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LETTER TO THE EDITOR

Author's reply

Fujio Kayama[1]

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We are really obliged to readers' interest in our study report.

On behalf of all the authors, I would like to respond to Dr. Horiguchi's comments.

#1 To the first comment that the study is not a cross-sectional study but only biomonitoring. I agree. I accept his comments.

#2 Japanese people more frequently consume fish and marine products more often when compared internationally. As Asahikawa is located in the middle of Hokkaido, we hypothesized that children in Asahikawa may eat less marine food, and different types of fish from ones in other areas in Japan. Interestingly, our statistical analysis in mercury data and fish species ingested revealed that those who eat more big predator fish show higher hair and blood mercury concentrations. We never consider this study is a representative of biomonitoring study in Japan. We never appealed it in the paper. Human activities vary much in district and individual characteristics. Even we chose some major cities like in Tokyo; dwellers are so heterogeneous in their life styles. No Japanese representativeness can be delineated without comparing other nationality. His requests about further studies among children will be satisfied when the ongoing large-scale nation-wide birth cohort study in Japan, Japan Environmental and Children's Study (JECS, or EcoChil study) will answer the pending questions.

#3 The comment mentioned that measurement of urinary Cd concentration might be higher due to interference with existing molybdenum in urine, as a result, the values are boosted up to high urinary concentrations almost equivalent to those observed in individuals with long-term high-Cd dietary body burden. At this time of the measurement, IDEA and I are not seriously considered in these phenomena. But even if molybdenum exists in urine at the concentration of 1000 ppb, it will raise few ppb levels in cadmium concentration. It does not explain these high values in Asahikawa children. Our major points of the paper are correlations between big tuna intake and high mercury concentrations. Even if cadmium measurements might be deviated slightly from the true value, our findings stated in the paper are not devaluated at all. But we really thank his comment in measurement of urinary cadmium concentrations by ICP-MS. It will help researchers involved in the further study and researchers in this area.

Best wishes
Fujio Kayama

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✉ Fujio Kayama
kayamaf@jichi.ac.jp

[1] Department of Environmental and Preventive Medicine, School of Medicine, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke, Tochigi 329-0498, Japan