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Case Report

Gossypiboma of the Neck Mimicking an Isolated Neck Recurrence

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A gossypiboma (also called textiloma or retained surgical sponge) of the neck is rarely reported compared to intraabdominal or intrathoracic gossypibomas and also can be misdiagnosed as metastatic lymph nodes. A patient was referred to our clinic for a supraclavicular neck mass 6 months after thyroidectomy and neck dissection for papillary thyroid carcinoma in another hospital. It was initially considered an isolated neck recurrence, but it was finally diagnosed as gossypiboma by a pathological examination of the surgically-excised specimen. Characteristic findings of computed tomography or positron emission tomography/computed tomography might be helpful to differentiate the gossypiboma from malignant neck mass or other inflammatory conditions. It is essential for clinicians to be aware of this disease entity in differential diagnosis of neck recurrence because a gossypiboma in the neck can be misinterpreted as a malignancy to induce unwarranted radical surgery.

Keywords. *Gossypiboma, Surgical sponge, Neck surgery*

INTRODUCTION

A gossypiboma, also called textiloma, literally means retained surgical sponge and is derived from the Latin word "gossypium," which means "cotton," and "boma" in Kiswahili, which means "place of concealment." It is difficult to diagnose a gossypiboma in the neck because of its rarity, various symptoms, and non-specific radiologic findings. Furthermore, it can be misinterpreted as malignancy and finally diagnosed from a histopathological examination of the surgical specimen after unwarranted radical surgery.

To our knowledge, a gossypiboma following head and neck operations is rarely reported. We present a case of a gossypiboma presenting neck mass mimicking an isolated neck recurrence with a patient who had underwent thyroidectomy with a neck dissection for papillary thyroid carcinoma at a local hospital. This report may help clinicians reduce the likelihood of misdiagnosis and avoid unnecessary radical operation.

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CASE REPORT

A 53-year-old woman was referred to our head and neck cancer clinic for an asymptomatic neck mass in the left supraclavicular area growing over the past 2 months. She had a history of a total thyroidectomy with a left lateral neck dissection for papillary thyroid cancer at another hospital 6 months prior.

A physical examination revealed a neck mass approximately 3×4 cm in size on the same side of previous neck dissection. Computed tomography showed the inhomogeneous, low-density mass with an enhanced surrounding capsule (Fig. 1A). Positron emission tomography/computed tomography (PET/CT) demonstrated the rim-shaped fluorodeoxyglucose (FDG) uptake with the central nidus without FDG uptake (Fig. 1B).

Fine-needle aspiration cytology remained inconclusive without any malignant cells. However, we considered it as a neck re-

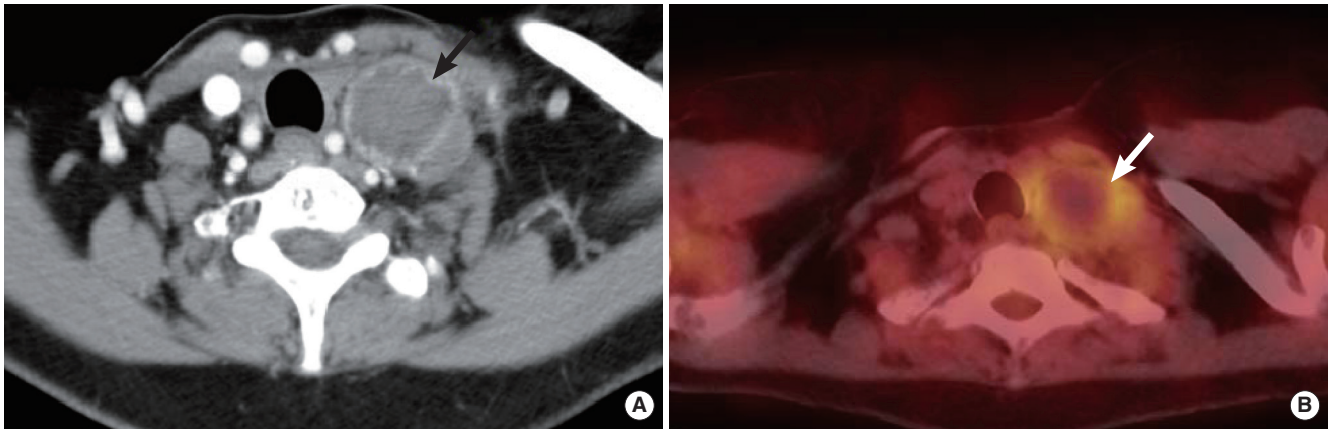

Fig. 1. The radiologic findings of retained gauze. (A) Neck computed tomography (CT) shows a low attenuating homogenous central mass with a hyperdense, well-enhancing, irregular rim. (B) Positron emission tomography/CT depicts the hot uptake on the rim of the left supraclavicular mass and no uptake on internal area of mass.

