Usefulness of Serum Neopterin in Renal Transplantation Considering the Neopterin/Creatinine Ratio

Y.	Yoshitaka	Kaneda
A.	Akinobu	Suga

Department of Urology, Yamaguchi University School of Medicine, Ube, Japan

Yoshitaka Kaneda, MD, Department of Urology, Yamaguchi University School of Medicine, Ube 755 (Japan)

Dear Sir,

We read the paper by Bäckman et al. [1] with great interest. We also studied serum neopterin levels, and found difference between hemodialysis patients with or without immunosuppression for renal transplantation (fig. 1). Although serum neopterin levels are increased at renal dysfunction, there is correlation between serum neopterin levels and serum creatinine levels ($r = 0.94$ by Schäfer et al. [2] and $r = 0.84$ by us [3]).

As serum neopterin levels are believed to be reflecting the immunological status, considering serum neopterin/creatinine ratio as neopterin index (NPT index), we can discriminate the effect of renal dysfunction from the immunological effect. We found increased NPT index at rejection episodes (fig. 2), and lower NPT index in *ci-closporin*treated renal transplant patients (fig. 3). Monitoring of serum neopterin levels in renal transplant patients is useful especially in the form of the NPT index.

500
400
300
200
100

• ϵ
 $\Lambda^{3/4}$
II

Healthy controls (II-12)

Chronic dialysis patients ($n = 13$)

Posttransplant dialysis patients ($n = 15$)

Fig. 1. Serum neopterin.

Fig. 2. NPT index at rejection.

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MP+ Az (n≈5)

CS + MP + Az (n = 11)

Fig. 3. NPT index with/without ciclosporin (cs). MP Methyl-prednisolone; AZ = azathioprine.