**INTRODUCTION**

One of the more important motor abilities for people playing team games is lower limb muscle strength. This ability allows the implementation of technical and tactical aims according to the game demands, and directly influences components such as (e.g.) running speed and gaining an advantage over the opponent. To date researchers mainly used so-called field test (e.g. vertical or long jump) or dynamometric platforms to assess lower limb strength. However, this has many limitations. Using the “OPTOGAIT” system opens up new opportunities for measurement, analysis and training. Publications on the topic are still rare.

The main aim of the investigation was to characterize the level of chosen lower limb muscle strength indicators (power, strength endurance, jumping) of team game players using the “OPTOGAIT” measurement system.

**METHODS**

Fourteen male field hockey players from the University School of PE in Poznań, Poland Sports Club AZS-AWF participated in the study (mean±SD: age 21.96±1.74 years, body mass 72.8±7.96 kg and height 176.4±3.55 cm, %fat 10.9±4.11). Using the “OPTOGAIT” system (Microgate Corporation, Italy) three tests were conducted: „Stiffness” – jumping, “Squat Jump” - power, “Tapping” – strength endurance.

**RESULTS**

Data analysis enabled the observation of irregular trends among those tested in relation to muscle strength indicators and was observed in most competitors. One competitor, however, achieved the expected relationship and achieved the highest results in the most observed variables.

<table>
<thead>
<tr>
<th>Squat jump [W/kg]</th>
<th>Tapping [steps/s]</th>
<th>Stiffness</th>
<th>Power (P) [W/kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>34,06</td>
<td>30,63</td>
<td>7,11</td>
</tr>
<tr>
<td>SD</td>
<td>7,19</td>
<td>6,61</td>
<td>1,07</td>
</tr>
</tbody>
</table>

**DISCUSSION AND CONCLUSION**

It was observed that, at a relatively similar sports level, the results suggest possible compensation of one element thanks to another. This could provide important methodological information which should be used during the design of training loads (exercise), taking into consideration the individual abilities of each of the players.

The results confirmed the usefulness of the “OPTOGAIT” system to assess different indications of lower limb muscle strength.

**REFERENCES**