anaesthetic (LA) delivery can be used during bronchoscopy to anaesthetize the upper airways. This study aimed to assess the effect on lidocaine requirement and patient comfort when using DV vs transcricoid LA delivery during bronchoscopy.

**Method** A prospective observational analysis from February-June 2023 was performed for patients undergoing bronchoscopy using either transcricoid or DV LA administration. 31 patients underwent bronchoscopy. All received nasal instillagel containing 2% lidocaine, oral spray LA (10 mg lidocaine/ spray) and IV Midazolam (2–4 mg) as standard. Data was collected for the total amount of LA used, patient reported cough, choking and comfort throughout the procedure. Comfort was recorded using a patient ranked analogue scale 0–10 (Very uncomfortable to very comfortable). Statistical significance was calculated using unpaired Student’s T-test.

**Results** 31 patients underwent bronchoscopy. 16 patients received LA via transcricoid injection (mean age 65.12±13.15 years, female 63%) and 15 via DV (mean age 61.26±14.20 years, female 60%). 3 procedures were not completed due to patient discomfort – 2 in the transcricoid group and 1 in the DV group. There was no significant difference in the dose of midazolam used between DV and transcricoid groups (mean dose 1.63 mg vs 1.75 mg, p=0.53). The total dose of lidocaine used in DV (mean dose 424 mg) was significantly higher than the cohort who received transcricoid anaesthesia (mean dose 312.5 mg, p<0.01). There was a significant reduction in cough experienced by the patients in the transcricoid group with 37.5% experiencing no cough at all vs 6.66% in the DV group. Equally, 87.5% of transcricoid anaesthetic cohort experienced no episodes of choking vs 46.6% in the DV group. Patient comfort differed between the 2 cohorts with the transcricoid group having a median comfort score of 8 vs DV group with a comfort score of 5. There were no complications of administering transcricoid anaesthesia.

**Conclusion** This small observational study suggests multiple benefits of transcricoid local anaesthetic delivery vs direct visualization, including reduced lidocaine requirements and improved patient comfort. Our study suggests potential superiority of the transcricoid route and larger scale observational study is warranted.

**Abstract P81**

**SINGLE CENTRE EXPERIENCE OF PHYSICIAN LED COMBINED RIGID AND FLEXIBLE BRONCHOSCOPY IN BENIGN AND MALIGNANT AIRWAY MANAGEMENT**

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**Introduction** Successful Rigid Bronchoscopy was first performed in 1897 to allow foreign body removal, and it still remains the cornerstone of complex diagnostic and therapeutic airway management, despite the introduction and technological advancements in flexible bronchoscopy in 1968. It allows safe easy access to the large airways complemented by the use of flexible bronchoscopy to perform diagnostic and therapeutic procedures, whilst maintaining uninterrupted adequate ventilation during the procedure. In the UK however, rigid is performed mostly by the Thoracic Surgeons with limited indications. Physician-led combined rigid and flexible bronchoscopy was introduced at the University Hospitals of North Midlands NHS Trust in 2013 and it is now a well-established safe technique to allow advanced bronchoscopic interventions.
Post-Operative Infections are Associated with Short Term Outcomes of Bilateral Lung Transplant Recipients

Aim To assess the utility and safety of respiratory physicians-led combined rigid and flexible bronchoscopy in the management of benign and malignant airway diseases.

Results Data was collected retrospectively from 59 patients from August 2018 until June 2023.

27 males, 32 females; mean age 62 years; range 23–90 years including a case of 24 week pregnant lady with severe sub-glottic stenosis.

Bronchoscopic interventions include 18 cases of tumour debulking (partial to complete) using coring technique, rigid forceps, balloon dilatation and Argon Plasma Coagulation (APC), 5 tracheo-bronchial stent placements (self-expanding metallic and silicone stents), 12 sub-glottic therapeutic balloon dilatations, 12 diagnostic bronchoscopy and endobronchial ultrasound (EBUS) guided nodal or mass sampling, 3 endobronchial valve insertions, 3 therapeutic procedures to manage endobronchial bleeding, 3 foreign body removal and 3 bronchial dilatation.

