Management of cold Abscess: A novel approach

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Abstract:
Percutaneous abscess drainage is a widely accepted method of treatment of an accessible abscess. Consistently, poor results have been reported by various authors due to presence of infected hematomas or presence of thick, viscous and purulent material. Several studies have proven the potential benefit of fibrinolytic therapy for treating abscess especially those with thick purulent material, old blood or loculations. The present report highlights the efficacy of fibrinolytic therapy in loculated abscess.

Keywords: Cold abscess; Fibrinolytic agent; TB.

Introduction:
Percutaneous abscess drainage is a widely accepted method of treatment of an accessible abscess. Consistently, poor results have been reported by various authors due to presence of infected hematomas or presence of thick, viscous and pus [1-3]. Installation of fibrinolytic agent in loculated abscess cavities facilitates drainage and is a safe and simple cost effective therapy. The rationale for the use of fibrinolytics for treating abscess outside the pleural space is almost same as intrapleural fibrinolytic therapy [4]. Since purulent material in loculated abscesses contains a high level of fibrin, fibrinolytics (Streptokinase/Urokinase) injected in to the purulent material retains its enzymatic properties and splits the fibrin therapy breaking the loculations [3].

Case Report:
A 32 years old male, known case of pulmonary tuberculosis (TB) on antitubercular therapy (ATT), presented with chief complaints of swelling over right infra scapular region, along with episodic cough and fever spikes, on and off. His general examination and systemic examination were unremarkable, except respiratory auscultation which revealed crepitation in the left infra-clavicular region. Local examination defined 7X5 cm, oval, soft, fluctuant, and non-tender swelling in the right infrascapular region. Cough impulse was present. His chest radiograph showed infiltrates in left upper zone. His computed tomography of LS spine showed a well defined lesion noted in right posterio-inferior pleural space and peripherally enhancing lesion in the right paraspinal muscles. His MRI showed an abscess in latissmus dorsi muscle on the right side. FNAC showed AFB and Gene Xpert showed sensitivity to Rifampicin, liquid culture also showed Rifampicin. Pigtail insertion was done under USG guidance and about 120-150 cc of pus was drained. There was no drainage in spite of repeated saline flushing. USG thorax was repeated and showed fluid with internal septations in the abscess. Fibrinolytic therapy was initiated (in view of residual loculated fluid). Fibrinolytic Agent: Inj. Urokinase 1 lac IU given 8th hourly (Dil. in 50cc normal saline), dwelling time 2 hours after each instillation. A cumulative of 350cc of pus was drained, over a period of 2 days. Swelling completely disappeared on a follow-up after one month. The authors had obtained a written informed consent from the patient to publish the data and the pictures.

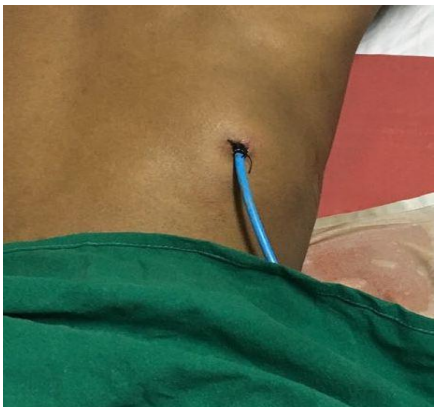

Fig. 1: Pig tail insertion

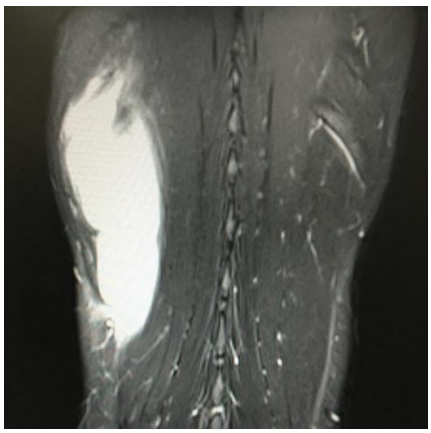

Fig. 2: Pre Fibrinolytic therapy MRI

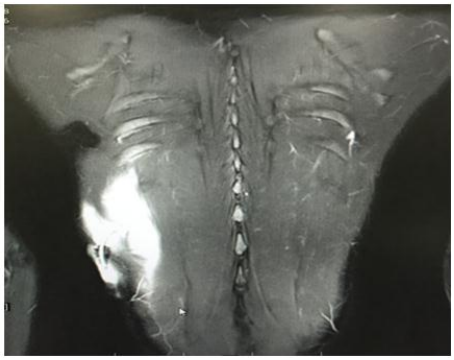

Fig. 3: Post fibrinolytic therapy MRI

Discussion:

The use of fibrinolytics in loculated pleural collection due to pneumonia, empyema and TB is well documented for long time [5]. The use of fibrinolytics for treating abscess outside the pleural space is almost same as intrapleural fibrinolytic therapy [4]. Since purulent material in locuated abscesses contains a high level of fibrin, fibrinolytics (STK or the UK) injected in to the purulent material retains its enzymatic properties and splits the fibrin therapy breaking the loculations [3]. Our case had loculated abscess as evidenced by an insignificant drainage in spite of catheter being in situ and significant amount of fluid in abscess cavity assessed by USG. There was an excellent response without any adverse effects after fibrinolytic therapy. The dose of fibrinolytic agent preferred 12500 IU (Urokinase) for cavities up to 3cm in diameter, 25000 IU for those of 3-5 cm in diameter, 50000 IU for 5–10 cm and 1lakh IU for more than 10cm in diameter. As the abscess in our case was greater than 10cm we used 1lakh IU of Urokinase 8^{th} hourly with drain time of 2 hours. Total 350cc pus was drained after fibrinolytic therapy. There was no haemorrhagic complication after the therapy. Absolute contraindications to fibrinolytic therapy include previous intracranial haemorrhage, ischemic stroke within 3 months and active bleeding or bleeding diathesis. The relative contraindications are systolic blood pressure more than 180 mmHg, major surgery within <3 weeks, pregnancy, current use of anticoagulants and active peptic ulcer.

Conclusion:

Installation of fibrinolytic agent in loculated abscess cavities facilitates drainage and is a safe, simple cost effective therapy. Furthermore, a detailed analysis a bigger centres with large data is imperative.

Conflicts of Interest: None declared
Acknowledgements: None

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