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The role of limb preference during the tackle in women’s rugby union: Effect on success rate, quality and impact level.

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Background

- Tackling is a key attribute in rugby union and tackle technique can directly affect the outcome of a match (Hendricks & Lambert, 2014).
- Incorrect tackle technique is a factor in rugby-related injuries (Burger et al, 2016)
- Correct tackling technique reduces injury incidence and improves tackle success (Sewry et al, 2015)
- Performance of a tackle may be attributed to the limb preference of the player completing the tackle, where limb preference relates to the choice of shoulder used to affect the tackle.

AIM:
To identify if a relationship between limb preference and tackle outcomes was evident through an examination of the success rate and quality of tackles during match-play and biomechanically measured impacts in tackles performed on a tackle bag.

Match-Play Tackle Assessment

- 4 Tyrrell’s Premier15s League matches
- Video-analysis using Longomatch
- All tackles identified and coded based on tackler side and tackle success
- Tackle quality determined by qualitative assessment of technique (Criteria in Burger et al, 2016)

Findings

<table>
<thead>
<tr>
<th>Preferred</th>
<th>Non-preferred</th>
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<tbody>
<tr>
<td>Success</td>
<td>77.6%</td>
</tr>
<tr>
<td>Max Accel</td>
<td>125.0 m/s²</td>
</tr>
</tbody>
</table>

Practice Tackle Assessment

- 13 players (age 26±5 years; height 168.3±7 cm; weight 73.1±9 kg); 6 forwards/7 backs
- Pasco Capstone 3-axis accelerometer integrated inside a 23kg Centurion tackle bag at shoulder height.
- Three tackles with the right and left shoulders
- Maximum horizontal acceleration measured

Findings

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Conclusions

- Tackle performance is influenced by players’ limb preference - greater number of successful tackles produced with the preferred limb
- Preferred shoulder results in significantly (p=0.28) greater impact accelerations that are likely to stop the opposition player
- Attempting to use the preferred shoulder may place players in a dangerous position due to poor technique
- Coaching should aim to improve tackle proficiency of both shoulders to improve confidence in using the non-preferred shoulder.

References