



Pulmonary Medicine

AN INTRAPLEURAL INSTILLATION OF STREPTOKINASE IN MULTILOCULATED TUBERCULOUS EMPYEMA THORACIS. DOES IT AVOID SURGERY? - A CASE REPORT

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ABSTRACT Multiloculated empyema incompletely drained by tube thoracotomy alone usually require operation to avoid a thoracotomy, yet treat this difficult problem, intrapleural fibrinolytic agents were employed. In our case, a patient present with multiloculated hydropneumothorax, we inserted ICD but pus was drained incompletely. As the patient is unfit for surgery and as a shortage of resources like VATS, we planned intrapleural SK instillation for facilitate drainage, streptokinase 2,50,000 U in 100 ml 0.9% saline solution was instilled daily into chest tube for 7 days, until resolution of fluid was demonstrated by chest x-ray. No treatment related mortality or complication noted. Intrapleural fibrinolytic agents are safe and cost-effective means of facilitating complete chest drainage, thereby avoiding the post-operative complication or major operative procedures in patients of multiloculate empyema patient who would usually have required open thoracotomy or recently VATS if available. However, intrapleural SK instillation will be more safe option in resources limited setting where VATS is not available.

KEYWORDS :

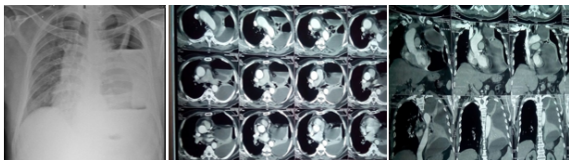
INTRODUCTION:

Most of the patients of multiloculated empyema present with progressive dyspnea, cough, chest pain and fever which compromise the quality of life. The drainage of empyema by Tube thoracostomy required to relieve symptoms. However this method usually fails in patients with multiloculated empyema, in whom fibrinous adhesions impede fluid or pus drainage which requires Video Assisted Thoracic Surgery (VATS) to drain the pus.

In such cases, Intrapleural administration of fibrinolytic agents has been shown to be effective and safe for the adhesinolysis and drainage of pus in multiloculated empyema. It may reduce the need for surgery and improves the clinical outcome.

CASE STUDY:

A 60 year old patient presented with occasional dry cough for a month, fever and breathlessness for 5 days. Patient was not giving any history of comorbidity. On examination patient was hypoxic, tachypneic and had tachycardia. On Chest auscultation, he had reduced air entry in left side. So, Chest X-ray was done which was suggestive of left sided multiple Air-fluid levels suspecting multiloculated hydropneumothorax versus multiple lung abscesses. CT thorax was done to confirm the diagnosis and was suggestive of large amount of multiloculated hydropneumothorax with underlying collapsed lung with thickened septa.



Routine blood investigations were done which were normal except for high RBS and HbA1c 8%. ICD insertion was done and pus was drained and bacterial culture and CBNAAT were sent which came negative. Other investigations were sent in which Sputum CBNAAT came positive for MTB. Patient was started on ATT, antibiotics and Insulin. Repeat chest xray was performed in 7th day which didn't show much improvement. Patient was planned for surgery but was unfit for surgery. So, patient was put on intrapleural fibrinolytic. Streptokinase

2, 50,000 IU was dissolved in 100ml saline was instilled in the pleural cavity through ICD. It was given twice daily for 7 days and repeat chest x-ray was done which showed significant improvement and his lung was expanded.



DISCUSSION:

Intrapleural fibrinolytic agent was used for the first time by Tilient and Sherry in 1949. It is considered as a viable alternative to facilitate drainage and lung expansion in empyema, inadequately treated by chest tube alone. Many studies have been published in the last few years with encouraging results of this therapy in complicated parapneumonic effusions, pleural empyema and multiloculated malignant pleural effusion.

With increasing reports of successful intrapleural fibrinolytic therapy in thoracic empyema we tried intrapleural streptokinase in our case and we found it safe and successful.

CONCLUSION:

Finally we concluded that, the efficacy of intrapleural streptokinase in complicated parapneumonic effusions and multiloculated empyema, its benefit over tube thoracostomy alone and its potential of avoiding the need of surgical intervention, that remain still controversial. But it can be considered when there is failure found with tube thoracostomy, so as to improve drainage of pus or pleural fluid.

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