In the selection during adolescence, coaches evaluate the technique, physique, and physiological ability and decide if a player has the "talent" to become a professional soccer player. However, some researchers have criticized that selection during adolescence has shown a bias towards date of birth and late maturing players have been systematically excluded. Yet there has been no study that indicates whether those born later in the selection year do actually mature later. The aim of this study is to clarify the relationship between the date of birth, skeletal age, and anthropometric characteristics in adolescent elite soccer players. The subjects of this study were 466 adolescent soccer players aged between 9.3 and 15.8 years (13.0±1.8 years) who belonged to the J-league Academy. They were divided into three categories, U12, U15, and U18, which were dependent on their chronological age. Their date of birth, height, weight, and skeletal age were measured, and each individual maturation ratio was evaluated (skeletal age-chronological age ratio). All measurements were taken between March and May (in Japan the selection year starts in April). Players were also divided into four groups based on their date of birth: Q1 (April-June), Q2 (July-September), Q3 (October-December), and Q4 (January-March). The differences between each group were evaluated by one-factorial ANOVA and Tukey’s least significant difference test. The p values less than 0.05 denoted the presence of a statistically significant difference. Overall, the number of players was largest in Q1 and smallest in Q4 (51.9% for Q1, 26.0% for Q2, 16.5% for Q3, and 6.6% for Q4). However, there were no significant differences in the maturation ratio between each group. In U15, Q4 players tended to have a larger maturation ratio than the other groups (0.4±0.8 years, 0.4±1.0 years, 0.1±1.0 years, and 0.6±0.9 years, respectively). With regard to the anthropometric characteristics, there were no significant group differences in the U12 and U18 categories. In U15, Q3 (159.4±10.0 cm) had significantly smaller heights than either Q1 (164.7±7.1 cm; p<0.01) or Q2 (164.2±7.4 cm; p<0.05), whereas the weights were similar. The heights (161.1±7.0 cm) and weights of Q4 were almost the same as those of Q1 and Q2. Our results suggest that there unquestionably exists a bias towards date of birth in the selection of Japanese adolescent soccer players. Moreover, it has been shown that the bias depends on the individual biological maturation ratio to some extent. We should keep in mind that the physiological performance and physique of early maturing players may not always improve and develop in late adolescence. Coaches should take individual biological maturation into consideration in their selection during adolescence.

Reference

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