

Department: Chest Department

Title: Comparison Of Two Methods Of Pleurodesis (Autologous Blood Versus Doxycycline) In Cases Of Malignant Pleural Effusions

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Abstract:

Background: Pleurodesis with sclerosing agents has been established as a cost-effective palliative procedure for controlling MPE. Autologous blood was discovered as a sclerosant a few decades ago. It could produce both microscopic and macroscopic pleural adhesions of a dose-dependent effect. It was first used as a chemical pleurodesis for spontaneous pneumothorax in 1987, and subsequently has been established as a well-tolerated and efficient sclerosant for terminating pneumothorax and PAL.

Aim of the work: To compare between two methods of pleurodesis (autologous blood versus doxycycline) in case of malignant pleural effusion.

Patients and methods: This study included 30 patients with malignant pleural effusion diagnosed by thoracoscopy and other tools, 15 of them underwent to pleurodesis by ABP and other 15 by doxycycline through chest tube during the period from January 2019 to September 2020.

All patients were subjected to full medical history , detailed clinical examination, Routine blood investigations: Complete blood count, liver and kidney function test, test for coagulation profile, Chest X-Ray, CT chest , Sonar guided thoracentesis:

pleural fluid was sent for microbiological, chemical and cytological analysis , Thoracoscopic pleural biopsy or other methods , Pleurodesis using autologous blood (1mg/kg maximum 100 mg) or doxycycline pleurodesis by (1mg/kg maximum 600 mg) through chest tube then assessment of success of pleurodesis and pleurodesis related complications.

Results: Out of 30 patients included in this study fourteen patients (93.3%) had successful pleurodesis in blood group and thirteen patients (86.7) had successful pleurodesis in doxycyclin group.

According to paladines criteria: In blood group complete response to pleurodesis in 13 (86.7%), partial response in 1 (6.7%) and no response in 1 (6.7%) while in doxycyclin group complete response in 12 (80%), partial response in 2 (13.3 %) and no response in 2 (13.3%).

In blood group 13.3% of patients had fever after pleurodesis while in doxacyclin group 6.7% of patients had fever, 13.3% oozing blood from ICT with hypotension, hypoxia, wheeze, respiratory distress.

Conclusion: 1- The results of our study concluded that ABP has an equivalent efficacy compared to doxacyclin pleurodesis for the treatment of MPE. ABP causes less pain compared to doxacyclin. Pleurodesis using autologous blood offers a simple, readily available and well-tolerated method of treatment, causing neither allergy nor pulmonary and systemic adverse events.

2- Thoracic US is an easy and accurate method for the detection of successful pleurodesis and follow up.

Key words: pleurodesis, MBE, autologous blood, doxacyclin