No significant complications were noted apart from bleeding during the procedure which was managed by the use of APC, topical administration of 1 in 10,000 adrenaline and cold saline along with intravenous tranexamic acid.

Results Our review demonstrates that combined rigid and flexible bronchoscopy can be safely performed by trained respiratory physicians to manage complex benign and malignant airway diseases with no significant complications.

Introduction Airway complications following lung transplantation are caused by ischaemia resulting from disruption to bronchial arterial supply. In this study we defined them as anastomotic dehiscence, bronchial stenosis, infections, granulation tissue excess and bronchomalacia. Several risk factors have been postulated including surgical technique, duration of post-transplant ventilation and pulmonary infection. Airway complications carry a significant morbidity and a mortality of between 2 to 4% and increase in chronic lung allograft syndrome.

Method We conducted a retrospective review of patients with and without airway complications. Airway complication were defined as: anastomotic dehiscence or the need for airway intervention (stenting, cryotherapy, dilatation, and diathermy). All single and bilateral lung transplants between January 2017 and March 2023 were analysed with respect to donor demographics, transplant urgency, ICU length of stay post-transplant and post-transplant infections with the risk of developing airway complications. Logistic regression with a p value of less than 0.1 in association with mortality on chi square test were entered as independent variables and final clinical status (alive or dead) were entered as dependent variables.

Results 229 patients were analysed, and we found no association between sex, number of organs (single/bilateral), patient/donor age and transplant urgency level with the development of airway complications. Patients with airway complications had an average infection incidence rate of 3.54, this compares to an average infection incidence rate of 1.13 in those without airway complications. The difference of 2.41 between the two groups was significant (p value <0.001). Using logistic regression, airway complication was found to be significantly associated with mortality with an odds ratio of 3.151 and a 95% confidence interval of 1.4–7.08 (p value 0.005). Other significant risk factors for mortality independent of airway complications in our cohort included urgent/super-urgent transplant listing and single lung transplantation.

Conclusion There is a significant association between post-transplant infections and airway complications. Airway complications significantly increase the risk of mortality post-transplant. Optimisation of donor and recipient strategies to address organ preservation and microbiology should help to prevent this complication.

When the going gets tough – Difficult infection and non-tuberculous mycobacteria

POST-OPERATIVE INFECTIONS ARE ASSOCIATED WITH THE DEVELOPMENT OF AIRWAY COMPLICATIONS AND INCREASED MORTALITY IN LUNG TRANSPLANT RECIPIENTS

Introduction Pseudomonas aeruginosa (PsA) is the most commonly isolated gram-negative bacterium after lung transplantation. PsA post-transplant isolation is associated with an increased incidence of chronic lung allograft dysfunction (CLAD) (Vos et al., 2008) and its treatment may improve pulmonary function, prevent CLAD progression and improve survival (Muynck et al., 2020). This study compared the short-term outcomes of bilateral lung transplant recipients with and without PsA.

Method All patients undergoing bilateral lung transplantation at Royal Papworth Hospital from 31/03/2018 to 01/04/2021 were included. Positive PsA isolates were identified in respiratory samples (sputum or bronchoalveolar lavage) obtained during routine surveillance and symptom-directed sampling. Patient demographics and outcomes (including hospital stay duration, peak FEV1, quality of life (EQ5D score)) were compared between PsA-positive and PsA-negative recipients. Statistical analyses included the chi-square test (dichotomous data), Mann U Whitney test (continuous data), multiple linear regression, and Cox proportional hazard regression analysis.

Results From a total of 76 transplant recipients, 29 (38.2%) isolated PsA in ≥1 respiratory culture post-transplant. The median time to the first PsA isolate was 43 days (range: 1–916 days). Antibiotic susceptibility varied, with 41% (n=12) having fully susceptible isolates and 59% (n=17) exhibiting resistance. PsA was most commonly isolated in patients with cystic fibrosis (34%). 13 out of the 29 positive patients isolated PsA pre-transplant. Patients with pre-transplant PsA demonstrated earlier isolation of PsA post-transplant (p= 0.039)