal of the lesion and suitable antibiotic administration, are essential for full recovery. Preventive strategies involve using absorbable sutures when feasible, maintaining strict aseptic conditions during surgery, and ensuring proper wound care after the procedure. Educating patients about wound hygiene and scheduling regular follow-up visits also play a vital role in minimizing the chances of recurrence.

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