**Introduction**

Rituximab (RTX) is a treatment for nephrotic syndrome (NS) and is commonly used in patients with frequently-relapsing steroid-sensitive nephrotic syndrome (SSNS) but its use is limited by non-reimbursed cost. RTX has the potential to reduce SSNS-associated morbidity through reducing corticosteroid (CS) exposure and relapse-associated risks such as acute kidney injury, infection and venous thromboembolism; in addition to whole-healthcare economy costs (through reducing hospital admissions and frequency of clinic attendances). Traditionally Rituximab is dosed at 375mg/m2 weekly for 4 weeks (Non-Hodgkins Lymphoma (NHL) regimen) or 1g on two occasions a fortnight apart (Rheumatoid arthritis (RA) dose). Ruggenenti et al reported results in a mixed group of adults and children with frequently relapsing NS treated with a single dose (SD) RTX 375mg/m2. The SD regimen is potentially attractive because it has lower, up-front, drug and administration costs. We retrospectively analysed our single-centre experience of treating adults with SSNS using either the traditional dose (TD) or the single dose (SD) regimen.

**Demographics**

Between September 2011 and September 2017 we treated 18 (10 male: 8 female) patients with SSNS (mean age 45.5 ±19, range 21-79 years) with RTX for the first time. Ten patients received SD RTX, 8 patients were treated with TD RTX (Either NHL or RA dose). Length of follow up differed between the two groups (SD 21 months; TD 44 months).

**Results**

Four patients from each group relapsed (4/10 SD; 4/8 TD). Time to relapse appeared shorter in the SD patients (4; 8; 10 and 45 months) compared to the TD patients (17; 18; 19 and 21 months). In addition 2 SD patients were pre-emptively re-dosed with a further SD RTX at 7 and 11 months respectively and have not relapsed. One TD patient received a pre-emptive re-dose (1g, once) at 16 months and has not relapsed. Six SD patients are relapse-free after 3 to 33 months; 4 TD patients are relapse-free after 3 to 71 months. One SD patient has died due to unrelated malignancy (asbestosis). At 1 year follow up 2/10 SD patients (both of whom had relapsed) were taking significant doses of CS (>25mg prednisolone daily). No TD patients were on comparable doses of CS.

**Conclusion**

Pending prospective trial data it seems prudent for patients in whom it is desirable to avoid high dose CS or who are at risk of high comorbidity in the event of NS relapse to receive traditional RTX dosing (RA regimen) rather than a single dose. Empirical re-dosing (with 1g, once) should be considered beyond 16 months. In addition to ‘time to relapse’ any assessment of novel RTX dosing regimens should consider cost effectiveness in terms of both corticosteroid exposure avoidance (total dose exposure; weight gain; diabetogenesis) and healthcare (number and length of acute admissions; number of clinic visits and pathology costs.)