

## CLINICAL IMAGES

## Thoracic balls

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An 84-year-old woman was admitted to hospital for acute exacerbation of chronic bronchitis. In 1951, she had undergone plombage (collapse therapy) for pulmonary tuberculosis, and she had no subsequent recurrences. A radiograph of her chest showed multiple radiotransparent balls, similar in size and form to Ping-Pong balls, in the apex of her left lung, compressing the upper left lobe. The left lung was smaller than the right lung. There were also opacities in the upper right lobe and calcified pleural fibrosis at the base of the left lung, consistent with the patient's history of tuberculosis (Figure 1, Appendix 1A, available at [www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.110529/-/DC1](http://www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.110529/-/DC1)). A computed tomographic scan showed a calcified shell at the periphery of these balls (Appendix 1B).

From the mid-19th to mid-20th century, rest in a sanatorium was the treatment of choice for pulmonary tuberculosis. Anecdotally, some patients were observed to be cured after the development of a spontaneous pneumothorax. Forlanini introduced the concept of artificially induced pneumothorax, in which the collapsed lung rested and healed without the need for the patient to spend years in an institution.<sup>1</sup> In artificially induced pneumothorax, the air needed to be replaced frequently; thus, more permanent solutions were sought. These included thoracoplasty or plombage, in which an extrapleural space was created between parietal pleura and the chest wall and filled with materials such as fat, oil, wax packs, bone or methyl-methacrylate (Lucite) balls, shown here.<sup>2</sup> Whether these therapies actually treated pulmonary tuberculosis will never be known, because there were no randomized clinical trials. Also, the infection could remit spontaneously, even without modern, effective drugs.

Complications may occur even decades after plombage with Lucite balls. These include infection and malignancy, as well as migration of the balls with erosion of adjacent structures



**Figure 1:** Posteroanterior radiograph of the chest of an 84-year-old woman who, in 1951, had undergone plombage for pulmonary tuberculosis. The radiograph shows radiotransparent balls in the left lung, compressing the left upper lobe, and calcified pleural fibrosis at the left base.

and extrusion into the chest wall or outside the thoracic cavity.<sup>3</sup> Treatment of these complications requires removal of every ball. However, in asymptomatic patients, there is no need for routine removal of the balls, especially because this would entail major operative risks in elderly patients.<sup>2</sup>

## References

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