INTRODUCTION

The approximate rate of shoulder dislocations in the United States is 23.5 per 100,000 persons, with 15.4% of all dislocations occurring in individuals between the ages of fifteen and nineteen years old. In adolescent patients, non-operative treatment leads to unacceptable high rates of recurrence following a first-time traumatic dislocation, with reported recurrence rates around 71%. In contrast, recurrence following arthroscopic Bankart repair occurs in approximately 17.3% of cases. Recurrence limits options for additional arthroscopic or open surgical interventions.

METHODS

• Study Selection

A search was conducted of the Medline, EMBASE, Ovid, and Google Scholar databases for clinical studies reporting outcomes following arthroscopic Bankart repair for traumatic shoulder instability in an adolescent population. The search strategy combined the following terms: pediatric, adolescent; young; children; shoulder; instability; global evidence/experience, manager, treatment; surgical; stabilization; arthroscopy, shoulder; arthroscopic; and Bankart repair.

The two authors independently screened titles and abstracts for relevant articles. Full texts were reviewed when a decision regarding inclusion or exclusion could not be made from the title and/or abstract alone.

The reference lists of the included studies and recent review articles were also examined to identify any additional relevant studies.

• Data Extraction & Quality Assessment

Data were extracted from included papers by one of the investigators (C.K.) and verified by the second investigator (M.S.). Any disagreement that arose was resolved by consensus.

The following information was extracted: title, author, year, location, study design, level of evidence, study population, patient demographics, interventions, outcomes, and follow-up duration.

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RESULTS

• Characteristics of Included Studies

Table 1. Characteristics of Included Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Location</th>
<th>Mean Age (yr)</th>
<th>Sample Size (Shoulder)</th>
<th>Mean Follow-Up (months)</th>
<th>MINORS score</th>
<th>CEBM score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campos et al. [14]</td>
<td>2002</td>
<td>USA</td>
<td>16 (13-18)</td>
<td>85</td>
<td>65</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Glynis et al. [22]</td>
<td>2014</td>
<td>USA</td>
<td>19 (17-20)</td>
<td>80</td>
<td>56</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Jones et al. [32]</td>
<td>2007</td>
<td>USA</td>
<td>14 (11-16)</td>
<td>32</td>
<td>25</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Kavanagh et al. [24]</td>
<td>2010</td>
<td>USA</td>
<td>12 (11-15)</td>
<td>5</td>
<td>26</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Nixon et al. [29]</td>
<td>2005</td>
<td>UK</td>
<td>16 (14-18)</td>
<td>61</td>
<td>22</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Pascual et al. [20]</td>
<td>2003</td>
<td>Spain</td>
<td>17 (14-20)</td>
<td>82</td>
<td>52</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Super et al. [19]</td>
<td>2017</td>
<td>USA</td>
<td>16 (15-18)</td>
<td>39</td>
<td>79</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Skyrim et al. [23]</td>
<td>2015</td>
<td>USA</td>
<td>17 (14-21)</td>
<td>40</td>
<td>28</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>MINORS, methodological Index for Non-randomized Studies; CEBM, Centre of Evidence-Based Medicine.</td>
<td></td>
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</tr>
</tbody>
</table>

The principal findings of this study showed the multitude of different outcome measurements and inconsistency in standardized outcome reporting following arthroscopic Bankart repair in the adolescent population. In addition to inconsistency in reported PROMs, there was also considerable variation within pain scores, shoulder stability testing (apprehension vs. relocation vs. sulcus), and recurrence (dislocation vs. subluxation). With the evidence, there would further guide clinical decision-making and treatment plans.

DISCUSSION

The principal findings of this study showed the multitude of different outcome measurements and inconsistency in standardized outcome reporting following arthroscopic Bankart repair in the adolescent population. In addition to inconsistency in reported PROMs, there was also considerable variation within pain scores, shoulder stability testing (apprehension vs. relocation vs. sulcus), and recurrence (dislocation vs. subluxation). With the evidence, there would further guide clinical decision-making and treatment plans.

CONCLUSION

There is considerable variation in reported clinical outcome measurements following arthroscopic Bankart repair for traumatic shoulder instability in the adolescent population. The study confirms the need for a standardized outcome reporting after arthroscopic anterior shoulder instability surgery in adolescent patients. Further research is required to develop a valid and reliable outcome tool to accurately measure shoulder instability in the adolescent population.

REFERENCES

1. Available upon request.
2. Available upon request.
3. Available upon request.
4. Available upon request.
5. Available upon request.
6. Available upon request.