

## Clinical Image

Pulmonary Mummification in a Coptic Mummy From Ancient Egypt<sup>☆</sup>

## Momificación pulmonar en una momia copta del Antiguo Egipto

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Mummification of lung tissue is not unusual due to 2 factors: it contains few of the epithelial cells with large concentrations of hydrolase-rich liposomes that are associated with the putrefaction process, and the area of desiccation is very large, due to the large volume of aerated regions.<sup>1</sup> However, it is rare to find examples with intact structures.

In this paper, we present a mummified individual from the Coptic period (4th to 8th centuries) from the necropolis of Qarara (Middle Egypt). The Q.445-2012 (“Moses”) individual was a male between 25 and 35 years of age.

The mummy was in a very good state of preservation. The bandaging was opened carefully and a longitudinal incision was then made in the side. When the cutaneous tissue was lifted *en bloc*, various structures were found inside the chest. In the right hemothorax,

there was a bullous structure of a brownish color, to which a tubular structure (vena cava?) was attached; both structures were extremely fragile. A formation in the upper mediastinum could be more clearly observed, while another fibrous laminar formation adhering to the rib area of the left hemothorax probably corresponded to pleural remains. A hard formation, consistent with the diaphragm, could be seen in the lower edge. Unlike other cases,<sup>2</sup> no structural remains of the heart could be perceived. The lung tissue was browner and darker than usual, suggesting pathology that was later confirmed. Lung diseases have been found in mummies from very ancient times: pneumonia and empyema (Chinchorro, Chile, 2000 BC), emphysema in Chilean mummies (Cabuja, AD 450–1000), foreign bodies in the respiratory tract, such as moss in an Arctic mummy (AD 400) and a



Fig. 1. On the left, the mummy before opening. On the right, lung (white arrow) and diaphragmatic pillar (black arrow).

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tooth in the bronchi of a Chilean child, and tuberculosis. Tuberculosis has been confirmed from the finding of Ghon's complex in an Andean mummy from AD 1000, the presence of acid-alcohol resistant bacilli, and since 1994, the isolation of *M. tuberculosis* DNA (Fig. 1).

## References

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