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Gossypiboma neck rare mimicker of tumor recurrence

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ABSTRACT

Retained foreign bodies (RFB) or Gossypibomas are rare causes of lump. They can present with symptoms several years after surgery. We encountered presentation of a patient with RFB or gossypiboma after total thyroidectomy and ablative session of I¹³¹ therapy with complaints of swelling on left side of neck since 2 months, discharge from post-operative drain site since one month associated with pain during deglutition. Discovery of such a case of RFB in neck providentially at an early stage, during investigation of such a lump is exceptional. We report such a singular case.

Keywords: Gossypiboma, Textiloma, Retained Foreign Body, Malignancy/ Tumor, Concomitant/ Coexistent Pathology

1. INTRODUCTION

Textiloma and gossypiboma are terms used to describe a mass of cotton matrix or sponge that is left behind in a body cavity during surgery. This is an uncommon surgical complication. Such retained foreign bodies can often mimic tumors or abscesses clinically or radiologically; however, they are rarely reported in literature or documented due to the medicolegal implications associated with them. The spectrum of signs and symptoms of gossypiboma are so variable that to diagnose them is difficult. It is even more difficult to diagnose a gossypiboma in the neck because of its rarity, varied symptoms, and non-specific radiological findings. Furthermore, it can always be misinterpreted as malignancy and finally diagnosed from histopathological examination of the surgical specimen after unwarranted radical surgery for malignancy.

We present a case of gossypiboma presenting as a neck mass in a patient who had undergone total thyroidectomy with modified surgical neck dissection and ablative I¹³¹ therapy for papillary carcinoma thyroid at an onco-surgical centre.

2. CASE DETAILS

26 years old female was operated for papillary carcinoma of thyroid (left lobe) with total thyroidectomy and bilateral surgical neck dissection in Jul 2016 at an onco-surgical centre. Patient was advised I¹³¹ radio-ablation of any residual thyroid tissue.

Patient presented to our center in Sept 2017 after the session of I¹³¹ ablation with complaints of swelling on left side of neck since 2 months, discharge from post op drain site since 1 month and pain during deglutition for the same duration. On clinical examination, a hard lump was noted on left side of neck along Sternocleidomastoid muscle (SCM) extending from level of hyoid bone till the superior level of thyroid cartilage along the surgical scar. A discharging sinus was noted on the superior aspect of the swelling. On scrutiny of treatment documents - Post op ultrasonogram (USG) neck had suggested calcified lymph nodal mass on left side of neck. Provisional Diagnosis of lymph nodal mass & recurrence of tumour was considered.

Patient underwent radiography of cervical spine and USG including colour Doppler of neck at our center. Radiograph cervical spine revealed post op status with multiple surgical clips, a linear radio opaque shadow was noted which appear to be folded upon itself, extending from level of C2 vertebrae lower end upto C5 vertebral level on left side (Fig 1). USG neck revealed a linear hyper-echoic lesion with intense posterior acoustic shadowing extending from the level of hyoid bone cranially to the level of thyroid cartilage region, measuring 2.8 x 4.0cm (TR x CC) in size (Fig 2a,2b and 2c). A sinus tract could be identified in its superior aspect (Fig 3). No significant vascularity was noted within the lesion. Rest of the neck USG appeared unremarkable except for post total thyroidectomy status.

A diagnosis of Gossypiboma neck was made.

As computed tomography (CT) was not available at this center, so a decision of exploratory surgery was taken. Patient underwent surgery and the retained surgical sponge was removed.

3. DISCUSSION

Textiloma and gossypiboma is used to describe a cotton matrix mass which is left behind in a body cavity during surgery. It is a rare surgical complication which is more commonly discovered in the abdomen. They can often mimic tumours or abscesses clinically or radiologically. "Gossypiboma" is a combination of the Latin word "gossypium", meaning cotton, and the Swahili word "boma", meaning place of concealment(1). Retention of surgical sponges or swabs in the abdomen or pelvis has been known in 1:100–5,000 of all surgical interventions. Incidences of RFB in the chest (2), extremities(3), CNS and breast have also been reported. Risk factors are obese patients, emergency or unplanned surgeries and after laparoscopic interventions(4). Items such as cotton or gauze pads cause foreign body reactions if left in the body cavity. Two types of responses are known: exudative and aseptic fibrous (or adhesive). Adhesive form can have adhesions, encapsulation, and granuloma formation. Exudative forms generally present early in the postoperative period and may involve secondary bacterial contamination, which results in various fistulas (5). A broad spectrum of clinical presentation are known, ranging from none (incidental finding on a postoperative radiograph) to fatal outcome, depending on the site and type of complication resulting from the retained foreign body(6).

