Case Report

Abdominal Subcutaneous Emphysema: a Rare Post-operative Complication in Aesthetic Breast Augmentation

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Breast augmentation is a common aesthetic procedure, with pneumothorax and subcutaneous emphysema (SE) reported as rare complications. This manuscript describes an unusual case of isolated abdominal and chest SE without pneumothorax following submuscular implant placement in a 32-year-old woman. The patient presented with painless abdominal swelling and crepitus shortly after surgery. Computed tomography confirmed extensive SE involving the abdominal wall and chest, with no evidence of pneumothorax or infection. The condition resolved spontaneously within seven days under conservative management. This case highlights that isolated SE after breast augmentation, even when extending to the abdomen, may represent a benign, self-limiting finding once serious complications are excluded.

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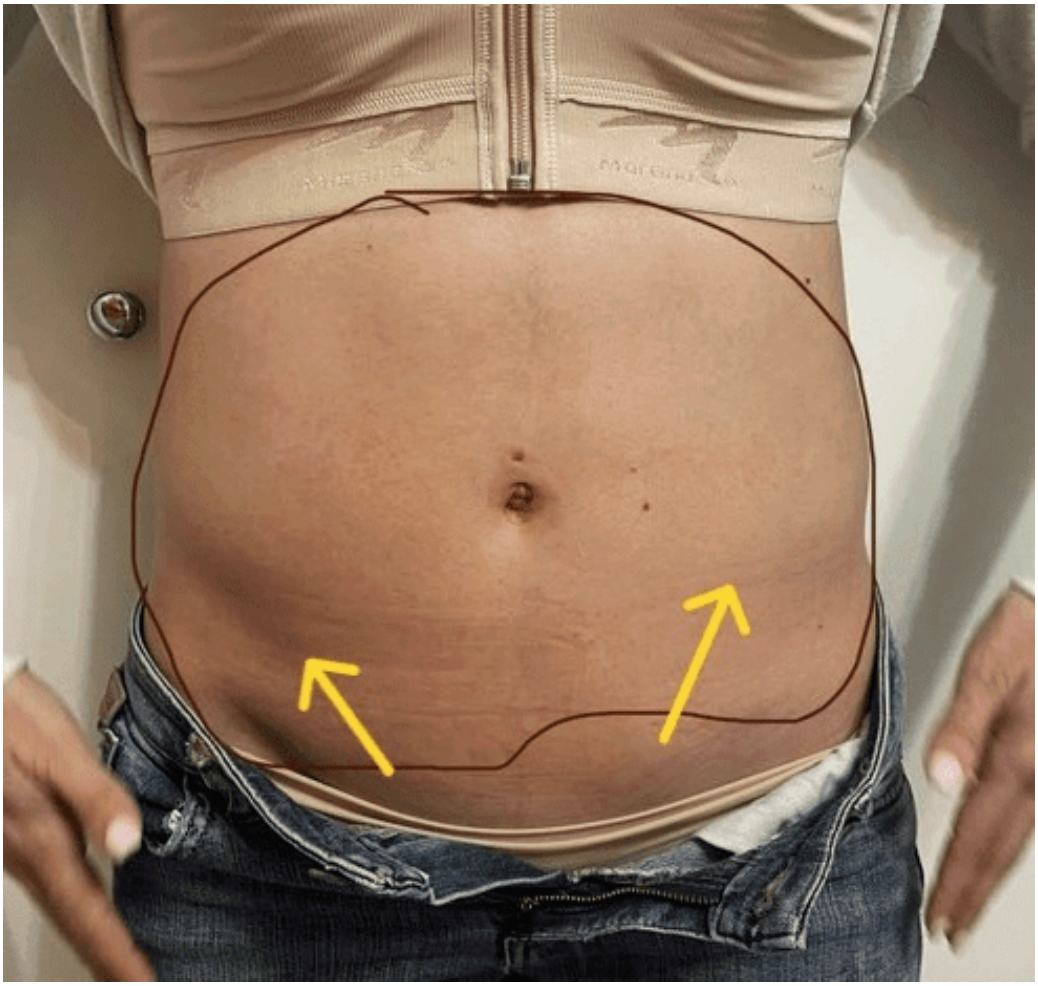
Introduction

Breast Augmentation (BA) is one of the commonest aesthetic procedures whereas Pneumothorax with Subcutaneous Emphysema (SE) has been described as one of its rare complication[1]. We like to present our experience of an extremely rare complication of SE at the abdomen and chest in a BA case without the presence of pneumothorax, and to the best of our knowledge is the first reported case.

