



Bilateral Large Intrathoracic Meningoceles Associated with Neurofibromatosis Type 1-Usefulness of 3D-CT Myelogram

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Clinical Image

Symptomatic thoracic meningoceles associated with Neurofibromatosis Type 1 (NF1) are rare pathology. A 54-year-old male was initially diagnosed with NF1 at the age of 10. He presented to us with dyspnea and headache that had been progressive for the past 5 days. On examination, severe respiratory dysfunction was present, and was found to have bilateral abnormal chest lesion on X-ray (Figure 1). Magnetic resonance imaging of the chest demonstrated large bilateral thoracic meningoceles, along with massive pleural effusion of the right thoracic cavity (Figure 2). We speculated the rupture of right meningocele caused cerebrospinal fluid leakage, causing dyspnea and headache. Thus, myelography and subsequent Computer Tomography (CTM) were performed to characterize the association of the chest lesions (Figure 3). 3D-CTM revealed large bilateral thoracic meningoceles, but no fluid leakage was observed. He died 2 weeks after admission, and autopsy revealed malignant change of neurofibroma which disseminated not only his thoracic cavity, but central nervous system.

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Figure 1: Chest X-ray on admission shows bilateral abnormal chest lesion.



Figure 2: T2 weight images of chest MRI. Coronal view demonstrates bilateral intrathoracic large meningoceles along with preural effusion in the right thoracic cavity (Left). Axial view demonstrates meningoceles arising from T3/4 foramen. Also dural ectasia and shifted spinal cord in the spinal canal were noted.

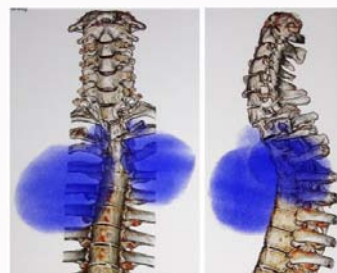


Figure 3: 3D-CT myelogram clearly shows bilateral large thoracic meningoceles, but no fluid leakage was detected. Left: Antero-posterior view. Right: Lateral view.