Human exposure to bismuth (Bi) is limited, except for its use in medicine.Because of its epidemiological characteristics and limited geographic distribution, 20 years after its occurrence, this encephalopathy is still an intriguing phenom- enon in metal toxicology.Even though large amounts of Bi-containing medications are consumed worldwide in often uncon- trolled situations, the risk for Bi-related toxicity in the population seems to be very low.The significance of occupational and environmental exposure is unknown, although Bi is increasingly used as a replacement for lead in many of its technical and chemical applications.The intake of Bi has been related to nephrotoxicity and a reversible encephalopathy, the latter mainly in France.Nephrotoxicity is related to very high doses of Bi or to the intake of organic Bi compounds which have long since been withdrawn from the market.Replacement of lead shot by Bi shot and the increasing amounts of Bi entering the environment after human use (Mueller, 1989) may draw attention to the question of the environmental safety of the metal.The mechanism of the neurotoxicity is unknown and it is impossible to predict which individuals might be at risk.Awareness among clinicians of the rare possibility that Bi may be involved in neurological disease will help to prevent the development of serious Bi-related disease.In medicine, Bi compounds have been .prescribed for over a century