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## Serum IgD Concentrations in Patients with Ataxia Telangiectasia and with Selective IgA Deficiency

Dear Sir, we read the article by Litzman et al. [1] with great interest. We had also studied serum IgD concentrations in immunodeficiency diseases, the great majority of them were ataxia telangiectasia (A-T; 38 patients) and selective IgA deficiency (11 patients) and we compared the IgD levels with healthy controls (n = 33) in the pediatric age group [2]. The blood was drawn when the patients were free of infection. Twenty A-T patients had normal and 18 patients had low serum IgA levels (table 1). All the patients and controls except 3 were older than 4 years (1 in each group). The median age was 11, 9 and 8 years for A-T cases, selective IgA-deficient patients and healthy controls, respectively. IgD levels were measured with the radial immunodiffusion technique using commercial plates (Behringwerke, Germany). The lower limit of sensitivity was about 5 U/ml. The Mann-Whitney U test was used for statistical analysis. Median values and ranges of serum IgD were 84.5 U/ml (0–440), 15 U/ml (0–240) and 49 U/ml (0–120) in A-T patients, selective IgA-deficient cases, and control groups, respectively.

Serum IgD was undetectable in 9 of 38 patients with A-T (3 in normal IgA group, 6 in IgA deficiency group), in 4 of 11 patients with selective IgA deficiency, and in 6 of 33 controls. The number of patients with undetectable IgD level was higher among A-T patients with low serum IgA than in those with normal serum IgA (33 vs. 15%). However, the difference between any of these groups were not found to be statistically significant. The serum IgD concentrations of the A-T patients were significantly higher than those of the controls (p = 0.018). A-T patients with normal IgA levels also had significantly elevated serum IgD levels (p = 0.0001) while A-T patients with IgA deficiency did not differ significantly (p = 0.3) when compared with the controls. When undetectable IgD levels were excluded, the serum IgD concentrations of the A-T patients were found to be significantly higher both in IgA-deficient and normal IgA groups than those of the controls (p = 0.0002 and p = 0.0001, respectively). The selective IgA-deficient patients tended to have lower IgD levels than A-T patients with low IgA. These findings did not support the

presence of a strict correlation between serum IgA and IgD levels. No correlation could be found in IgD levels between patients with A-T or selective IgA deficiency with or without frequent infections. In conclusion, even though the frequency of undetectable IgD levels was higher in both A-T patients with low IgA levels and patients with selective IgA deficiency in comparison to controls when the measurable serum levels of IgD were considered, IgD levels were higher in A-T patients with IgA deficiency than in those with selective IgA deficiency.

### References

- 1 Litzman J, Ward AM, Wild G, Znojil V, Morgan G: Serum IgD levels in children under investigation for and with defined immunodeficiency. *Int Arch Allergy Immunol* 1997;114: 54–58.
- 2 Sanal O, Ersoy F, Tezcan I, Yeniay I: Serum IgD concentrations in immunodeficiency diseases. *Turk J Pediatr* 1990;213:175–182.

**Table 1.** Serum IgD concentrations in patients and age-matched healthy controls

Group	n	Age <sup>1</sup> years	Undetectable IgD cases <sup>2</sup>	IgD values <sup>1</sup> U/ml
A-T	38	11 (4–23)	9 (23.6)	84.5 (0–440)
Normal IgA	20		3 (15)	95 (0–440)
IgA-deficient	18		6 (33)	51 (0–410)
Selective IgA deficiency	11	9 (2–10)	4 (36.3)	15 (0–240)
Controls	33	8(2–12)	6 (18.1)	49 (0–120)

<sup>1</sup> Values represent median with the range in parentheses.  
<sup>2</sup> Percentage is given in parentheses.