Case report

A 32 years old female with clear medical history underwent a drainless BA under general anaesthesia. Textured silicone implants, round high-profile, 275 cc each, were placed through a submammary incision

in submuscular position under the pectoralis major muscle. The patient was discharged at the first post-operative day with per-os antibiotics sultamicillin. During the following hours, although the patient was generally well and the breasts were fine and uncomplicated, she noticed an otherwise painless swelling at the left hypochondrium. Therefore we advised her to come back to the Plastic Surgery Clinic. Upon her arrival at the department, the clinical examination revealed minor swelling, mild discoloration with bluish hue, and crepitus at the upper abdomen, extending gradually to the lower abdomen and even to the right side of the abdominal wall (Figures 1a,b). The pulmonary condition remained well. There were no signs of infection, pyrexia, tenderness or signs of acute abdomen. An urgent CT scan confirmed the SE with the presence of free air in the upper and lower abdominal subcutaneous tissue and between the oblique muscles as well as the pectoral muscles and subcutaneous tissue at the chest, but excluded the presence of pneumothorax, pneumomediastinum or other complication (Figure 2). The SE was attributed to the maneuvers done during implant insertion. The patient was re-assured, discharged from the hospital and continued to be followed-up. Photographs were taken almost every day during the immediate post-operative period in order to evaluate the clinical progress and for documentation. The patient was very pleased with the aesthetic breast outcome, whereas the emphysema was resolved gradually and ultimately disappeared within the 7th post-operative day.



Figures 1a. Patient's photos taken 1st post-operative day: minor swelling extending gradually to the lower abdomen and even to the right side of the abdominal wall.

