



DIROFILARIASIS AS A CAUSE OF PLEURAL EFFUSION - A CASE REPORT

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Background:

Dirofilariasis is a parasitic zoonosis caused by a nematode *Dirofilaria* spp. In Europe, *D. repens* is the most prevalent species, although there have also been reported cases of *D. immitis*. The primary hosts are domesticated and wild dogs, with mosquitoes serving as vectors. While *D. repens* typically causes subcutaneous and ocular dirofilariasis, *D. immitis* commonly leads to pulmonary dirofilariasis, although there have been reports of other organ systems being affected as well. In this report we describe a case of dirofilariasis affecting the lungs.

Conclusion:

This case report presents a rare cause of pleural effusion and emphasizes the importance of considering uncommon etiologies, especially in patients with persistent or atypical clinical features.



Recent reports have shown dirofilariasis cases emerging in previously unaffected regions of Europe, with higher frequency in areas already known to be affected. Therefore it is important to familiarize clinicians with the existence of this disease.

Case:

A previously healthy 44-year old male patient presented to the emergency department with a one-month history of chest pain and coughing. He reported no fever or weight loss. The patient had previously received antibiotics at another institution due to suspected pneumonia with pleural effusion detected on chest X-ray. However, the pain persisted despite treatment. A CT-scan of the thorax was performed, revealing a pleural effusion extending from the base to the apex of the lungs, with consequent atelectasis of the right lower and middle lobes. Within the pleural effusion there was a 70x9mm thickening of the parietal pleura. The patient was hospitalized, and a thoracocentesis was performed, which revealed an eosinophilic effusion, with no malignant cells detected. Bronchoscopy showed no pathology and there were no significant microbiological findings. The patient started pulmonary rehabilitation, and the pleural effusion was in regression. During a follow-up appointment a CT scan of the thorax was repeated and it showed a complete resolution of the pleural effusion but an increase in size of the parietal pleura thickening. Consequently, an uniportal video-assisted thoracoscopic surgery was performed, during which a pathological deposit of the parietal pleura was identified and removed in its entirety. Histological examination of the tissue revealed an infection caused by the parasite *Dirofilaria* spp. The patient had no perioperative complications and remained symptom-free during follow-up appointments. As complete surgical excision of the parasite is usually curative, there was no further treatment indicated so far, but frequent follow-up appointments were recommended.