

LETTERS TO THE EDITOR

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# Single center experience on talc poudrage morbidity: focus on high talc dosage

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## Abstract

Malignant pleural effusion (MPE) is a common clinical problem of concern for most of the pneumologists and thoracic surgeons. A general consensus regarding the use of talc poudrage in treatment of MPE exists, but only few studies analyzed in detail talc insufflation related pulmonary morbidity. In particular, ARDS talc-related is caused by physical and chemical effects of the small talc particles (50% particle size  $<15\ \mu\text{m}$ ) and its occurrence is independent from the underlying disease, the quantity of talc used or the technique of talc instillation. In our series we observed 3 cases only (0.75%) of talc-related lung injury. This data strongly confirm the low rate of talc-related lung injury after talc poudrage in treatment of MPE regardless the amount of talc insufflated.

## Letter to the editor

We read with great interest the report by Barbetakis et al [1] on morbidity, mortality and life expectancy following thoroscopic talc insufflation. Malignant pleural effusion (MPE) is a common clinical problem of concern for most of the pneumologists and thoracic surgeons. In the US the annual incidence of MPE is estimated to be 250.000 cases and several studies suggest that exudative effusions are by large (42 - 77%) caused by malignancy [2]. A general consensus regarding the use of talc poudrage in treatment of MPE exists, only few studies analyzed in detail talc insufflation related pulmonary morbidity. The most common side effects are pleuritic chest pain and mild fever. However very serious and potentially fatal adverse events, albeit unusual (1 to 9% in published series [3]), as such as an adult respiratory distress syndrome (ARDS), can happen and these are related to the physical and chemical effects of the small talc particles (50% particle size  $<15\ \mu\text{m}$ ).

The occurrence of ARDS is, in fact, independent from the underlying disease, the quantity of talc used or the technique of talc instillation but it's strongly related to talc particle size. A greater alveolarterial oxygen gradient in the group exposed to non-graded talc at 48 h

after pleurodesis was detected when matched with that of those exposed to graded talc [4].

In our department, in the period between 01/95 and 10/10, we performed thoroscopic talc pleurodesis in 401 patients with MPE. As previously reported in our data [5], we performed a "single access" technique in those cases with no evidence of pleural adhesions or loculated effusions (241 patients), while 160 patients underwent a standard thoracoscopy. We routinely used an average of 4 grams (range 2-28 grams) of large-particle asbestos-free talc pneumatically atomized through a soft silicone tube. To be specified that the upper range (up to 28 grams) was reached in those cases (15 patients) with high (up to 500 ml/die) flow. In our series we observed 3 cases only (0.75%) of talc-related lung injury (acute respiratory failure in 2 cases and acute pulmonary edema in 1 patient). Our complication rate is lower to that reported in [1] (acute respiratory failure in 7 cases and reexpansion pulmonary edema in 1 patient), although the Authors have denied a correlation between talc insufflation and pulmonary complications. As well, differently from the evidence reported by Montes et al [6], we did not observe any complications in the 15 cases insufflated with more than 8 grams of talc.

Our results confirm the low rate of talc-related lung injury after talc poudrage in treatment of MPE regardless the amount of talc insufflated. We would really appreciate the Authors' reflection and reaction in

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considering and discussing about high-dose (over 8 g) graded-talc pleurodesis.

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#### Authors' contributions

GL conceived the study, collected data and drafted the manuscript. MLV reviewed the pertinent literature. VP and MTC helped with bibliography. AC critically revised the paper. All authors read and approved the final version of the manuscript

#### Competing interests

The authors declare that they have no competing interests.

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