International Surgery Journal
Lohani KR et al. Int Surg J. 2019 Sep;6(9):3409-3411
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20194088

Case Report

Thyroid gossypiboma: a rare diagnosis with common presentation

Kush Raj Lohani, Kamal Kataria*, Piyush Ranjan, Sarada Khadka, Jnaneshwari Jayaram

Department of Surgical Disciplines, All India Institute for Medical Sciences, New Delhi, India

Received: 16 June 2019
Revised: 05 August 2019
Accepted: 06 August 2019

***Correspondence:**
Dr. Kamal Kataria,
E-mail: drkamalkataria@gmail.com

ABSTRACT

Gossypiboma is a surgical negligence and is commonly reported in major abdominal surgeries. It has rarely been reported after thyroid surgeries. We present gossypibomas found in two post-hemithyroidectomy patients who presented differently and at varied time interval after primary surgery. First patient is a middle-aged lady who presented with persistent discharging sinus from neck for the past 4 years. She underwent hemithyroidectomy in the past. Another patient is an elderly lady who presented with lump in the neck for the past 3 months. She also had history of thyroid surgery about 36 years back. With the working diagnosis of thyroid abscess and malignancy in the respective cases, extensive work up was done including imaging and needle aspiration. However, definitive diagnosis could only be made intra-operatively, where gauze piece was found embedded in the prior surgical site. Gossypibomas can present in a varied fashion 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 gossypibomas. Safer working environment with safety checkpoints are warranted to avoiding such incidences.

Keywords: Gossypiboma, Surgical negligence, Thyroidectomy

INTRODUCTION

Gossypiboma is the term used for foreign body in the form of cotton or gauze piece retained at the surgical site. It is also referred to as textilloma. It is a medical negligence and questions safe surgical practice. The importance of medical negligence was highlighted by the Institute of Medicine early in 1999.[1] Surgical negligence delays recovery and injures surgical patients.[2] Overall incidence of retained foreign body is about 1:5,500 operations while its incidence post thyroidectomy is rarely reported.[3] We present case scenario of two post hemi thyroidectomy patients operated in the past at outside health care facility. They presented to us with complaints somehow related to the past surgery with diagnostic dilemma even after clinical, pathological and radiological evaluation. There was even a dreaded working diagnosis of thyroid malignancy.

CASE REPORT

Patient "J" is a middle-aged lady who presented with swelling in the midline of neck for the past 4 years. The swelling was gradually increasing in size. There was associated discharging sinus in the midline (Figure 1a). Patient underwent right hemi thyroidectomy in the past. The details of the indication and surgical procedure were unavailable. On examination, around 7×5 cms swelling was noted which was more prominent on the left side (Figure 1a). Multiple pus or wound swab cultures and even lymph node aspirates were negative for bacteria, fungus or mycobacteria. Ultrasound revealed large collection in the intramuscular plane with peripheral vascularity. Ultrasound of the left lobe of thyroid showed TI-RADS 3 lesion (thyroid image reporting and data system) and was found to be Bethesda 2 on FNAC (fine-needle aspiration cytology). CT sinogram showed

multiple sub centimetric nodes with suspected collection in left thyroid bed and an abscess in intramuscular plane. There was also a contrast tract in the midline (Figure 2). With the diagnosis of a thyroid abscess, exploration of neck was done in Rose position with Kocher's incision. Sinus tract was identified and delineated (Figure 1b and c). Multiple suture granulomas were noted on the right side (Figure 1d). Left lobe of thyroid was dissected off the strap muscle. To our surprise, gauze piece was found embedded in the left thyroid bed (Figure 1e and f). It was removed and completion thyroidectomy was performed. Post-operatively, patient developed hypocalcemia that was managed with intravenous calcium infusion.

