


# Subcutaneous and muscle layer seroma complicated with thoracentesis

Yasuhito Sekimoto  | Makiko Kohmaru | Tomoko Okuma | Manabu Tajima | Mitsuaki Sekiya

Department of Respiratory Medicine, Saitama Saiseikai Kawaguchi General Hospital, Kawaguchi, Japan

## Correspondence

Yasuhito Sekimoto, Department of Respiratory Medicine, Saitama Saiseikai Kawaguchi General Hospital, 5 Chome-11-5 Nishikawaguchi, Kawaguchi, Saitama 332-8558, Japan.  
Email: [y-sekimo@juntendo.ac.jp](mailto:y-sekimo@juntendo.ac.jp)

Associate Editor: Simon A Joosten

## Key message

Diagnostic thoracentesis is a basic and relatively safe diagnostic method for patients with pleural effusion. However, complications of thoracentesis are rare and not well known because of the low incidence. Herein, we report a case of subcutaneous and muscle layer seroma following thoracentesis.

## KEYWORDS

dyspnea, muscle layer seroma, pleural effusion, subcutaneous seroma, thoracentesis

## CLINICAL IMAGE

A 67-year-old woman was admitted to our hospital for swelling of the left lateral abdomen and groin 2 days after diagnostic thoracentesis. She had developed dyspnea 4 weeks before the presentation, and her chest radiograph showed massive pleural effusion on the left (Figure 1A). A diagnostic thoracentesis was performed using a 16-gauge needle, and 700 mL pleural fluid was drained without any acute complications. Massive pleural effusion on the left persisted as noted on the chest radiograph after thoracentesis (Figure 1B). However, on admission, chest radiograph showed decreased left pleural effusion (Figure 1C), while chest and abdomen computed tomography revealed multiple fluid accumulations in the muscle and subcutaneous layers, which was consistent with findings of a seroma (Figure 1D arrowheads). Seroma is an uncommon complication of thoracentesis with an incidence <1.0%,<sup>1</sup> and only one previous case with subcutaneous seroma was reported.<sup>2</sup>

To our best knowledge, no published report is available on such a widely spread seroma across the muscle and subcutaneous layers. We should pay attention to a possible incidence of seroma if patients report swelling of the lateral abdomen or groin after diagnostic thoracentesis.

## AUTHOR CONTRIBUTIONS

Yasuhito Sekimoto, Makiko Kohmaru, Tomoko Okuma, Manabu Tajima, and Mitsuaki Sekiya were the attending doctors who treated the patient on admission. Yasuhito Sekimoto and Mitsuaki Sekiya drafted the manuscript. Yasuhito Sekimoto submitted the final manuscript. All authors read and approved the final manuscript.

## ACKNOWLEDGMENTS

We would like to thank Editage for English language editing.

## CONFLICT OF INTEREST STATEMENT

None declared.

