



FIBRINOLYTIC THERAPY AND PLEURODESIS, TWO DIFFERENT PROCEDURES FOR TOTAL EVACUATION OF MULTILOCULATED MALIGNANT PLEURAL EFFUSION AND PREVENTION OF FLUID REACCUMULATION-A CASE REPORT

BEČEJAC T.¹, Jalšovec D.¹, Milišić Jašarević I.¹, Bunjevac I.¹, Cesarec V.¹, Danolić D.²

¹ University Hospital Centre Zagreb, ZAGREB, Croatia
Department of Thoracic Surgery

² Sestre Milosrdnice University Hospital Center, ZAGREB, Croatia
University Hospital for Tumours

Background:

Introduction: Malignant pleural effusion can sometimes be multiloculated and divided by fibrous adhesions that prevent adequate evacuation of fluid via chest tube insertion. One or more small-bore drainage catheters can be used in the management of this type of pleural effusion but with limited success. This often prevents successful pleurodesis. In combination with pleurodesis, fibrinolytic therapy may resolve multiloculated pleural effusion and prevent fluid reaccumulation.



Conclusion:

Conclusions: Intrapleural application of fibrinolytic therapy presents a potent tool in the management of multiloculated malignant pleural effusion that otherwise can not be resolved by simple chest tube insertion. In this case, we witnessed a complete fluid evacuation after only one alteplase application. Pleurodesis with 40% glucose is a safe and effective procedure that, in this case, prevented further pleural effusion reaccumulation.

Keywords: pleural effusion, fibrinolytic therapy, alteplase, pleurodesis

Case:

Case report:

We present a case of a 42-year-old female patient with a massive multiloculated malignant pleural effusion. The patient was diagnosed with an invasive left breast carcinoma. Neoadjuvant oncological treatment was indicated, followed by a surgical skin-sparing



mastectomy, irradiation, and hormonal therapy.

Later, the patient suffered from persistent cough and dyspnea. An MSCT scan revealed a massive left-sided pleural effusion that was treated with a 12 Fr small-bore catheter. The cytological analysis revealed malignant cells. After a complete evacuation of fluid, the patient was discharged from the hospital but soon suffered from a relapse and required 2L of oxygen therapy.

Because of now multiloculated pleural effusion, two 12 Fr small-bore catheters were placed intrathoracally under ultrasound control, and 2000 ml of yellowish fluid was evacuated.

Then we decided to conduct the fibrinolysis with an alteplase. 10 mg of alteplase was instilled intrathoracally through a drainage system that was then closed for two hours. After opening a chest catheter, an additional 1000 ml of now red sanguinolent effusion was evacuated. The following chest X-ray showed a complete evacuation of pleural effusion and the complete reexpansion of lung parenchyma. The next day, we performed pleurodesis with 40% glucose in order to fuse the parietal and visceral pleura and prevent further reaccumulation of fluid. After two days, no fluid secretion was noted, and both drainage chest tubes were extracted. The patient was discharged from the hospital with no oxygen therapy. A month later, no additional fluid reaccumulation was noticed on the chest X-ray. The patient started further oncological treatment and had a satisfactory respiratory status.