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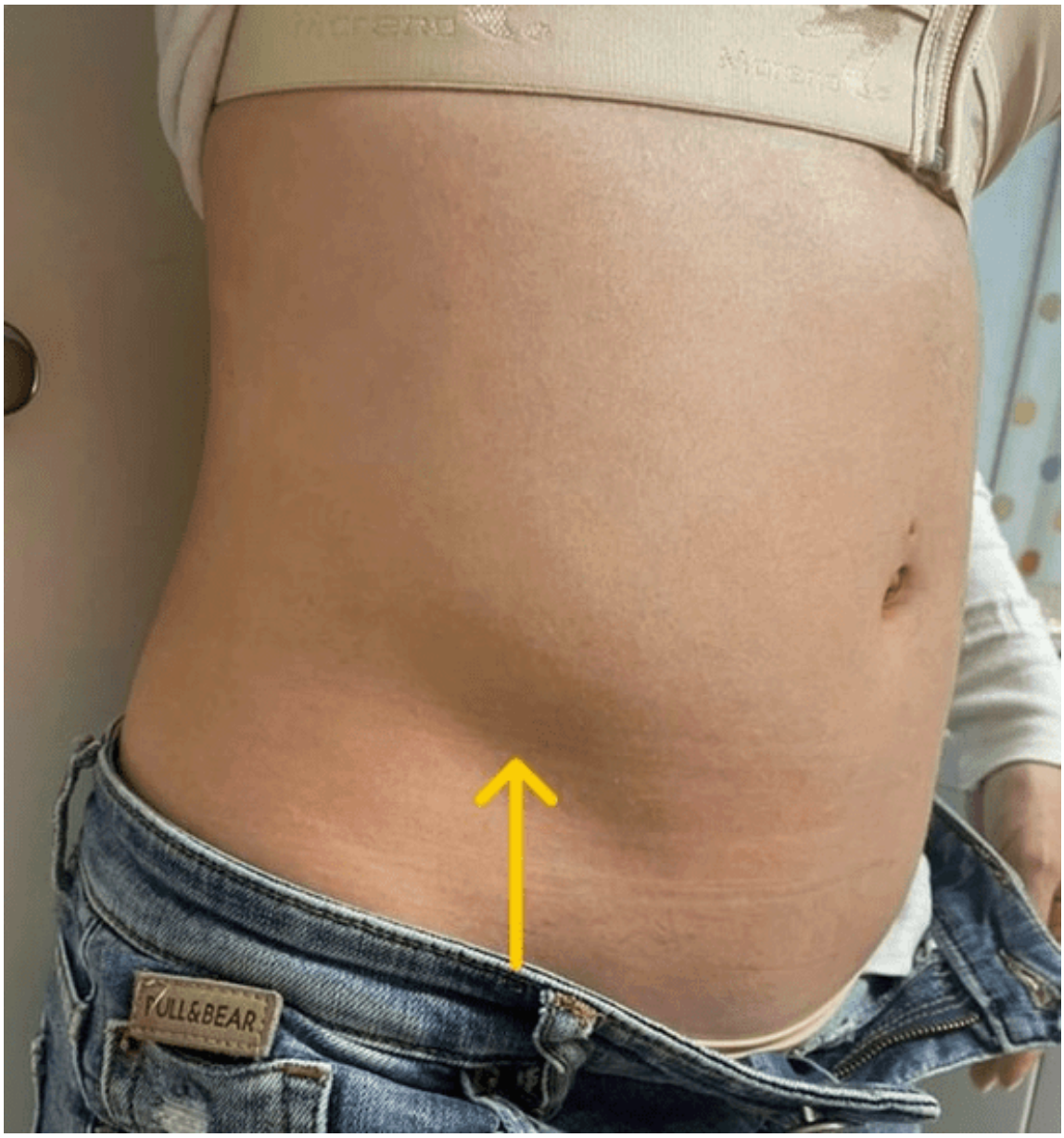

Figures 1b. Patient's photos taken 1st post-operative day: minor swelling extending gradually to the lower abdomen and even to the right side of the abdominal wall.

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Figure 2. The CT scan confirmed the SE with the presence of free air in the upper abdominal subcutaneous tissue and between the oblique muscles.

Discussion

Among the known complications of breast augmentation, pneumothorax represents an infrequent complication, although in clinical practice may occur more frequent than the reported cases[2][3]. It also may occur with other concomitant complications as SE. The chest is usually the affected site. The general status of the patient depends mainly on the presence or absence of implant-related surgical infection. If there are signs of infection, patient is unwell and getting worsened with pyrexia, painful swollen breasts, and skin redness, then the surgeon encounters a surgical emergency that it may necessitate the implant removal. Isolated SE with no pneumothorax, infection or other pathology is very rare as one only reported case has been reported in the literature. SE at the chest may occur during BA as the air may be entrapped in the pocket or subcutaneous plane following wound closure and therefore it is anticipated and should not be considered as a complication. Although it is a suspected common occurrence of the BA procedure, it has not been underlined and rarely cause problems[1]. Isolated SE at the abdominal wall in the upper and lower abdominal subcutaneous tissue and between the oblique muscles is extremely rare and to the best of our knowledge is the first reported case. This case report highlights that an isolated SE

at the abdominal wall and chest during BA procedure can be considered an iatrogenic but otherwise “innocent” / not worrying sign in a patient with good general condition and verified absence of pneumothorax[1].

Conclusion

Isolated SE at the abdomen and chest during BA can be an innocent sign. If there are no signs of infection, then the clinical situation will resolve gradually within a few days, and re-assurance with close monitoring of the patient is enough. However it is important to evaluate the patient immediately in order to exclude an implant-related surgical complication and moreover to rule out the presence of pneumothorax.

Statements and Declarations

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Potential competing interests

No potential competing interests to declare.

References

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Declarations

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