Clinical response, efficacy and changes of Immune function with Rituximab treatment in childhood difficult to treat nephrotic syndrome

To identify remission, relapse, Changes in immune function in difficult to treat childhood nephrotic syndrome

Single center
Prospective interventional

Two-year study

N=21

1-18years

Inclusion criteria
- SDNS
- No response to steroids
- Steroid toxicity
- SRNS
- No remission with CNI
- CNI toxicity

Rituximab
375mg/m2
Biweekly 1-4 times

- Mean age 9.5 years
- SDNS 11
- SRNS 10
- MCD 8

Follow up

0.5 1 3 6 12 months

Complications
- ✓ Infections 12
- ✓ Death 1
- ✓ Infusion rel. 1

Remission

SDNS 11/11
SRNS 4/10

Complete Remission 11
Partial remission 4
No remission 6

Relapse No.
SDNS 4 (6 months)
3 (one year)
SRNS 3 (6 months)
3 (one year)

Rituximab dose and Remission
One dose 11
Two doses 3
Three doses 1

Changes in immune function

Decreased levels of CD 19
Recovered within 9-10 months

IgA
IgM
IgG
Stable levels pre/post treatment

Conclusion: Rituximab led to CR in 11/21 children with DTT nephrotic syndrome, achieving complete remission in all children with SDNS and in 4 children with SRNS. 57% of the children had infections while 23% had no complications. 1/3rd of children with B cell depletion recovered within 9 to 12 months and the pre / post treatment serum levels of IgG ,IgA and IgM did not change in the study cohort.

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WCN'26