

recent study showed that the risk of cerebral infarction stroke was significantly increased in individuals having high serum thiocyanate concentrations.<sup>22)</sup> There also is some evidence that thiocyanate enhances the action of glutamate in a subclass of neuronal glutamate receptors which are involved in the neurodegenerative disorders.<sup>23)</sup>

These results suggested that the ingestion of cyanide from foods could also induce the accumulation of cyanide and thiocyanate in the blood of patients with chronic kidney diseases and might be associated with the onset of encephalopathy. However, since the human capacity for detoxification and the toxicity of cyanide and thiocyanate from food exposure in haemodialysis patients have not been fully investigated, a further investigation is necessary in order to elucidate the relationship between the cyanide in Sugihiratake mushrooms and the onset of a new type of encephalopathy that occurred in Japan during the fall of 2004. Nevertheless, it should be noted that there could still be other factors and other substances that caused this novel type of encephalopathy in addition to the ingestion of cyanide from Sugihiratake mushrooms.

In conclusion, we were the first to determine the cyanide content in the Sugihiratake samples collected from certain areas of Japan during the fall of 2004. In addition, we showed that some samples could contain cyanide in the range of N.D.–114.0 µg/g, and suggested that its form in the Sugihiratake samples could be the sodium or potassium salt. This finding suggested that cyanide in Sugihiratake might be associated with the onset of a novel type of encephalopathy in patients with chronic kidney diseases, which occurred in Japan during the fall of 2004.

**Acknowledgements** We thank Dr. Taku Nagao and Dr. Yukihiro Goda for their useful suggestions. This study was supported by a grant from the Ministry of Health, Labour and Welfare of Japan in the fiscal year 2004.

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