Katsunori Fujii, J Sports Med Doping Stud 2017, 7:4(Suppl)
DOI: 10.4172/2161-0673-C1-011

Proposal of Fujimmon's growth curve for new standardization as human growth model

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In discussing growth phenomena to date, Scammon's growth curves often occupy a central position in the arguments given. However, Scammon's growth curves were proposed more than 85 years ago, and the theory was constructed in an age when computers did not exist. Today, when so much more is understood scientifically, it is natural that we should try and verify the validity of a theory proposed more than 85 years ago. No report has yet clearly validated this theory. Given the above, in this study the theory proposed by Scammon was first re-examined to investigate the standardization of the human growth system, and a new growth curve model was constructed for the standard human growth pattern. That growth model pattern is proposed as the Fuijimmon growth curve. As data showing the four attributes classified from the growth curves of Scammon, the data used were cross-sectional growth data from age 1 year to 20 years for brain weight (as the neural type), thymus gland and tonsils (as the neural type), testicles (as the genital type), and liver and heart (as the general type) shown by Takaishi et al. (1987). The Wavelet Interpolation Model (WIM) is a method to examine growth distance values. A growth curve is produced by data-data interpolation with a wavelet function and deriving the growth velocity curve obtained by differentiating the described distance curve to approximately describe the true growth curve from given growth data. The effectiveness of the WIM lies in its extremely high approximate accuracy in sensitively reading local events. They have already been set forth in prior studies by Fujii (1999). As the results, that the velocity curves in general type visceral growth and genital type testicular growth can be shown to be very similar is something that seems to have been demonstrated for the first time by Fujii (2015). This proposal for the Fujimmon growth curves as a standardization of the human growth model may make it possible to verify the changes in human proportions formed from three patterns, a neural type, lymphoid type, and general type, from the relative changes in the growth of the head, which is representative of the neural type, and the growth in height, which is representative of the general type.

Biography

Katsunori Fujii has completed his PhD from Kanazawa University and graduated from Tokyo University of Education. He is Professor of Aichi Institute of Technology. He has published more than 100 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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