Discussion on: High dose immunoglobulin IV treatment in adrenoleukodystrophy

M Cappa, E Bertini, P del Balzo, P Cambiaso, A Di Biase, S Salvati

One of the major problems in the treatment of X-linked adrenoleukodystrophy (ALD) is its great phenotypic variability ranging from a myelopathic variant with adult onset (27.6 $\pm$ 8.7 years) which is compatible with a normal life-span to a devastating childhood cerebral form with a mean (SD) age of onset of 7.1 (1.7) years leading to an apparently vegetative state or death within a few years.¹ Cerebral white matter involvement as seen in about 50% of all ALD patients seems to be the most important prognostic marker.

To date all therapeutic efforts including dietary therapy with GTO/GTE (Lorenzo's oil) or immunosuppressants have failed to alter the clinical course in patients with cerebral demyelinations.² However, preliminary treatment results in patients with early

lesions, myelopathic variants (adrenomyeloneuropathy) and asymptomatic patients, are much more encouraging as the clinical progression may be stopped or at least significantly diminished by GTO/GTE and bone marrow transplant.¹

Similar experiences are shown for high-dose immunoglobulin application in this group of patients. We saw clinical improvement in three of nine patients repeatedly treated with 1 g/kg 7S-immunoglobulin (Venimmun, Behring, Germany) who had adrenomyeloneuropathy (AMN). Three other patients with AMN remained stable whereas three with cerebral demyelinations deteriorated or died despite repeated infusions of high-dose immunoglobulins in one case (table).

In conclusion, high-dose immunoglobulin has no effect on patients with ALD with severe brain demyelination. However, the treatment may be valuable in patients considered for bone marrow transplant. In the very early stages of the disease it may help to prevent inflammatory brain involvement, and repeated application appears necessary to achieve this therapeutic goal.

WOLFGANG KOHLER

Moabit Hospital,
Berlin, Germany

Intravenous immunoglobulin therapy for adrenoleukodystrophy

Dose:

1 g/kg 7S-Immunoglobulin (Venimmun)

Patients:

9 adult patients with various X-ALD phenotypes
15 treatment-series

Methods:

Clinical status (Kurtzke Scale (0–10),
Self-Assessment Scale (+/–129))

Cortical function

MRI

Neurophysiology (NCV, VEP, AEP, SSEP)

Results:

	Cerebral involvement	
	no	yes
Clinical improvement	3 (3)	0
Clinical stable	3 (0)	0
Clinical worsening	0	2 (1)
Death	0	1 (0)

()Patients treated repeatedly

1 Moser HW, Köhler W, Borel MS, *et al.* The many faces of X-linked adrenoleukodystrophy: Implications for pathogenesis and the evaluation of therapy. In: Wanders RJA, Schutgens RBH, eds. *Peroxisomal disorders in relation to function and biogenesis of peroxisomes*. Amsterdam: Elsevier, 1994 (in press).

2 Moser HW, Moser AB, Smith KD, *et al.* Adrenoleukodystrophy: phenotypic variability: Implications for therapy. *J Inher Metab Dis* 1992;15:645–64.