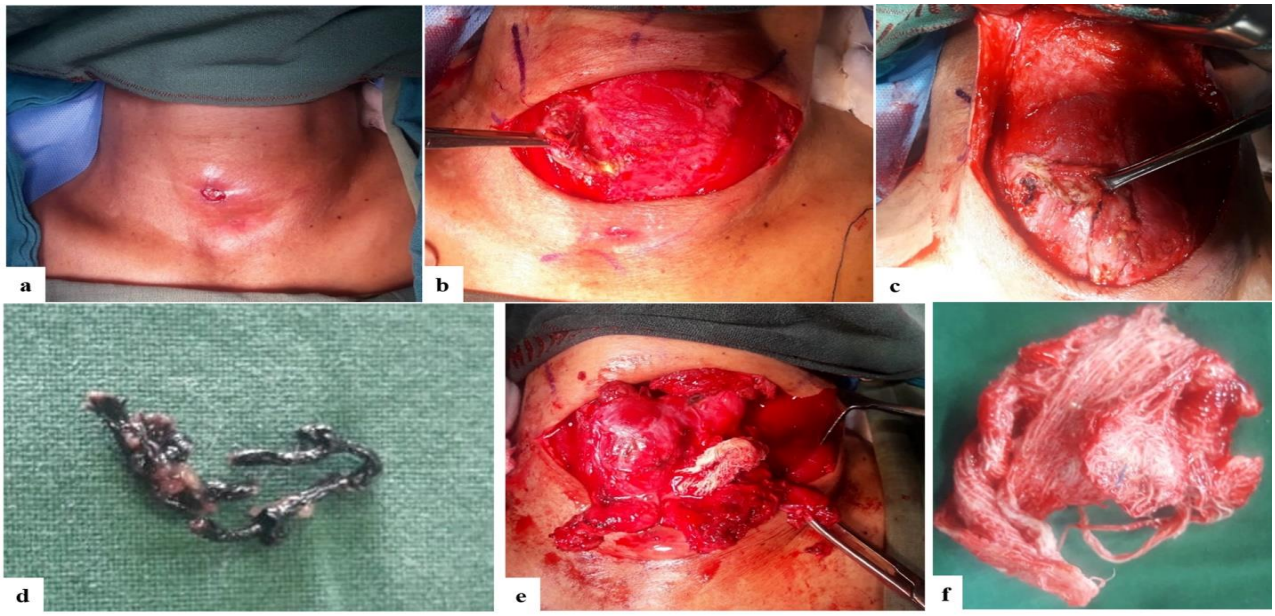

Figure 1: (a) Thyroid sinus, (b) sinus tract, (c) tract delineated, (d) retained sutures, (e) gauze piece in situ, (f) thyroid gossypiboma.

Figure 2: CT sinogram showing thyroid mass and discharging sinus.

Similarly, patient "T" is an elderly lady who presented with swelling in the thyroid region for the past 3 months on the right side. She had prior history of thyroidectomy done about 36 years back (records of the procedure and indication both were not available). She was in the euthyroid state. On examination she had about 2.5×2.5 cms lump in the right side of neck that moved with deglutination. The lump was categorized as TI-RADS 4 on ultrasound and Bethesda 3 on FNAC. CT scan revealed ill-defined mass with suspicion for lymph node or recurrence of thyroid malignancy. With the working diagnosis of thyroid malignancy and provisional plan for modified neck dissection, dissection was carried out. Platysma and strap muscles could not be delineated. Nodule was seen on the right side, which turned out to be gossypiboma. It was excised and completion thyroidectomy was done. Post-operative course was unremarkable. Both patients are being maintained on calcium, vitamin D and thyroid replacement. These patients had to go through diagnostic dilemma, unnecessary investigations after apparently normal surgical procedures and finally ended up with completion thyroidectomy. These events undoubtedly affected their quality of life and have lifelong implications. These untoward incidences could have been avoided.