## DATA AVAILABILITY STATEMENT

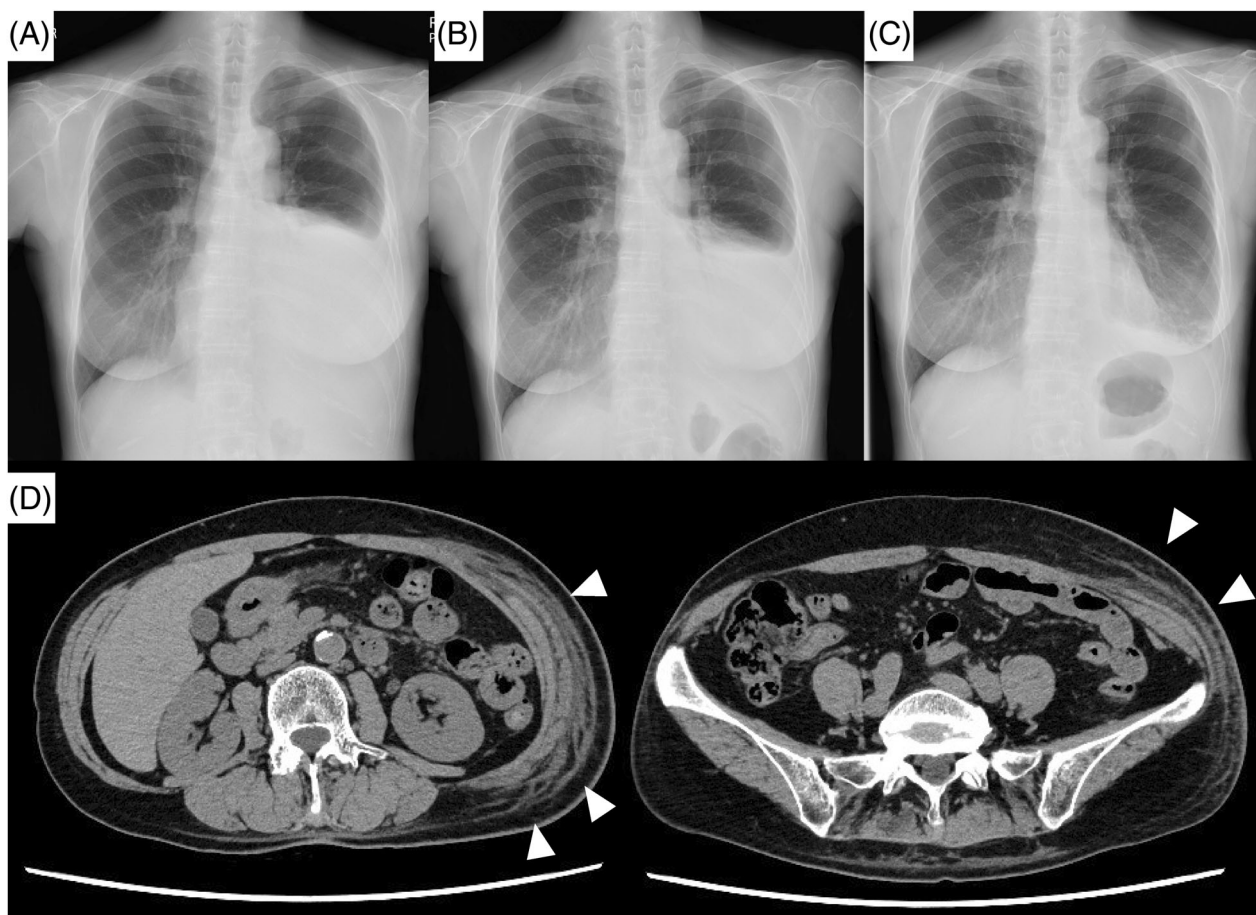
The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ETHICS STATEMENT

The authors declare that appropriate written informed consent was obtained for the publication of this manuscript and accompanying images.

## ORCID

Yasuhito Sekimoto  <https://orcid.org/0000-0001-9546-3056>



**FIGURE 1** (A, B) Showing the patient's chest radiographs before and after thoracentesis, respectively. (C) Showing the patient's chest radiographs 2 days after thoracentesis. (D) Showing chest and abdomen computed tomography findings on admission.

## REFERENCES

1. Seneff MG, Corwin RW, Gold LH, Irwin RS. Complications associated with thoracentesis. *Chest*. 1986;90:97–100. <https://doi.org/10.1378/chest.90.1.97>
2. Chen CH, Tu CY. Subcutaneous seroma after diagnostic thoracentesis. *CMAJ*. 2011;183:345. <https://doi.org/10.1503/cmaj.092218>

**How to cite this article:** Sekimoto Y, Kohmaru M, Okuma T, Tajima M, Sekiya M. Subcutaneous and muscle layer seroma complicated with thoracentesis. *Respirology Case Reports*. 2023;11:e01100. <https://doi.org/10.1002/rcr2.1100>