A YEARLY CHANGE IN BALL KICKING PERFORMANCES IN MALE JUNIOR SOCCER PLAYERS.

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The purpose of this study was to investigate a yearly change in ball kicking performances development due to physical growth in male junior soccer players. Seventeen male junior soccer players aged from 12 to 14 years were served as subjects. The subjects were classified two body height groups (over 155 cm group (O-155G, n=9), and under 155 cm group (U-155G, n=8)). The anthropometric data and ball kicking performances were measured two times (first time: T1 and second time: T2) with an interval of almost one year. The anthropometric parameters for body height (BH), body weight (BW) and fat-free mass (FFM) were measured in all the subjects. All subjects were performed maximal ball kicking to measure maximal kicked ball distance (BD). Kicked ball velocity (BV) was measured by Radar Gun (Mizuno, Japan) in the distance of 5m with the three ball kicking. Maximal swing velocity (SV) on ball kicking movement of the lower limb was obtained using a custom-made movement velocity measurement system of Speed Meter (VINE, Japan). The percentage of the difference (%BH, %BW, %FFM, %BD, %BV and %SV) between T1 and T2 (T2 minus T1) to T1 was calculated and expressed as a variable representing the relative change per one year.

BH, BW and FFM were significantly increased between T1 and T2 in both body height groups. In U155G, BV was significantly increased between T1 and T2. BD and SV were not changed between T1 and T2. On the other hand, O155G showed significant increase in BD, BV and SV between T1 and T2. %BH, %BW and %FFM were not observed significant difference between U155G (BH: 4.9±1.3%, BW: 6.9±8.2%, FFM: 9.9±5.4%) and O155G (BH: 3.5±1.7%, BW: 10.7±3.6%, FFM: 10.5±4.0%). %BD and %BV were significantly higher in O155G (BD: 18.4±8.6%, BV: 8.4±6.0%) than U155G (BD: -3.9±10.9%, BV: 3.2±2.1%). %SV was significant correlated to %BV in O155G (r=-0.916, p<0.05). However, significantly negative correlation coefficient was obtained between %SV and %BV in U155G. No significant correlation coefficient between %BV and %BD in both U155G and O155G. %BH were closely related to %BV and %SV in O155G (%BV: r=0.871, SV: r=-0.902, p<0.05). %BH was not correlated to the %BD in both groups of U155G and O155G.

From these results, Ball kicking performances were more developing on O155G than U155G during one year soccer play. And also, it was considered that the level of body height growth might be affected to the development of ball kicking performance in adolescent.

Reference

Keywords: Soccer, Growth and Development