



Successful pleurodesis of refractory pleural effusion caused by heart failure due to restrictive cardiomyopathy caused by amyloidosis

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Background:

Amyloidosis is a group of diseases characterized by the accumulation of amyloid in the extracellular spaces of various organs and tissues. Pleural effusion can occur as part of pleural amyloidosis, but also as a consequence of heart failure caused by amyloidosis.

Case presentation:

A 48-year-old male was diagnosed with amyloidosis (hTTR gene mutation) in 2019. As a part of the illness, he developed restrictive cardiomyopathy and impairment of functional capacity (NYHA II). During 2021, he clinically worsened due to the appearance of a chronic right-sided pleural effusion. Repeated pleural punctures (once a week) significantly reduced his quality of life, and hindered the possibility of advanced treatment methods, such as heart transplantation. In 8/2021., after confirmation of a transudative effusion, that most likely resulted from the heart failure (pleural biopsy and exclusion of pleural amyloidosis involvement was not done due to high risk), it was decided to place a thoracic drain and try to perform a pleurodesis. The first procedure was performed upon reduction of daily secretion below 200 ml. The procedure failed and effusion accumulated again, now in two distinct pleural spaces. After consultation with thoracic surgeons, the decision was made to repeat the procedure. Both spaces were drained (one was complicated by the development of a liquid pneumothorax) and pleurodesis with talc was repeated after the secretion fell below 100 ml/24 h. No re-accumulation of pleural effusion was found on further check-ups. The patient continued with cardiological follow-ups and treatment and, in January 2023, he underwent a simultaneous heart and liver transplant.

Conclusion:

Pleurodesis is not an established choice of treatment for chronic transudative effusions, but in well-selected patients it can significantly improve the quality of life.