

Current Practice

The treatment of steroid sensitive nephrotic syndrome

U D Mahamithawa¹

Sri Lanka Journal of Child Health, 2002; **31**: 60-2

(Key words: steroid sensitive nephrotic syndrome, SSNS, treatment)

Due to an oversight, a part of the above article was omitted from the last issue of the journal. We are now rectifying this omission.

Frequently relapsing and steroid dependent MCNS

These children are difficult to treat and develop steroid toxicity. The first step in management is to identify frequent relapsers and steroid dependence accurately, using the definitions given. This requires the paediatrician to spend time evaluating the course of the disease and the treatment given throughout. The definitions are applicable only if standard relapse treatment has been used in the preceding relapses.

Levamisole

The relative efficacy of levamisole is not known. In the University Paediatric unit, at the Lady Ridgeway Hospital for Children, we have been using this drug since 1993. A 10 year review of 110 children with SSNS followed up by us showed that levamisole was able to induce remissions lasting 2 years or longer and there was no statistically significant difference in efficacy when compared with cyclophosphamide¹⁴. However, it appears as though levamisole is more effective in the milder forms of the disease. We have not encountered any serious side effects with this drug to date¹⁴.

Cyclosporin A

This drug is nephrotoxic and therefore can be used only if facilities are available to monitor drug levels very regularly. The Medical Research Institute has recently commenced assessing blood levels of cyclosporin, but this is done only on 2 specified days of the week. The very high cost of the drug and the problems of assessing blood levels regularly makes it difficult for us, in Sri Lanka, to use this drug at present.

WHAT WE NOW KNOW

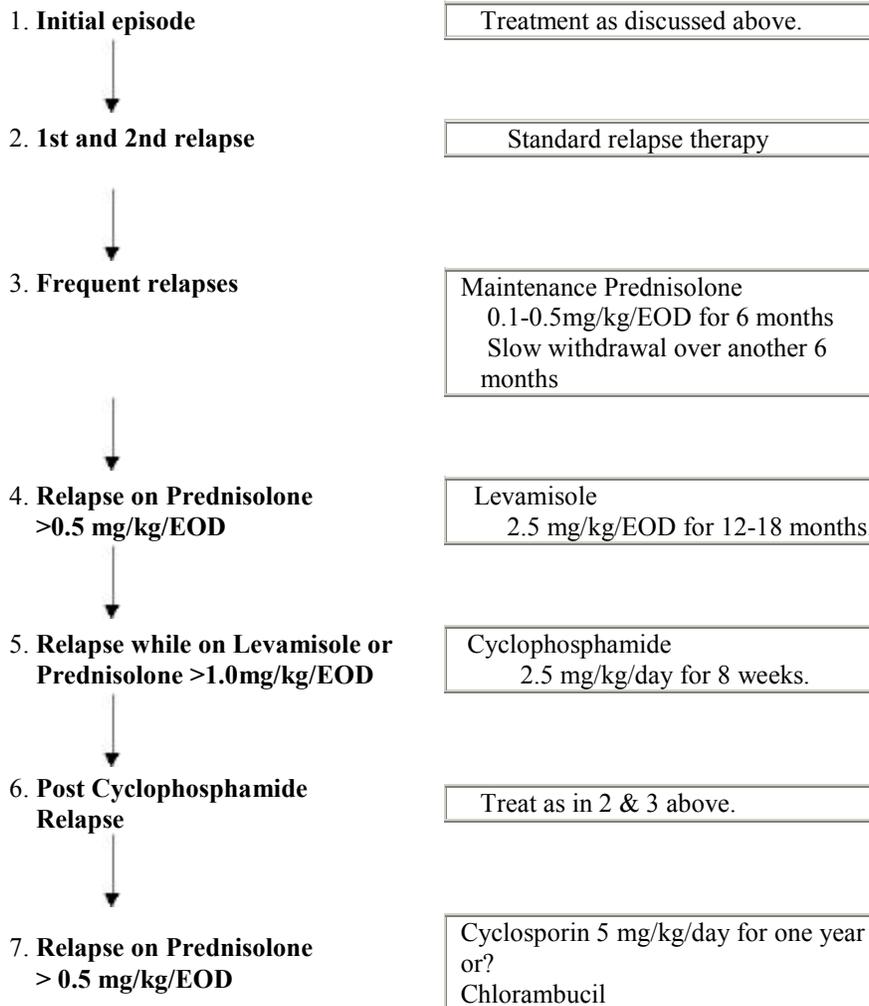
- Children with frequent relapses usually remain steroid responsive⁴.
- There are no randomized controlled trials comparing repeated courses of standard relapse therapy with long term low dose alternate day prednisolone therapy for frequent relapses.
- 8 week courses of cyclophosphamide or chlorambucil and prolonged courses of cyclosporin or levamisole substantially reduce the incidence of relapses¹³.
- Cyclosporin and levamisole effectively induce remission, but are unable to sustain this effect once treatment is withdrawn¹³.
- There is insufficient data at present to show that alkylating agents are more effective than cyclosporin or levamisole in reducing the incidence of relapses^{13,14}.

