

GOSSYPIBOMA: A RARE ETIOLOGY OF CHRONIC DISCHARGING SINUS IN POST THYROIDECTOMY PATIENT**Hiren Debbarma^{1*}, Tarun Guha², Debaleena Dey³ and Bipasha Debbarma⁴**¹Postgraduate Trainee, Department of ENT, Agartala Government Medical College.²Associate Professor, Department of ENT, Agartala Government Medical College.³Assistant Professor, Department of ENT, Agartala Government Medical College.⁴Postgraduate Trainee, Department of Obstetrics and Gynaecology, Patna Medical College.***Corresponding Author: Hiren Debbarma**

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ABSTRACT

Retained foreign body (known as gossypiboma or gauzoma or textiloma) following surgeries of the neck is rarely reported compared to intraabdominal or intrathoracic surgeries. We present a middle-aged lady who presented with persistent discharging sinus from neck 9 months after left hemithyroidectomy. MRI neck reveals left para-tracheal abscess with sinus track formation but the definitive diagnosis could only be made intra-operatively, where gauze piece was found embedded in the prior surgical site. Gossypibomas can present in a various way that can be easily missed from clinical judgement and imaging. High clinical suspicion in patients with prior history of surgery presenting with chronic discharging sinus or lump is key to diagnosing gossypiboma.

KEYWORDS: Gossypiboma, Gauzoma, Discharging neck sinus, Thyroidectomy, Retained surgical gauze.**INTRODUCTION**

A gossypiboma or gauzoma means retained surgical sponge or gauze and is derived from the Latin word "gossypium," which means "cotton," and "boma" in Kiswahili, which means "place of concealment." It also describes as a mass in the body, composed of a cotton matrix (most frequently a surgical sponge), which is surrounded by a foreign body reaction.^[1] Presently synthetic material has replaced the cotton, and the term 'textiloma' has also been used in literature. A retained cotton matrix inside the body produces a local inflammation on the first day, then a granulomatous reaction after a week and later fibrosis approximately after two weeks.^[2] Overall incidence of a retained foreign body is about 1:5,500 operations while its incidence post thyroidectomy is rarely reported.^[3] During surgical procedures precautionary measures are always taken to avoid or minimize complications. Iatrogenic operative complications do occur when surgical materials like gauze, sponges, or surgical instruments are forgotten intraoperation leading to various complications, such as failure of the wound to heal, sinus formation, fistulations, and abscesses.^[4] To our knowledge, a gossypiboma following head and neck operations is rarely reported." It is difficult to diagnose a gossypiboma in the neck because of its rarity, absence of hollow viscus, various symptoms, and non-specific radiologic findings. Here we present a case of a gossypiboma presenting as a

persistent discharging sinus from neck 9 months after left hemithyroidectomy. This article may help clinicians reduce the likelihood of misdiagnosis and avoid unnecessary radical operation.

CASE DETAILS

A 40 year old female presented to ENT OPD with a chronic non healing sinus discharging purulent material from scar in the neck with history of left hemithyroidectomy 9 months back for a colloid nodular goitre.

On examination, there was a horizontal scar mark in the neck, below the level of thyroid cartilage. There was a sinus with discharging purulent materials from the left end [Fig 1]. No regional lymphadenopathy. Examination of other systems including oral cavity or oropharynx and larynx was normal. Patient was euthyroid. CECT neck revealed ill defined hypodensity in skin and subcutaneous planes of left lobe of thyroid gland region with well defined 1.7 x 1.8 cm sized slightly hyperdense nodular lesion within [Fig 2]. Culture & sensitivity report of the discharge was negative for bacterial growth. USG of neck revealed a heavily calcified lesion in the region of left thyroid lobe with adjacent ill-defined hypoechoic collection and a small fluid filled track arising from the collection and communicating with the skin. MRI of neck revealed well defined single altered isointense and

hypointense lesion measuring 1.34 x 1.42 cm at the location of left lobe of thyroid which shows ring enhancement on post contrast images [Fig 3]. There is also evidence of fistula tract extending from the lesion to the anterior aspect of the neck measuring approx. 0.58 cm long.