The diagnosis of gossypiboma may be difficult as it may mimic a benign or malignant soft tissue tumor (5). Radiographs are the most commonly used method to detect retained sponges (7). Sponges containing radiopaque marker can easily be diagnosed on conventional radiography. Radiographic marker in sponges can have bizarre appearances which could be misinterpreted as calcification, intestinal contrast material or surgical clips. Radiolucent material such as sponges without any radiopaque marker can cause diagnostic problems. Ultrasound features include a well-delineated mass containing a wavy internal echo with a hypoechoic ring and strong posterior acoustic shadowing. Ultrasound appearance can be classified into two groups, a cystic type and a solid type (8). The cystic type appears as a cystic lesion with zigzag echogenic bundle within. The solid types can appear as a complex mass containing hyperechoic and hypoechoic regions within. Acoustic shadowing is caused by the retained material or the calcified regions within gossypiboma, or by retained pockets of air. Computed tomography (CT) is the best diagnostic modality to detect gossypibomas and its possible complications. It has a characteristic finding of low-density heterogeneous mass with an external high-density wall. On contrast-enhanced imaging it shows a spongiform pattern containing air bubbles(9). The radiopaque marker strip may be seen as a thin metallic density in the mass. On Magnetic Resonance Imaging (MRI), the signal intensity may vary according to histologic composition, stage, and fluid content. Retained absorbable hemostatic sponges can show intermediate T1 and high or complex mixed T2 signal intensity with a whorled internal configuration.

Gossypibomas in the neck are extremely rare because of limited surgical field; the factors generally associated with risk of RFB during neck surgery include emergency surgery and any unplanned changes in surgical procedure(10). It is an important differential diagnosis of neck mass recurrence and it can easily be misinterpreted as a malignancy/ recurrence leading to unwarranted radical surgery.

4. MEDICO-LEGAL ASPECT

Medico-legal problems against the involved doctors may arise because of retained surgical sponge. No doubt Retained Foreign Body (RFB) is very distressful for patient but it causes immense embarrassment to surgeon and possibly the diagnostician. Nothing can compensate for the loss of reputation. This is always an unexplained risk in all surgical procedures.

5. CONCLUSION

RFB should be considered in the differential diagnosis of any postoperative patient who presents with pain, infection, or palpable mass after surgery. To spot a sponge on a post-operative radiograph is difficult if retained foreign body does not contain radiopaque markers. The best diagnostic modality to rule out a RFB is CT scan. Gossypiboma has medico-legal repercussions. The surgeon should always remain watchful and careful, as the harm to reputation is seldom undone. All effort should be made to have a clear line of communication between surgeon and other team member, also a proper count of all equipment before surgery and after surgery is a must especially during an emergency surgery.

Gossypiboma is preventable if due precaution is taken and a systematic approach is used during surgeries.

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Fig 1: Lateral Radiograph Cervical spine showing linear radiopaque shadow extending from C2 vertebrae till C5 vertebral level.

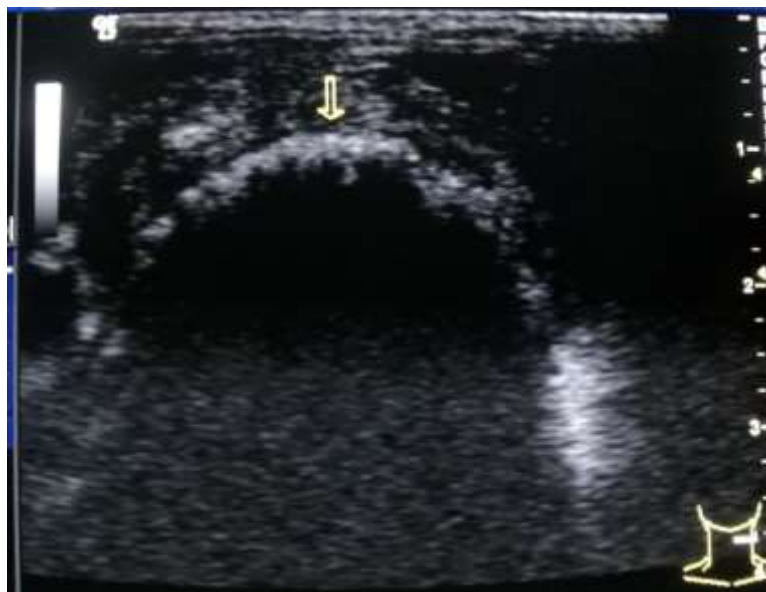


Fig 2a,2b and 2c:- USG Neck showing linear echogenic lesion with intense posterior acoustic shadowing on the left side of neck.



Fig 3:- USG neck showing sinus tract from the upper pole of the echogenic lesion.

