КРАТКОЕ СООБЩЕНИЕ

INCREASED HAIR MERCURY IN AN AUTISTIC BOY OF A PROFESSIONAL DENTIST MOTHER

ПОВЫШЕННЫЙ УРОВЕНЬ РТУТИ В ВОЛОСАХ У АУТИЧНОГО РЕБЕНКА МАТЕРИ-СТОМАТОЛОГА

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КЛЮЧЕВЫЕ СЛОВА: аутизм, ртуть, передача от матери ребёнку.

ABSTRACT. The case of a 3 years and seven months old boy who suffers from autism is discussed. The probable cause of the disease is considered to be occupational contact of the mother with mercury.

РЕЗЮМЕ. Обсуждается случай аутизма у мальчика в возрасте 3 лет и 7 месяцев. В качестве вероятной причины заболевания рассматривается профессиональный контакт матери с ртутью.

Autism is a human impaired mental behavioral condition of unknown origin that recently has been associated with the infant vaccines having mercury containing thiomersal preservative (Clarkson et al., 2003). Indeed, mercury is highly toxic heavy metal to humans (WHO, 1976, 1996), but the existing evidence associating the thiomersal mercury exposure to autism thus far appears unsubstantiated (Pichichero et al., 2002). In this note we discuss the case of a 3 years and seven months old boy RB who suffers from autism. He is the only son to a well going married couple. His 35 years and four months old mother IS-B is the professional dentist and the father is the aeronautical engineer. They live and work in the Adriatic coastal city of Zadar, Croatia. To help RB to treat autism, his mother avidly searched Internet and found that autism may be induced by exposure to highly toxic heavy metal mercury. She ordered RB urinary porphyrin profile at the ISO certified Laboratorie Phillipe Auguste, Paris, France who found the increased urinary mercury (Hg/Cr > 0.45 μg/g). They also reported characteristic changes of the porphyrin profile where mercury specifically targets coproporphyrin oxidase (CPOX) and uroporphyrin decarboxylase (UROD) in hem biosynthetic pathway. Then she contacted us for a possible chelation therapy. We asked her to submit both her and her son's hair for the analysis at the Center for Biotic Medicine, Moscow, Russia, yet another ISO certified high tech analytical laboratory. The hair was collected, prepared, and analyzed by the inductively coupled plasma mass spectroscopy (ICP MS) as already described (Momčilović et al., 2006), and the results are presented in Table 1.

The boy RB falls within the 75% percentile of height and weight for his age group (Documenta Geigy, 1956 – P.259). His mother worked short hours until the time of RB delivery, and reassumed her profession after she stopped him breast feeding at the age of five and a half months. The observed hair mercury level of RB was considered to be increased, whereas that of his mother was considered to be normal.

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Table 1. ***Increased hair mercury in an autistic boy of a professional mother dentist***

Initials	Relationship	Age, y/mo	Height, cm	Weight, kg	Hair Hg, µg/g	Blood group
RB	Son	3/7	104	16.5	4.35	B+
IS-B	Mother	35/4	168	62.5	1.70	B+

According to the CBM standards, the current normal range of hair mercury in adults of both sexes is 0.00–2.00 µg/g (Momčilović et al., 2006). In a larger sample of both men and women (n = 759) we observed the median hair mercury in Croatia to be 0.653 µg/g (data not reported here). Thus, the mother dentist already had almost three times more mercury in her hair than it is the median hair mercury of the population, albeit still within the current CBM so called normal range (Momčilović et al., 2006). She felt no signs of health impairment. Indeed, dentists are a well identified risk population occupationally exposed to mercury (Ritchie et al., 2002). However, the observed high hair mercury of RB, i.e., mother to child transfer, may be puzzling to those who are not familiar with the age dependent specificity of the mercury absorption. The more so as mother declined direct contact of her son RB with the dental material. Since mercury is absorbed about ten times higher in the infants and very young children (Kostial et al., 1991; Dorea, 2004), it is evident that small amounts of environmental mercury from the dentist office were insidiously transferred from the occupationally exposed but not mercury poisoned mother to the child, and accumulated in the child due to the age dependent increase of their Hg gastro-intestinal absorption. Indeed, if the mother of RB had the rate of Hg absorption as infant and children, i.e., ten times higher, her hair mercury could be as high as 17 µg/g.

The dentist office is at the ground floor of the same building where RB lives with his parents at the third floor, and from time to time mother would climb upstairs to see him. She did it seldom since the boy would get crying when she leaves him to stay behind. It is pertinent to note here that miners in the mercury mine (Idria, Slovenia) always change their cloth on a daily base before the work, and would have shower and mercury uncontaminated cloth after the work. This note is not to exclude mercury as a possible culprit in inducing autism at this time of craziness (Ault, 2004) over the possible harmful effects of vaccine adjuvants (Al) and vaccine preservatives (thiomersal), respectively (Hyde, 1995; Clarkson et al., 2003). We wanted to warn of possible uncommon sources of children toxic heavy metal exposure, and specific age-dependent differences in mercury absorption regardless of other possible medical conditions. Currently, thiomersal is considered to be safe as a vaccine preservative (Strategic Advisory Group of Experts, 2002).

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