Journal of the Neurological Sciences 268 (2008) 183–186

Journal of the Neurological Sciences

www.elsevier.com/locate/jns

Short communication

# A case of ovarioleukodystrophy without eIF2B mutations

Carmen Gaudiano, Carol Di Perri, Ornella Scali, Alessandra Rufa, Carla Battisti, Nicola De Stefano, Antonio Federico *

*Department of Neurological and Behavioural Sciences, University of Siena, Italy*

Received 4 July 2007; received in revised form 7 September 2007; accepted 29 October 2007
Available online 3 December 2007

**Abstract**

A new association of Vanishing White Matter (VWM) and premature ovarian failure (POF) was recently described as a sole entity called ovarioleukodystrophy. Seven out of eight patients reported by Fogli et al. had translation initiation factor (eIF2B) mutations, specific to the VWM. The only patient without mutations had a distinctive neurological presentation that included cognitive deterioration without motor signs and white matter abnormalities restricted to the frontal lobe.

We describe here a case suggestive of ovarioleukodistrophy carrying no eIF2B mutations.


*Keywords:* Ovarioleukodystrophy; eIF2B mutations; Genetic heterogeneity

## 1. Introduction

Ovarian failure (OF) is defined as primary amenorrhea or as secondary amenorrhea lasting >6 months, associated with elevated gonadotrophin levels at age <40 years. Premature OF affects 1% of all women and occurs in 0.1% of cases at age <30 years [1]. Besides kariotype abnormalities, very few genes are known to be associated with this ovarian dysfunction.

A recent report [2] has described four patients with the unusual association of Ovarian failure (OF) with white matter (WM) abnormalities observed in cerebral MRI suggestive of Vanishing White Matter disease (VWM) [3,4], this entity was termed "ovarioleukodystrophy" [2]. As the VWM [5], this condition was found to be related to eIF2B mutations [1], suggesting a common pathophysiological mechanism between the two disease entities.

Here we report on a patient with premature ovarian failure (POF) and leukodystrophy (LD) of unknown cause (ovarioleukodystrophy), who did not carry any eIF2B mutation.

## 2. Case report

The patient was 34 years old when she was admitted to our department in November 2001. She was the 3rd child of 6 sisters and 1 brother of non-consanguineous parents. At the family history, it is relevant that one sister had amenorrhea (only one menstrual episode when she was 12), gait impairment and cognitive deterioration since the age of 25 years, diffuse WM abnormalities on brain MRI. She died at the age of 30 years for bronchopneumonia. In our patient, no complications during pregnancy and after delivery were reported. She had menarche at 12 years and regular periods until the age of 22 years, when she could have menstruation only with estro-progestinic treatment. Her initial mental and motor development was normal. At age 32 she presented depression and attention impairment. One year later she gradually developed progressive spastic tetraparesis and cognitive impairment. At presentation, her neurological exam showed severe dysphagia, anarthria, brisk deep reflexes of

* Corresponding author. Neurometabolic Unit, Department of Neurological and Behavioral Sciences, University of Siena, Viale Bracci 2, 53100 Siena, Italy. Tel.: +39 577 585760; fax: +39 577 40327.
*E-mail address:* federico@unisi.it (A. Federico).

0022-510X/$ - see front matter © 2007 Elsevier B.V. All rights reserved.
doi:10.1016/j.jns.2007.10.027