台灣胸腔暨重症加護醫學會 **2026年08月12日 南區月會-病例討論**

Malignant Pleural Mesothelioma Presenting with Acute Cardiorespiratory Failure and Widespread Metastasis: A Case Report

1.Introduction

Malignant pleural mesothelioma (MPM) is a rare and aggressive malignancy arising from the mesothelial surfacing of the pleural cavity, strongly associated with asbestos exposure. Characterized by an insidious onset, patients typically present with non-specific symptoms such as progressive dyspnea, non-productive cough, and chest wall pain. Due to its diffuse growth pattern and late-stage presentation, early diagnosis remains clinically challenging.

2.Case Report

A 70-year-old male with a history of diabetes mellitus and hypertension presented with a one-month history of progressive dyspnea and cough. He initially sought care at a local clinic and was referred to the emergency department of E-Da Cancer Hospital, where admission was advised; however, the patient signed an against-medical-advice (AMA) discharge and subsequently collapsed in the hospital parking lot. After the medical team initiated cardiopulmonary cerebral resuscitation for out-of-hospital cardiac arrest, achieving return of spontaneous circulation. The patient was then transferred to our ED.

Initial diagnostic imaging revealed a complex, multi-system crisis resulting from both advanced underlying disease and resuscitation trauma. A computed tomography scan on December 22 demonstrated multiple tumors across the lungs, pleura, left chest wall, mediastinal lymph nodes, liver, and peritoneum, initially raising suspicion for primary lung cancer. Furthermore, brain CT revealed an acute traumatic epidural hematoma and subarachnoid hemorrhage. Laboratory evaluations showed leukocytosis, hyponatremia, hypokalemia, abnormal liver function, elevated lactate, and profound anemia. Due to the high surgical risk, the Division of Neurosurgery recommended conservative observation for the EDH. patient to the Medical Intensive Care Unit (MICU).

In the medical intensive care unit, empirical antibiotic therapy with Tapimycin was initiated, and an echocardiogram demonstrated a preserved left ventricular ejection fraction of 58%. To address severe bilateral pleural effusion, pigtail catheters were sequentially inserted; initial pleural fluid cytology and cell block analysis was suspicious for malignancy. A definitive left pleural biopsy performed on 2025/12/26, confirmed a diagnosis of malignant epithelioid mesothelioma, grade I. During his ICU stay, a follow-up electroencephalogram confirmed mild, diffuse cortical dysfunction with low voltage, secondary to hypoxic encephalopathy.

By early January, follow-up imaging revealed a re-accumulation of the right-sided pleural effusion, requiring continued pigtail drainage and supportive respiratory management on the ventilator. Recognizing the terminal nature of his stage IV

malignant mesothelioma combined with irreversible hypoxic encephalopathy from the prolonged cardiac arrest, the multidisciplinary team engaged in extensive goals-of-care discussions with the family. Following multiple confirmations, the patient’s wife requested the withdrawal of life-sustaining treatment. On the morning of 2026/01/06, mechanical ventilation was discontinued, and the patient passed away peacefully at 11:53 AM.

3.References

1.Kindler HL, Ismaila N, Armato SG 3rd, et al. Treatment of Pleural Mesothelioma: ASCO Guideline Update. *J Clin Oncol*. 2025;43(5):546-557.

2.Popat S, Baas P, Faivre-Finn C, et al. Malignant pleural mesothelioma: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2021;33(2):129-142.

3.Radiologists RSNA. Pleural Mesothelioma: Ninth Edition of the TNM Staging Classification. *Radiology: Cardiothoracic Imaging*. 2025;7(1):e250213.

4.Murray and Nadel's Textbook of Respiratory Medicine, 2022/7