

### **Rifampicin Induced Steroid Unresponsiveness in Nephrotic Syndrome**

In clinical practice, we often do not seem to pay enough attention to drug interactions, although in some cases they may become therapeutically important. We report here a case of nephrotic syndrome, who demonstrated drug interaction between rifampicin and prednisolone and as a result, failed to show the expected response.

A 1 year 2 months old male child was admitted with us with the diagnosis of nephrotic syndrome. His clinical and laboratory picture was consistent with minimal change nephrosis. He was started on prednisolone, 2 mg/kg and was also put on isonex and rifampicin in view of a positive history of contact and a suggestive chest X-ray. Appropriate supportive care was also provided. After 3 weeks of this therapy, he became albumin free for 2 days and was discharged on request. However, on follow-up, he had a poor control of albuminuria and relapsed. He was readmitted for proper compliance but continued to have heavy albuminuria even after 3 weeks of second hospitalization. At this stage, an attempt was made to exclude other causes of steroid unresponsiveness, keeping in mind a non-minimal change lesion. However, all investigations including urinary protein electrophoresis and renal biopsy were in favor of a minimal change disease. Reconsidering the whole case, it was thought that simultaneous administration of rifampicin and ste-

roids may be responsible for steroid-unresponsiveness and it was decided to stop rifampicin. The child responded and albuminuria started clearing by day 5. By day 10, he was albumin free and was discharged. He has been albumin free for almost 2 months after discharge now.

It is a well documented fact that rifampicin is a strong hepatic microsomal enzyme inducer and increases the rate of its own metabolism and that of many other drugs, including steroids. Ohnhaus *et al.*(1) in their study demonstrated that the 24 hours urinary excretion of 6-hydro cortisol increased by 268% following administration of rifampicin. In clinical setting, there are many situations where steroids and rifampicin are used together, without any obvious problem. In the present case, the cause of steroid unresponsiveness may have been a concomitant administration of rifampicin. We donot want to imply that in all cases this combination may exhibit similar effects but in some situations, one should keep this possibility in mind before resorting to more aggressive investigations or therapy.

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#### **REFERENCES**

1. Ohnhaus EE, Kirchof B, Peheim E. Effect of enzyme induction on plasma lipids using antipyrine, phenobarbitone and rifampicin. *Clin Pharmacol Ther* 1979, 25: 591-597.