Plombage rupture presenting as a subcutaneous tumor: Unexpected differential diagnosis

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INTRODUCTION

During the 1930s to 1950s, plombage treatment was widely used to treat pulmonary tuberculosis. After the 1950s, this method was no longer used because of a lack of effectiveness and improvement of antituberculosis medication. Decades later, plombage complications started to manifest themselves. We report a rare case of ruptured plombage that presented as an unusual skin tumor imitating subcutaneous sarcoma in an 89-year-old woman.

CASE REPORT

An 89-year-old woman presented with a swelling on the right side of her décolletage. The swelling was first noticed after physiotherapy treatment for right-sided shoulder pain 3 weeks ago. During physiotherapy, she felt stabbing pain in the right side of her chest when her arm was quickly and vigorously moved to the back. She denied fever, night sweats, and weight loss.

She reported right-sided pulmonary tuberculosis treated with plombage in 1952, a prolapsed disc, and a pheochromocytoma resection 10 years ago.

Physical examination revealed a rubberlike, non-tender, 15 × 5-cm, skin-colored lump extending from the right side of the neck to the right shoulder and down toward the middle of the chest (Fig 1).

Because of the clinical aspect of the lump and the age of the patient, a tumor such as sarcoma was taken into consideration. However, lump palpation was unusual and softer than sarcoma and not attached to the surrounding tissue. Therefore, a rupture of the approximately 70-year-old plombage was our most likely diagnosis.

Unexpectedly, the plombage seemed to be intact according to chest radiograph (Fig 2) and magnetic resonance imaging (Fig 3). Additionally, magnetic resonance imaging revealed a heterogeneous soft tissue mass that extended from the upper medial edge of the right scapula to the right axilla along the anterior thoracic wall. The mass surrounded the brachial plexus. Neuroma, sarcoma, lymphoma, and extensive hypertrophic scar after wide plombage thoracoplasty were considered as radiologic differential diagnoses. After a discussion with a pulmonologist and the patient, she accepted a diagnostic biopsy in the surgery department to exclude tumors and ruptured plombage. Despite the magnetic resonance images, the histopathologic examination confirmed the ruptured plombage by detection of foreign-body granulomas and large empty vacuoles, which corresponded to the removed paraffin oil during histologic preparation (Fig 4). Microorganism screening result for tuberculosis was negative.

A close follow-up and watch-and-wait strategy were suggested as a treatment regimen.

DISCUSSION

During the tuberculosis epidemic after World War II and before effective antituberculosis agents were discovered, plombage was a common treatment strategy.1,2 This strategy was first used by Tuffier in 1891 to treat upper lobe tuberculosis of the lung. The procedure was conducted by forming a surgical cavity under the upper portion of the chest wall ribs and by filling the area with different dormant substances such as paraffin wax, fat, rubber balloons,
oil, and Lucite balls to achieve an artificial lung collapse. This forced collapse was supposed to lead to infection isolation and healing process improvement. Normally, the plombage was advised to be extracted a few years later. Nonetheless, some patients missed a follow-up and therefore still carry it.

Several years later, as a result of unremoved plombage various complications were reported such as rupture of the plombage with bronchial, pleural, or pleurocutaneous fistula; oil aspiration; infection; abscess; migration; and tumors, especially with Lucite.1-6 Mycobacterial persistence in the material with reactivation of tuberculosis has also been reported.7 The treatment of these complications is challenging.

In the last few years, scant cases have been published, presumably because only a few patients with plombage reached aged 90 years. This rare report highlights the importance of knowing the old tuberculosis treatment strategy because late complications may occur. Furthermore, this case shows the significance of the biopsy in plombage leakage that may not be noticed or can even be falsely evaluated radiologically. Hence, dermatologists should be aware of these cutaneous complications caused by plombage rupture in elderly patients.

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