Respiratory syncytial viral infections in lung transplant recipients: Treatment with aerolised ribavirin

Dr. Simona 19532 Soresi s.soresi@rbht.nhs.uk MD ¹, Ms. Haifa 19533 Lyster h.lyster@rbht.nhs.uk ¹, Dr. Anne 19534 Hall a.hall@rbht.nhs.uk MD ¹, Dr. Anna 19535 Reed a.reed@rbht.nhs.uk MD ¹, Dr. Andre 19536 Simon a.simon@rbht.nhs.uk MD ¹ and Dr. Martin 19725 Carby m.carby@rbht.nhs.uk MD ¹. ¹ Cardiothoracic Transplant Unit, Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom, UB96JH and ² Honorary Lecturer, Department of Cardiovascular Pharmacology, National Heart Lung Institute, Imperial College, London, United Kingdom, SW3 6LR.

Body: Respiratory syncytial virus (RSV) is an important cause of serious respiratory illness in lung transplant recipients (LTRs). RSV is a well recognised risk factor for the development of bronchiolitis obliterans syndrome (BOS). Ribavirin has been administered intravenously and orally in the treatment of RSV in adult lung transplantation but reports of its use aerolised is limited. We performed a retrospective analysis of LTRs who received aerolised ribavirin to treat RSV during the period December 2010-12, outcomes included respiratory function tests (RFTs) and adverse drug reactions (ADRs). 8 LTRs (2 male) were treated with aerolised Ribavirin for RSV infection, all presented with a drop in RFTs and viral symptoms. 3 patients with histological and/or radiological evidence of interstitial pneumonitis also received intravenous immunoglobulin (500mg/kg daily for 5 days) and high dose corticosteroids. Aerolised Ribavirin was administered as 6g/day at a concentration of 60mg/ml running at 17.5ml/hour for 2 hours every 8 hours until 2 consecutive negative nasopharyngeal aspirate samples were achieved. RFTs were repeated at the end of the treatment course. 8 patients (9 treatment episodes) were treated for a mean of 10.6 days (range: 6-22 days). In 6 of the 9 treatment episodes the respiratory symptoms resolved completely, with RFTs returning to baseline. 2 patients died post-treatment (81 and 184 days) and 1 patient developed BOS. There were minor ADRs in 4 patients: sore throat (1), headache (3) and nausea (1), none necessitated treatment discontinuation. In adult LTRs with RSV infections, aerolised ribavirin is a safe and promising treatment option with minimal systemic ADRs.