Patient was then taken up for wound exploration under general anaesthesia. Intraoperatively, sinus tract was delineated. Sinus tract was followed and pus was seen in left paratracheal region which was drained. To our surprise, after drainage of pus, there was a gauze approximately 8 x 6 cm in the left paratracheal region with dense adhesions to adjacent tissue and creating an encysted lesion. The gauze was dissected free from the attachments and was carefully removed. The cavity was cleaned and irrigated with betadine and saline and surgical site was closed in layers after leaving a drain. Post-operatively patient was kept on ceftriaxone-sulbactam. Sutures removed after 7 days and wound healed well and the patient was discharged. Patient will be followed up after 2 weeks.



Fig. 1: Preoperative picture of sinus.



Fig 2: CECT of neck.



Fig 3: MRI of neck.



Fig. 4: Intraoperative picture showing exposure of sinus tract.

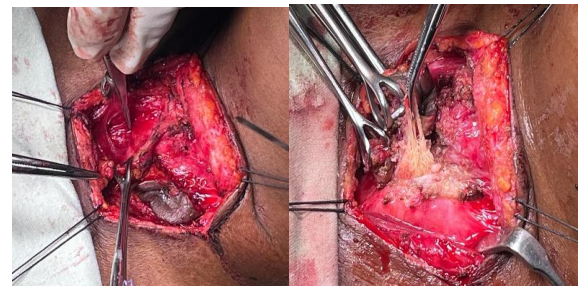


Fig 5: Gauge piece in situ.



Fig. 6: Thyroid gossypiboma.

DISCUSSION

Gossypibomas are considered a type of surgical negligence, which is mainly reported in major abdominal surgeries.^[5] Gossypibomas after thyroid surgery is a very rare event. Patients with gossypiboma often have vague clinical presentations and the diagnosis usually comes as a surprise.^[6] However, there have been reports of asymptomatic gossypiboma as well.^[7] Gossypibomas after thyroid surgery commonly present as chronic discharging sinus or lump mimicking malignancy.^[8] Similar to our case, retained gauze piece after thyroid surgery resulted in chronic discharging sinus. Chronic inflammation associated with gossypibomas lead to foreign body giant cell reaction and can result in either fibrotic capsule, adhesion, fistula, abscess or non-healing wound, as also noted in our case.^[9] CT scan is commonly used modality for suspicious retained body.^[3] Our patients also underwent CT scan but the diagnosis of gossypiboma could be made intra-operatively only.

Gossypiboma demonstrates various radiological manifestations, and even can change in its appearance depending on the location and the type of foreign body

reaction. A characteristic sonographic finding of gossypiboma includes a highly echogenic curvilinear structure with dense posterior acoustic shadowing.^[10] The typical radiologic finding on computed tomography is a predominantly high attenuation central mass with a spongiform pattern of air bubble and a hyperdense, well-enhancing rim.^[11] The characteristic MRI features include the delineation of a well-defined mass with a peripheral wall of low signal intensity at T1- and T2-weighted imaging, with whorled stripes within the internal portion and peripheral wall enhancement at contrast-enhanced T1-weighted imaging.^[12]

Factors responsible for gossypibomas are mainly related to type of surgery and the conduct of operating room.^[13] Emergency surgeries, lengthy procedures, unexpected change in procedure, multicavity cases, obese patients, shift changes during the surgery, poor communication, false counting of sponges, no clear standardized counting policy and use of nonradiopaque sponges are among the main risk factors associated with gossypibomas.^[13] Cima *et al* in their large study of 191,168 total surgical procedures in four years, found evidence of 68 different cases of retained foreign bodies in the body as a whole; and reported that majority of the retained foreign bodies were sponges (60%), miscellaneous items (20%), needles (9%) and instrument (3%).^[3] Gossypiboma resulted in reoperation in up to 65% of these patients.^[3] Therefore, prevention of such surgical error should be of the utmost priority for the safety of the patient and as a part of safe surgical practice. Routine post-operative high resolution x rays are helpful to detect up to 60 % of retained foreign bodies, whereas intra-operative x-rays in doubtful cases can yield in up to 67% of cases.^[3] Multistep checkpoints to prevent the risk factors with the multidisciplinary involvement of the Surgeons, Nursing staff and the anaesthesiologists are very essential.^[13]

CONCLUSION

In conclusion, thyroid gossypiboma should be given a high index of suspicion in the presence of a persistently discharging sinus from the surgical site postoperatively. The surgical team should carry the basic principle of checking gauze count and instrument count in all surgical procedures to avoid this preventable complication and also using gauze pieces with radiopaque threads. Safe surgical practice and anticipation are key to prevention and management of thyroid gossypibomas.

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