Prevalence study for Kashin-Beck Disease in 6 counties of Lhasa prefecture in Tibet Autonomous Region, P.R.China

Mathieu F\textsuperscript{a}, Claus W\textsuperscript{a}, Lobsang R\textsuperscript{b}, Wangdu L\textsuperscript{b}, Sheero R\textsuperscript{c}, Dermience M\textsuperscript{d}, Rooze S\textsuperscript{e}, De Maertelaer V\textsuperscript{f}, Hinsenkamp M\textsuperscript{g}

\textsuperscript{a} Kashin–Beck Disease Fund asbl-vzw, Rue de l’Aunee, 6, B-6953 Forrieres, Belgium
\textsuperscript{b} Kashin–Beck Disease Foundation, Gakyiling Hotel, Tuanjie Xincun, Sera Road, 850 000 Lhasa, T.A.R., PR China
\textsuperscript{c} Center for disease control and prevention – North Lin Kuo road 21, Lhasa, T.A.R., PR China
\textsuperscript{d} University of Liege – Gembloux Agro Bio Tech, Department Agro-Bio-Chem, Analytical Chemistry, Passage des Deportés, 2, B-5030 Gembloux, Belgium
\textsuperscript{e} Unité de nutrition et métabolisme. Hôpital Universitaire des Enfants Reine Fabiola. Université Libre de Bruxelles. Belgium
\textsuperscript{f} Université Libre de Bruxelles. SBIM and Institut de Recherche Interdisciplinaire en Biologie humaine et moléculaire. Belgium
\textsuperscript{g} Hôpital Erasme, Service d’Orthopédie et Traumatologie, Université Libre de Bruxelles, 808 route de Lennik, 1070 Bruxelles, Belgique

Kashin-Beck disease (KBD) is an osteochondropathy affecting the growth cartilage of the long bones of the children during their childhood. The evolution of the disease shows severe signs of arthrosis, affecting the join cartilage already during the childhood and the young adult age. Besides many studies, there is no biological test to diagnose KBD. On the field, the clinical diagnosis remains the most precise and the most appropriate one. This prevalence study is based on the clinical diagnosis. Prevalence rates were calculated during 3 years, in 2004, 2008 and 2012. Children from 3 to 15 years old from the administrative lists of 51 villages in 6 communities in Lhasa prefecture were checked exhaustively at these 3 periods. The results show of a drastically decrease of the percentage of KBD in the 6 communities, with an overall prevalence of 33.32\% in 2004, 28.73\% in 2008 and a decrease till 3.03\% in 2012. The decrease shows some difference from one to another community. From 2004 till 2008, some randomized interventions occurred in the 51 villages with nutrients supplements for the children. From 2008 till 2012, larger spectrum interventions took place also in those villages, focusing on a diversification of the daily diet of the children and preventive measures against fungal contaminations of the cereals. Combination of these interventions and a general development of the areas have most probably a positive impact on the incidence and the prevalence of the KBD.