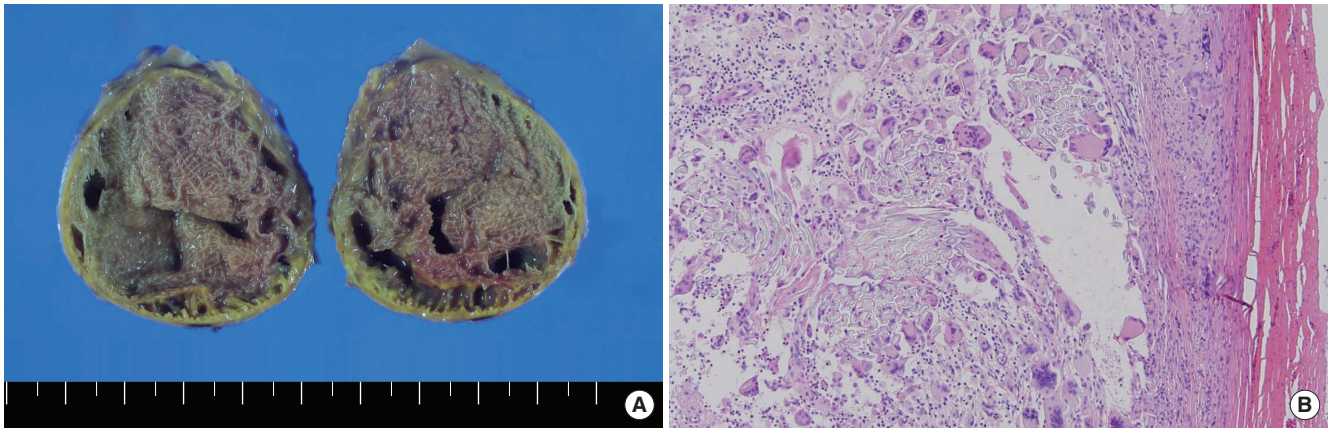

Fig. 2. (A) Cross section view. The specimen shows retained gauze with external capsule formation. (B) Microscopic examination revealed a foreign body with dense fibrocystic wall with a lining of multinucleated giant cells. Chronic inflammatory cell infiltrations were also visible around the foreign body (H&E, ×100).

currence following previous neck dissection and thus planned to perform a salvage modified radical neck dissection. A well-encapsulated hard mass was noted between the common carotid artery and internal jugular vein. It was displacing the carotid artery to the posterior-medial side and adherent to the internal jugular vein. The mass was completely removed by salvage neck dissection.

Gross appearance of the resected specimen revealed a fibrotic mass lesion containing a surgical sponge (Fig. 2A). A microscopic examination revealed foreign body reaction and fibrosis surrounding the surgical sponge (Fig. 2B). It was finally diagnosed as gossypiboma by a pathological examination.

DISCUSSION

A gossypiboma has still been observed in clinical practice in spite of an increase of use of radio-opaque swabs and caution given by surgical teams. Gawande et al. [1] reported that the significant factors associated with a high risk of retention of a foreign body during surgery included emergency surgery, an unplanned change in surgical procedure, and body-mass index. Intraabdominal or intrathoracic gossypiboma are relatively more common, but gossypiboma in the neck is extremely rare because its surgical field is not as wide and deep as the abdomen.

The acute presentation typically consists of local inflammatory reaction such as an abscess formation with or without secondary bacterial infection. However, gossypiboma may develop months or even years after the initial surgery as a delayed presentation. It would have resulted from an aseptic foreign body reaction to the cotton materials and surrounding fibrotic encapsulation and adhesion.

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 [2]. The typical radiologic finding on computed tomography is a predominantly high attenuation central mass with a spongiform pattern of air bubble and a hyperdenese, well-enhancing rim [3]. The characteristic magnetic resonance imaging 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-wighted imaging [4]. Regarding the features of FDG PET of gossypibomas recently reported [5], gossypiboma showed a circular rim-shaped FDG uptake indicating the fibrous encapsulation and a central nidus without FDG uptake representing the cavity packed with blood clots and the retained sponge.

A retained sponge is less common but a clinically significant event. Multidisciplinary approaches and new technologies such as a bar-code system and radiofrequency identification may help to reduce these events. However, the most important factor for preventing these events is the exact counting of sponges. During operations, all surgeons and assistants should check for retained surgical gauzes and count the number of gauzes used. With those efforts of regular counting of all instruments, and use of radioopaque swabs, this avoidable error should be completely eradicated. It is essential for clinicians to be aware of this disease entity in differential diagnosis of neck recurrence because a gossypiboma in the neck can be misinterpreted as a malignancy to induce unwarranted radical surgery.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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REFERENCES

1. Gawande AA, Studdert DM, Orav EJ, Brennan TA, Zinner MJ. Risk factors for retained instruments and sponges after surgery. N Engl J Med. 2003 Jan;348(3):229-35.
2. Lauwers PR, Van Hee RH. Intraperitoneal gossypibomas: the need to count sponges. World J Surg. 2000 May;24(5):521-7.
3. Park HJ, Im SA, Chun HJ, Park SH, O JH, Lee KY. Changes in CT appearance of intrathoracic gossypiboma over 10 years. Br J Radiol. 2008 Feb;81(962):e61-3.
4. Kim CK, Park BK, Ha H. Gossypiboma in abdomen and pelvis: MRI findings in four patients. AJR Am J Roentgenol. 2007 Oct;189(4): 814-7.
5. Yuh-Feng T, Chin-Chu W, Cheng-Tau S, Min-Tsung T. FDG PET CT features of an intraabdominal gossypiboma. Clin Nucl Med. 2005 Aug;30(8):561-3.