

CASE REPORT

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# Gossypiboma as a rare complication of septoplasty procedure: case report and review of literatures

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## Abstract

**Background:** Foreign body granuloma due to retained surgical sponge is also called gossypiboma. Only one case of nasal septum gossypiboma has been reported.

In this report, we present a case of retained surgical sponge at the septoplasty site.

**Case presentation:** A 16-year-old male patient came to our emergency department complaining of nasal obstruction associated with low-grade fever. With past history of septoplasty 3 months ago. Endoscopic examination of the nasal cavity revealed bilateral smooth swelling of the nasal septum, no fluid was detected with aspiration. A CT scan of the nose and paranasal sinuses revealed significant posterior septal swelling. A consent had been taken from the parents, and the patient was prepared for endoscopic exploration under general anesthesia. Elevation of bilateral mucoperichondrial and mucoperiosteal flaps was done. There was a firm swelling with intense reaction all around, after meticulous dissection of this lesion and was delivered with Blakesley forceps. On closer examination it was a missed cotton ball. The patient follow-up for 12 months was excellent with complete disappearance of his complaints.

**Conclusions:** Retained surgical items should be considered in the differential diagnosis of post-operative nasal septum swellings. Sponges used for nasal surgery should be of appropriate size and attached to a thread and should be counted.

**Keywords:** Case report, Foreign body granulomas, Gossypiboma, Retained surgical items, Septal swellings

## Background

Post septoplasty swellings include hematoma, nasal cyst, mucocele and gossypiboma [1–3].

Gossypiboma is a foreign body granuloma due to retained surgical sponge, also called textiloma, cottonballoma or gauzeoma. The risk of retained surgical items increases with longer duration of surgery, safety variances, and incorrect counts [4].

Seven risk factors for retained surgical items were detected in pooled data in case-control studies:

(estimated intraoperative blood loss > 500 mL, incorrect surgical count, more than one subprocedure, more than one surgical team, operative time, and unexpected intraoperative factors) [5].

Gossypiboma is more common in thoracic and abdominal surgery. Reports on superficial sites, such as the extremities, the neck, breast, or nasal septum as in our case. To our knowledge, only one case of nasal septum gossypiboma has been reported [6].

Retained surgical items have been reported after open appendectomy with transmigration to small intestine and passed with stool [7]. Also, gossypiboma masking as recurrent malignancy discovered 13 months post-cytoreductive surgery for ovarian carcinoma [8].

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Fourteen cases of gossybomas treated between January 1999 and December 2004 were retrospectively assessed in single surgical center study emphasizing the magnitude of the problem [9].

In a study for evaluation of costs of retained surgical items, the total annualized cost of operative room time spent searching for sponges and ruling out the presence of potentially retained sponges using radiography was \$219,056. These costs explain the importance of this item to be considered in surgical practice [10].

In this report, we present a case of retained surgical sponge at the septoplasty site.

### Case presentation

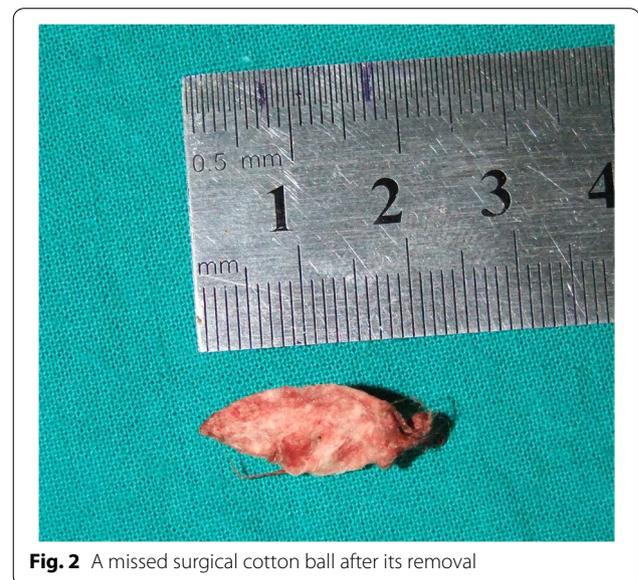
A 16-year-old male patient came to our emergency department because of nasal obstruction associated with low-grade fever. With past history of septoplasty 3 months ago. The vital signs were measured as follows: blood pressure 100/60 mmHg, heart rate 75/min, respiratory rate 18/min, and body temperature 37.7°. His laboratory data were reported as follows: white blood cell count 13,100/ $\mu$ L and blood gas: pH: 7.41, pCO<sub>2</sub> 39 mmHg, pO<sub>2</sub> 65 mmHg, and HCO<sub>3</sub><sup>-</sup> 24.6 mmol/L.

No tenderness or deformities were detected on external nasal examination. Endoscopic examination of the nasal cavity revealed bilateral smooth swelling of the nasal septum without any signs of infection. No fluid was detected with aspiration. A CT scan of the nose and paranasal sinuses revealed a significant posterior septal swelling with intact skull base (Fig. 1). The patient was prepared for surgical exploration under general anesthesia. Right hemitransfixion incision was done with elevation of bilateral mucoperichondrial and mucoperiosteal flaps, in the posterior part of the nasal septum there was a firm swelling with intense reaction all around, after meticulous

dissection of this lesion it was delivered with Blakesley forceps. Examination of the specimen revealed missed cotton ball with intense reaction all around (Fig. 2) local irrigation with antibiotics was done then closure of the flaps using 4/0 vicryl suture. Systemic antibiotics in the form of amoxicillin/clavulanic injection were prescribed for 2 weeks. Follow-up for 12 months revealed complete healing of surgical site and improvement of all patient complaints and with no abnormal endoscopic findings.

### Conclusion

Retained surgical items should be considered in the differential diagnosis of post-operative nasal septum swellings. Careful history taking, thorough examination,



**Fig. 2** A missed surgical cotton ball after its removal



**Fig. 1** A CT scan of the paranasal sinuses (coronal cuts) showing a swelling of the posterior nasal septum mimics septal hematoma

radiological evaluation, and trial of aspiration will be of great value in decision making. Counting strategies and surgical checklists are effective in reducing morbidity, mortality, and compliant with safety measures. Sponges used for nasal surgery should be of appropriate size and attached to a thread and should be counted.

#### Acknowledgements

Not applicable.

#### Author's contributions

KE is the corresponding author, designed the work, drafted the work, and the surgeon of the patient. The author read and approved the final manuscript.

#### Funding

No funding issues with this manuscript.

#### Availability of data and materials

All data and material are available upon request.

#### Declarations

##### Ethics approval and consent to participate:

An ethical approval was obtained with approval code 33863/6/20 at faculty of medicine, Tanta University. Written informed consent was obtained from the patient parents for participation in this case report.

##### Consent for publication

Written Informed consent was obtained from the patient parents for publication of this case report and accompanying images.

##### Competing interests

The authors declare that they have no competing interests.

Received: 21 January 2022 Accepted: 1 December 2022

Published online: 22 December 2022

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