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Tackling is a key attribute in rugby union and tackle technique can directly affect the outcome of a match. Success of a tackle may be attributed to intended power generation, approach angle, and the limb preference of the player completing the tackle, where limb preference relates to the choice of shoulder used to affect the tackle. Therefore, we investigated the relationship between player limb preference and tackle outcomes, specifically the success rate and quality of tackles during match-play and the biomechanically measured tackle impact. After institutional ethical approval was obtained, four English women's Tyrell's Premier15 league matches were video-analysed using Longomatch. All tackles were identified and coded based on tackler side and tackle success. Tackle quality was determined through qualitative assessment of the technique during video-analysis. Poor technique was defined as use of the preferred limb that placed the tacklers' head in a sub-optimal position across the front of the body rather than to the outside of the tackled player. A total of 460 tackles were performed in the four analysed games, with two thirds completed with the preferred side. Use of the preferred shoulder was more likely to produce a successful tackle (77.6%) compared to the use of the non-preferred shoulder (66.8%). Of the 308 tackles completed with the preferred shoulder, 15 were classed as poor quality. In a separate training session, maximum horizontal and resultant accelerations during practice tackles were measured with a Pasco Capstone 3-axis accelerometer integrated inside a 23kg Centurion tackle bag at shoulder height. 13 players (age 26 ± 5 years; height 168.3 ± 7 cm; weight 73.1 ± 9 kg); 6 forwards/7 backs) completed three tackles with the right and left shoulders during a single training session. Mean resultant and horizontal acceleration was higher when the preferred side impacted the tackle bag ($137 \text{ m}\cdot\text{s}^{-2}$ vs. $129 \text{ m}\cdot\text{s}^{-2}$ & $125 \text{ m}\cdot\text{s}^{-2}$ vs $118 \text{ m}\cdot\text{s}^{-2}$ respectively). Tackle performance is influenced by players' limb preference, with a greater number of successful tackles produced with the preferred limb, potentially as the preferred shoulder results in greater impact accelerations that are likely to stop the opposition player. Limb choice is often influenced by the skill competency of the player, even at a premier league level, with players uncomfortable using their 'wrong' shoulder due to lower perceived strength or poor execution. However, attempting to use the preferred shoulder to compensate may place players in a dangerous position due to inadequate technique. Coaching should aim to improve tackle proficiency of both shoulders to improve confidence in using the non-preferred shoulder.