

## **Pulse Dexamethasone Therapy**

Mondal *et al.* have recently reviewed the therapeutic uses of methylprednisolone (MP)(1). The latest volume of MIMS India (June 1995) mentions the recent availability of intravenous MP, under the trade name Solu-Medrol (Max India Limited), 1 g costing Rs. 715/-

The anti-inflammatory effect of MP is almost similar to that of prednisolone. Prednisolone has been extensively studied and is the corticosteroid most commonly recommended for oral use. The experience with the use of oral MP is very limited and there is no justification to recommend its use over oral prednisolone.

The authors have emphasized the use of intravenous high dose pulse methylprednisolone treatment for a number of conditions including rapidly progressive glomerulonephritis (crescentic glomerulonephritis), lupus nephritis, renal transplant rejection, aplastic anemia and bronchial asthma. While acute rejection episodes following renal transplantation are most often treated with pulse MP, high dose oral prednisolone is equally effective(2).

Dexamethasone, which is 9alpha-fluoro, 16alpha-methylprednisolone, has an anti-inflammatory effect which is more than 5 times that of prednisolone. The mineralocorticoid action of the drug is negligible. Both MP and dexamethasone are minimally bound to transcortin and the unbound "free" concentration of the drugs, following intravenous administration is high(3). The volume of distribution and the rate of drug clearance is also similar for both drugs(3).

We have used intravenous pulse dexamethasone in a dose of 4-5 mg / kg either daily or on alternate days as an alternative to pulse MP. Pulse dexamethasone has mainly been administered to patients with crescentic glomerulonephritis(4), lupus nephritis and steroid resistant nephrotic syndrome. The results were similar to those reported with pulse MP and the side effects mainly limited to transient hypertension and

exacerbation of intercurrent infections. Satisfactory results using pulse dexamethasone have also been reported in adults with pemphigus vulgaris(5). The difference in cost of treatment with pulse dexamethasone and MP is considerable. For example, the cost of treating a 30 kg child with 6 doses of pulse dexamethasone is Rs. 650/- compared to Rs. 4300/- for equipotent doses of pulse MP.

There have not been any clinical trials comparing treatment of pulse MP with that of dexamethasone. There is, however, almost a decade of clinical experience with intravenous pulse dexamethasone in our country and the results are satisfactory. We, therefore, feel that a course of pulse dexamethasone should be preferred to that of MP in treatment of steroid resistant nephrotic syndrome, lupus nephritis, crescentic glomerulonephritis and other conditions which may require high dose intravenous corticosteroid therapy.

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