THE INCIDENTS AND INJURIES IN BEACH SOCCER: THE FIRST PROSPECTIVE VIDEO-BASED ANALYSIS OF THE ACTIONS BEFORE BEACH SOCCER INJURIES

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INTRODUCTION

➤ Beach soccer differs from football.
   ➤ Three periods: 12 min a period.
   ➤ Five players each team.
   ➤ Smaller pitch dimension.
   ➤ Soft sand ground.
   ➤ No shoe wearing.
INTRODUCTION

➤ The high risk situations leading to injuries in beach soccer is unknown.

➤ A few researches studied the injuries encountered in beach soccer.
METHODS

➤ Prospectively collected video files from
  ➤ Official Asian Beach Games 2014 VDOs.
  ➤ 27 matches/ 129 male international athletes/ 13 countries.

VDO Analysis

➤ Video-based football incident analysis (FIA) method.
  ➤ Andersen et al.
  ➤ Categorized of data for understanding the causes of incident.
➤ No study has applied the video analysis tools to beach soccer.
INCIDENT AND INJURY DEFINITION

**Incident definition**
- Match stopped for 15 seconds or more.
- One or more players lay down on the field.
- Appeared to be in pain or received medical treatment.

**Injury definition**
- New or recurring musculoskeletal injury required the medical attention.
- Most severe injury was recorded, if multiple injuries occurred.
FOOTBALL INCIDENT ANALYSIS: 19 SITUATIONS BEFORE INCIDENT OCCURRING

Type of attention
Team action before incident
Type of incident risk action
Degree of balance
Degree of individual ball control
Localization in the field
Position in situation
Duel type
Tackling type
Ball winning situation

Playing position
Action with the ball
Player role
Movement direction
Movement intensity
Ball possession
Attack type
Attacking effectiveness
Referee’s decision

Definition of each incident was sited from Andersen, T. Bahr, R. 2003 Football incident analysis: a new video based method to describe injury mechanisms in professional football British Journal of Sports Medicine
RESULTS – INCIDENTS RECORD

➤ 255 incidents in 27 matches.
➤ Averaging 4.7 incidents per match
➤ 1,541 per 1,000 player-hours

Most common incident
- Player position: Goalkeeper (31%), Defender (25%), Striker (21%)
- Player role: First defender (66%), First attacker (31%)
- Possession: Defending phase (65%), Attacking phase (35%)
- Situation: One-on-one situation with the immediate opponent (66%)
- Body parts: Lower leg (25%), T-/L-spine (17%), Foot/toe (11%), Head (11%)

0.87 Inter-observer reliability
0.93 Inter-observer reliability
**RESULTS – FOOTBALL INCIDENT ANALYSIS (FIA)**

- **Action with the ball**: Most of the incidents resulted from dribbling and tackling.
- **Localization**: Most of the incidents occurred in the defensive zone.
- **Duel type**: Most of the duel type occurred during tackling and running.
- **Team action before incident**: Most of the incident occurred after short passing.
INJURY REPORTS

- **Most common location of injury**
  - Foot/toe (40%)
  - Thigh (16%)
  - T/L spine (12%), lower leg (8%)

- **Most common type of injury**
  - Contusion (28%)
  - Strain (24%)
  - Sprain (12%), laceration (12%)

- **Mechanism of injury**
  - Contact (52%)
  - Overuse (16%)
  - Non-contact (12%)

- **Degree of injury**
  - Not severe (<7 days lost) 88%
  - Severe (> 7 days lost) 12%

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**Total 25 injuries**
- 0.46 injuries/team/match
- 151 injuries/1,000 player-hours
First study of FIA method to beach soccer.

Beach soccer incident is four times higher than football.*

The incident in beach soccer differ from football in various aspects as following table.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Beach soccer</th>
<th>Football</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Defending (65%)</td>
<td>Attacking (57%)</td>
</tr>
<tr>
<td>Localization</td>
<td>Defensive zone</td>
<td>Mid-defensive zone</td>
</tr>
<tr>
<td>Player position</td>
<td>Goalkeeper (30%)</td>
<td>Striker (30%)</td>
</tr>
<tr>
<td>Duel type</td>
<td>Tackling</td>
<td>Tackling</td>
</tr>
<tr>
<td>Action before incident</td>
<td>Dribbling</td>
<td>Heading</td>
</tr>
<tr>
<td>Team action</td>
<td>Short pass</td>
<td>Short pass</td>
</tr>
<tr>
<td>Most common location</td>
<td>Foot and toe</td>
<td>Thigh</td>
</tr>
</tbody>
</table>

CONCLUSION

➤ Beach soccer has higher rates of incidents and injuries than football.

➤ We can identified the unique characteristics of injury in beach soccer with differ from football.

➤ Foot and toe are the most common location of injuries in beach soccer.
REFERENCES


