Background

- Monoarticular, benign tenosynovial giant cell tumor, derived from synovial tissue
- Incidence: rare, 1.8 cases per million people
- Location: Knee is most common, followed by the Hip → 15% of cases
- Variable presentation:
  - Synovial Involvement
  - Level of Aggression
- Morphology
- Typically seen on MRI after a patient presents with insidious joint pain
- Purpose: To add to the paucity of literature on the arthroscopic management of hip PVNS.

Villos type or thread-like PVNS lesions on arthroscopic view (black arrow)

Globus type PVNS lesions on arthroscopic view (asterisk)

Methods

- Retrospective Cohort Analysis, with Prospectively collected PROMs and VAS Pain Score
- Inclusion: hip arthroscopy, biopsy-proven PVNS, and follow-up of a minimum of 3-years
- Outcomes:
  - Recurrence of PVNS
  - Revision: arthroscopy or arthroplasty
  - PROMs
  - Pain, Patient Satisfaction, and Complications

Results

- Total cohort: 14 hips
  - Avg Age: 33.4 ± 4.17 years
  - Male: 6 (43%)
  - Female: 8 (57%)
  - Mean patient follow-up:
    - 6.7 ± 1.87 years
    - Range: 47—117 months

- Morphology:
  - Diffuse type: 5 (36%)
  - Nodular type: 9 (64%)
  - Patient Satisfaction:
    - Yes—14 (100%)
    - Would choose the same treatment again?:
      - Yes—14 (100%)

PROMs at Latest Follow-up

![Figure 1. PROMs functional levels at latest follow-up after hip arthroscopic PVNS excision and synovectomy](image)

<table>
<thead>
<tr>
<th>Total Cohort</th>
<th>Diffuse vs Nodular</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Pain Relief—Yes</td>
<td>12 (86%)</td>
</tr>
<tr>
<td>VAS Pain Score</td>
<td>Preoperative</td>
</tr>
<tr>
<td></td>
<td>Postoperative</td>
</tr>
<tr>
<td></td>
<td>Difference</td>
</tr>
<tr>
<td>Recurrence</td>
<td>1 (7%)</td>
</tr>
<tr>
<td>Revision</td>
<td>Arthroscopy</td>
</tr>
<tr>
<td></td>
<td>Arthroplasty</td>
</tr>
</tbody>
</table>

Table 1. Comparison of Pain, Recurrence, and Revision at latest follow-up in 14 patients, for total cohort, then separated into Diffuse vs Nodular types

| Statistical Significance Notation: | *: <.05; **: <.01; ***: <.001; †: Borderline. |

Conclusion

- Arthroscopic management of hip PVNS is a promising surgical approach that provides safe, reliable, and durable favorable outcomes
- To our knowledge, this is the one of the largest cohorts of arthroscopic-managed hip PVNS with the longest reported follow-up of: average of 6.7 years
- PROMs show fair hip functionality, with no difference between Diffuse and Nodular

Next Steps and Limitations

- Further investigation with larger cohorts and comparison groups are necessary
- This study has a small sample size
- There was no comparison group of open synovectomy
- Only one other study with a similar sample size and follow-up beyond 5-years: Byrd et al: 13 patients, mean f/u: 63 months
- This study adds to the paucity of literature on arthroscopic managed hip PVNS, with 14 patients with a mean f/u of 79 months

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Key References