DISCUSSION

Gossypibomas are considered a type of surgical negligence, which is mainly reported in major abdominal surgeries.[2, 3] Gossypibomas after thyroid surgery is a very rare event. Gossypibomas after thyroid surgery commonly present as chronic discharging sinus or lump mimicking malignancy.[4-6] Similar to the first case, retained gauze piece after thyroid surgery resulted in chronic discharging sinus and non-healing wound.[4] Likewise, similar to our second case, retained gauze piece, suture granuloma and even hemostatic agents have mimicked malignancy.[5-7] 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 cases.[8,9] The associated inflammation can

lead to increased FDG uptake with typical central gas and radiopaque material on concurrent CT scan.[10] 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.

Factors responsible for gossypibomas are mainly related to type of surgery and the conduct of operating room.[9] 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 nonradioopaque sponges in the end of surgery are among the main risk factors associated with gossypibomas.[9] Majority of the retained foreign bodies were sponges (60%), miscellaneous items (20%), needles (9%) and instrument (3%) in a large study of 191,168 operations.[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. Safer working health system is the cornerstone for decreasing medical negligence.[1] 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] Nevertheless, multistep checkpoints to prevent the risk factors with the multidisciplinary involvement of the Surgeons, Nursing staff and the anesthesiologists are very essential.[9]

CONCLUSION

Thyroid gossypibomas can present commonly with discharging sinus or lump in the operated site. Safe surgical practice and anticipation are key to prevention and management of thyroid gossypibomas.

ACKNOWLEDGEMENTS

Authors would like to thanks Santosha Kumar Pattashanee, Ajay Simha, Neeraj Kumar, Gaurav Prasad for their valuble support during study.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Kohn LT, Corrigan JM, Donaldson MS (eds). Institute of Medicine (US) Committee on Quality of Health Care in America. To Err is Human: Building a Safer Health System. Washington (DC): National Academies Press (US); 2000.
2. Krizek TJ. Surgical error: ethical issues of adverse events. Arch Surg Chic Ill 1960. 2000;135(11):1359–66.
3. Cima RR, Kollengode A, Garnatz J, Storsveen A, Weisbrod C, Deschamps C. Incidence and characteristics of potential and actual retained foreign object events in surgical patients. J Am Coll Surg. 2008;207(1):80–7.
4. Musa AA, Banjo A, Agboola O, Osinupebi O. Failure to Heal of Thyroidectomy Wound Due to Gossypiboma and Stitch Sinus: Report of Two Cases. J Surg Tech Case Rep. 2012;4(1):24–6.
5. Chung YE, Kim E-K, Kim MJ, Yun M, Hong SW. Suture Granuloma Mimicking Recurrent Thyroid Carcinoma on Ultrasonography. Yonsei Med J. 2006;47(5):748–51.
6. Kim KJ, Lim J-Y, Choi J-S, Kim Y-M. Gossypiboma of the Neck Mimicking an Isolated Neck Recurrence. Clin Exp Otorhinolaryngol. 2013;6(4):269–71.
7. Shahin MN, Gupta A. Hemostatic agent mimicking residual thyroid tissue in a patient status post competition thyroidectomy for thyroid cancer. Endocr Pract Off J Am Coll Endocrinol Am Assoc Clin Endocrinol. 2018;24(5):500.
8. Padmaja GJV, Sireesha A, Devi TS, Nirmala BV. Cytology of suture granuloma in a recurrent thyroid nodule. J Med Allied Sci. 2014;4(1):40–2.
9. Wan W, Le T, Riskin L, Macario A. Improving safety in the operating room: a systematic literature review of retained surgical sponges. Curr Opin Anaesthesiol. 2009;22(2):207–14.
10. Niederkohr RD, Hwang BJ, Quon A. FDG PET/CT detection of a gossypiboma in the neck. Clin Nucl Med. 2007;32(11):893–5.

Cite this article as: Lohani KR, Kataria K, Ranjan P, Khadka S, Jayaram J. Thyroid gossypiboma: a rare diagnosis with common presentation. Int Surg J 2019;6:3409-11.