

## Case Report

# Gauzoma: A very rare cause of post-thyroidectomy surgical site infection

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### Abstract

Foreign bodies retained at the operative sites especially in the body cavities are reported from the developed as well as developing countries. It is preventable iatrogenic complication due to negligence on the part of operating team. The mass formed is called as a Gossypiboma or Gauzoma or textiloma. It may remain asymptomatic for months to years or can lead to acute abdomen. It leads to morbidity and possible mortality. In the suspected cases ultrasound or computerized tomography scan should be ordered immediately to avoid undue delay in the management. We report a case of retained surgical gauze after thyroid surgery which presented with hoarseness of voice and surgical site infection. The operative site was explored immediately to retrieve the foreign body.

**Keywords:** Gossypiboma, Gauzoma, thyroid operation, surgical site infection

## 1. Introduction

The true incidence of Gossypiboma or Gauzoma is difficult to find out due to underreporting of cases because of medico legal concern. The most common foreign body is the surgical sponge. The retention of foreign body should be suspected if the postoperative course is unusual and unresolved. Such cases may remain asymptomatic for months to years or develop acute postoperative complications. The high index of suspicion is required for early diagnosis and treatment. The case is being reported for rarity of clinical presentation with hoarseness of voice and surgical site infection.

## 2. Case report

A 24 year old female patient was admitted for thyroid surgery for benign solitary nodule of left lobe of thyroid. She had no symptoms suggestive of compression of adjacent structures. The patient had undergone left lobectomy without any difficulty during surgical procedure and the postoperative course was also uneventful. But she got readmitted within one week with pus discharge, hoarseness of voice and the swelling at surgical site (figure 1).

**Figure1: It reveals the scar of thyroid surgery with surgical site infection.**



She was treated with antimicrobial agent according to culture and sensitivity and was subjected to ultrasonography of neck which revealed a hypodense mass having wavy stripped or whorled pattern suggestive of foreign body. The patient was subjected for the exploration of the operative site. We found erroneously retained surgical gauze at the operative site within the abscess cavity (figure 2).

**Figure 2: It reveals the offending gauze piece being taken out from the operative site.**



The offending surgical gauze was retrieved and abscess cavity was drained out completely. The incision was closed with negative suction drain. The postoperative course was uneventful except edema of skin flaps. The voice of patient improved immediately after the removal of gauze piece.

### 3. Discussion

The foreign bodies retained at surgical site are not only the cause for morbidity and possible mortality but has great medico legal importance.<sup>1,2</sup> Gossypiboma/ Gauzoma (from the Latin 'Gossypium', the genus of cotton plant and Kiswahili word 'boma' means "place of concealment".) is a rare and preventable iatrogenic mass caused by retained surgical sponge or gauze. It was first described by Wilson in 1884. It is also known as textiloma, muslinoma or cottonoid.<sup>2,4</sup> The reported incidence of the gossypiboma is 1 in 100 to 3000 for all types of surgical procedures.<sup>3,4</sup> But the occurrence of Gauzoma after thyroid surgery is extremely rare complication. Emergency surgery, sudden change in the operative procedure, high body mass index, troublesome haemorrhage and lack of nontechnical skills are the risk factors for gossypibomas.<sup>3,5</sup> There are two types of body responses to the retained sponges. The first one is the formation of the foreign body granuloma due to development of adhesions and encapsulation. The second one is exudative reaction which leads to formation of an abscess with or without bacterial infection.<sup>2</sup> Clinical presentation may be acute or sub acute. It may remain asymptomatic for months or years after the surgical procedure.<sup>3,4,6,7</sup> The clinical features are nonspecific and are related to the location of the gossypiboma, its relation with other viscera, response of the body and the degree of bacterial contamination.<sup>2,4</sup>

The present case may be unique example of post-thyroidectomy Gauzoma causing hoarseness of voice and surgical site infection. There should be very high index of suspicion in case of unusual, unresolved and unexplained postoperative course to avoid delay in the management.<sup>6</sup> Plain radiograph shows curved or linear opacities of the radio opaque markers incorporated in the sponges. Surgical towels show peculiar in folding or whorled appearance.<sup>3,4</sup> Ultrasonographically, it looks like a well defined hypo echoic mass containing hyper echoic area with marked acoustic shadowing. Computerized tomography reveals cystic lesion with a spongiform pattern with entrapped gas bubbles. It also reveals capsular enhancement, concentric layering and wall calcification, wavy striped or a whorled pattern.<sup>2,3,4</sup> Magnetic resonance imaging of gossypiboma shows well defined mass with low signal intensity on T1 weighted imaging and high signal intensity on T2 weighted imaging. Positron emission tomography demonstrates a "rim pattern of flurodeoxyglucose uptake "as a characteristic finding which is nonspecific to gossypiboma. Surgery is the mainstay of the treatment and complications require immediate surgical intervention. Three separate counts of the potential foreign bodies, before, during and after surgical procedure can minimize the incidence of gossypibomas. All sponges should be incorporated with radioopaque markers. In case of the discrepancy in the counts, postoperative radiograph should be asked to detect retained foreign bodies. Alex *et al* used the radiofrequency identification chip to detect intracavitary sponges tagged with it.<sup>1</sup>

Musa *et al* reported two cases foreign body retention after thyroid surgery.<sup>8</sup> To conclude, it is the responsibility of the operating team to avoid foreign bodies at the operative sites.

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