JOURNAL CLUB SUMMARIES

What's hot that the other lot got

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STEMMING THE FLOW: NEBULISED TRANSEXAMIC ACID CAN BE USED TO CONTROL BLEEDING IN PATIENTS WITH NON-MASSIVE HAEMOPTYSIS

Transexamic acid (TA) is an antifibrinolytic drug used to control bleeding and is most commonly administered as a systemic preparation. The effectiveness of nebulised TA in the treatment of haemodynamically stable patients with non-massive haemoptysis was assessed in a prospective, double-blind, randomised controlled trial of nebulised TA (500 mg, three times per day) versus 0.9% 5 mL normal saline (Wand *et al*, Chest 2018; doi: 10.1016/j.chest.2018.09.026). Forty-seven patients were randomised; 25 patients received nebulised TA and 22 patients received the normal saline placebo. Resolution of bleeding was achieved within 5 days from admission in 96% of the TA-treated group and 50% of the placebo group ($p<0.0005$). Mean hospital length of stay was shorter for the TA group compared with the placebo group (5.7±2.5 versus 7.8±4.6 days, $p=0.046$). Four out of 22 patients in the placebo group and none out of 25 patients in the TA group required interventional procedures to control bleeding ($p=0.041$). There were no serious adverse events reported in either the active treatment or placebo groups. The investigators concluded that TA inhalations can be used safely and effectively to control bleeding in patients with non-massive haemoptysis.

A TAILORED APPROACH TO MALIGNANT PLEURAL EFFUSION MANAGEMENT: THORACIC ULTRASOUND AS AN EARLY PREDICTOR OF PLEURODESIS SUCCESS

Patients with malignant pleural effusion require efficient palliation of their symptoms. This is commonly achieved with intercostal chest drain (ICD) placement and instillation of talc slurry to facilitate chemical pleurodesis. However, there is an acknowledged failure rate of chemical pleurodesis with few data to guide clinicians on individual outcomes and assist with timing of drain removal. Corcoran and colleagues (Chest 2018; doi: 10.1016/j.chest.2018.08.1031) conducted a prospective, observational cohort pilot study to determine whether talc slurry pleurodesis success could be predicted using a thoracic ultrasound (TUS) score of lung sliding pre-talc and post-talc slurry administration. TUS was scored by a bedside clinician and blinded assessor. Eighteen patients were recruited to the study and those with pleurodesis failure had a lower pleural adherence score (PAS 6.58±2.78) compared with patients with a successful pleurodesis (PAS 12.85±3.62). The mean time from talc administration to ICD removal was 2.9±1.1 days. Fifteen study participants also completed a patient satisfaction questionnaire with TUS examination deemed to be acceptable. The investigators concluded that early prediction of long-term outcomes following chemical pleurodesis may be facilitated by a TUS-derived pleural adherence score.

SAFETY FIRST: ENDOBRONCHIAL ULTRASOUND-GUIDED TRANSBRONCHIAL NEEDLE ASPIRATION IS SAFE WITHIN 1 YEAR OF PERCUTANEOUS CORONARY INTERVENTION

Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a minimally invasive procedure for nodal staging and pathological diagnosis in patients with lung cancer. The safety of EBUS-TBNA in patients with coronary artery disease (CAD), particularly in patients who have undergone percutaneous coronary intervention (PCI), has not previously been reported. Gil and colleagues (Thoracic Cancer 2018; doi: 10.1111/1759–7714.12846) sought to determine the safety of EBUS-TBNA in patients who had undergone PCI and insertion of a coronary stent within the previous year. Electronic medical records of 24 patients with suspected or diagnosed non-small cell lung cancer from a single centre were retrospectively reviewed. The primary outcome was the incidence of cardiovascular complications within 24 hours post-EBUS-TBNA. There was only one complication identified: atrial fibrillation (AF) with rapid ventricular response in a 75-year-old patient with known AF. Seven patients had transient procedural-related complications, none of which required escalation of care. Nineteen patients received antithrombotic treatment and no significant periprocedural or postprocedural bleeding was reported. The authors concluded that EBUS-TBNA is safe in patients with stable CAD who had recent PCI. However, of note, all patients were admitted for 24 hours presurgery and further 24 hours postsurgery limiting generalisability to centres using a day-case approach for EBUS-TBNA.

MONEY TALKS: SAVINGS CAN BE MADE BY USING SINGLE-USE BRONCHOSCOPES IN PERCUTANEOUS DILATATIONAL TRACHEOSTOMY

Percutaneous dilatational tracheostomy (PDT) is a practical and safe alternative to open surgical tracheostomy in intubated patients in critical care aided by bronchoscopic guidance. Either single-use or reusable bronchoscopes can be used with the latter requiring cleaning, decontamination and sterilisation after each use as well as being susceptible to damage. Using the available literature and study-specific questionnaires sent to USA, UK and German centres, Sohrt and colleagues (Pharmcoecon Open 2018; doi: 10.1007/s41669-018-0091-2) examined the cost of using single-use and reusable bronchoscopes in PDT. Eleven studies consisting of 4476 procedures were included but only 99 out of the 266 questionnaires sent were returned. Reusable bronchoscopes were used in 31 hospitals with a total of 1698 PDT procedures performed. The estimated cost per use of a single-use bronchoscope was US$249±36. After combining acquisition (US$135±152), reprocessing (US$123±128) and accounting for repair costs (repair rate 1:27 procedures, cost per repair US$3530±2669), the mean cost per procedure of a reusable bronchoscope was calculated as US$406, although with a significant cost spread at each step. The incremental cost per use of a reusable bronchoscope compared with a single-use bronchoscope was US$157, indicating a potential 39% saving per PDT with reusable equipment. The authors concluded that significant savings can be made by using single-use bronchoscopes to guide PDT.

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