Treatment protocol for children with SSNS

This protocol is a modified version of the guidelines set out by the British Association for Paediatric Nephrology and Research Unit¹⁵.

¹Senior Lecturer in Paediatrics, Faculty of Medicine, University of Colombo.

Treatment Protocol



References

1. Schapner H W. The immune system in minimal change nephrotic syndrome. *Paediatr Nephrol* 1989; **3**: 101-10.
2. Shaloup R J. Pathogenesis of lipoid nephrosis: a disorder of T-cell function. *Lancet* 1975; **II**: 556-60.
3. Arneil G C. Treatment nephrosis with Prednisolone. *Lancet* 1956; **I**: 409-11.
4. Arbeitsgemeinschaft Für, Pädiatrische Nephrologie, Alternate day versus intermittent prednisolone in frequently relapsing nephrotic syndrome. *Lancet* 1979; **I**: 401-3.
5. Ueda N, Chihara M, Kamaguchi S, Niinomi Y, Nonoda T, et al. Intermittent versus long term tapering prednisolone for initial therapy in children with idiopathic nephrotic syndrome. *J. Pediatr.* 1988; **112**: 122-6.
6. Ksiazek J, Wyszynska T. Short versus long initial prednisolone treatment in steroid sensitive nephrotic syndrome in children. *Acta Paediatrica* 1995; **84**: 889-93.
7. Ehrlich J H H, Brodehl J. Arbeitsgemeinschaft für Pädiatrische Nephrologie, Long versus standard prednisolone therapy for initial treatment of idiopathic nephrotic syndrome in children. *Eur J. Pediatr.* 1993; **152**: 357-61.
8. Ekka B K, Bagga A, Srivastava R N, Single versus divided dose prednisolone therapy for relapses of nephrotic syndrome. *Paediatr. Nephrol* 1997; **1**: 597-9.
9. International Study of Kidney Diseases in Children, Early identification of frequent relapsers among children with MCNS. *J. Paediatr.* 1982; **101**: 514-8.
10. Arbeitsgemeinschaft für Pädiatrische Nephrologie, Short versus standard prednisolone therapy for initial treatment of idiopathic nephrotic syndrome in children. *Lancet* 1988; **I**: 380-3.
11. Hodson E M, Knight J F, Willis N S, Craig J C. Corticosteroid therapy in nephrotic syndrome: a meta analysis of randomised controlled trials. *Arch Dis Child* 2000; **83**: 45-51.
12. International study of Kidney Diseases in Children. Nephrotic syndrome in children. Randomized trial comparing 2 prednisolone regimes in steroid responsive patients who relapse early. *J. Pediatr* 1979; **95**: 239 -43.
13. Durkan A M, Hodson E M, Willis N S, Craig J C. Immunosuppressive agents in childhood nephrotic syndrome: A meta-analysis of randomized controlled trials. *Kidney Int.* 2001; **59**: 1919-27.
14. Mahamithawa U D, Hubert H D N, Bahirathan S. Use of alternative treatment in SSNS - A ten year review. Paper presented at Vth International Congress of Tropical Pediatrics 1999; Jaipur, India.
15. Report of a Workshop by the British Association for Paediatric Nephrology and Research Unit, Royal College of Physicians. Consensus statement on management and audit potential for steroid responsive nephrotic syndrome. *Arch Dis Child* 1994; **70**: 151-7.