

Is the Use of a Postoperative Hip Orthosis Beneficial Following Routine Arthroscopy of the Hip? A Retrospective Cohort Study

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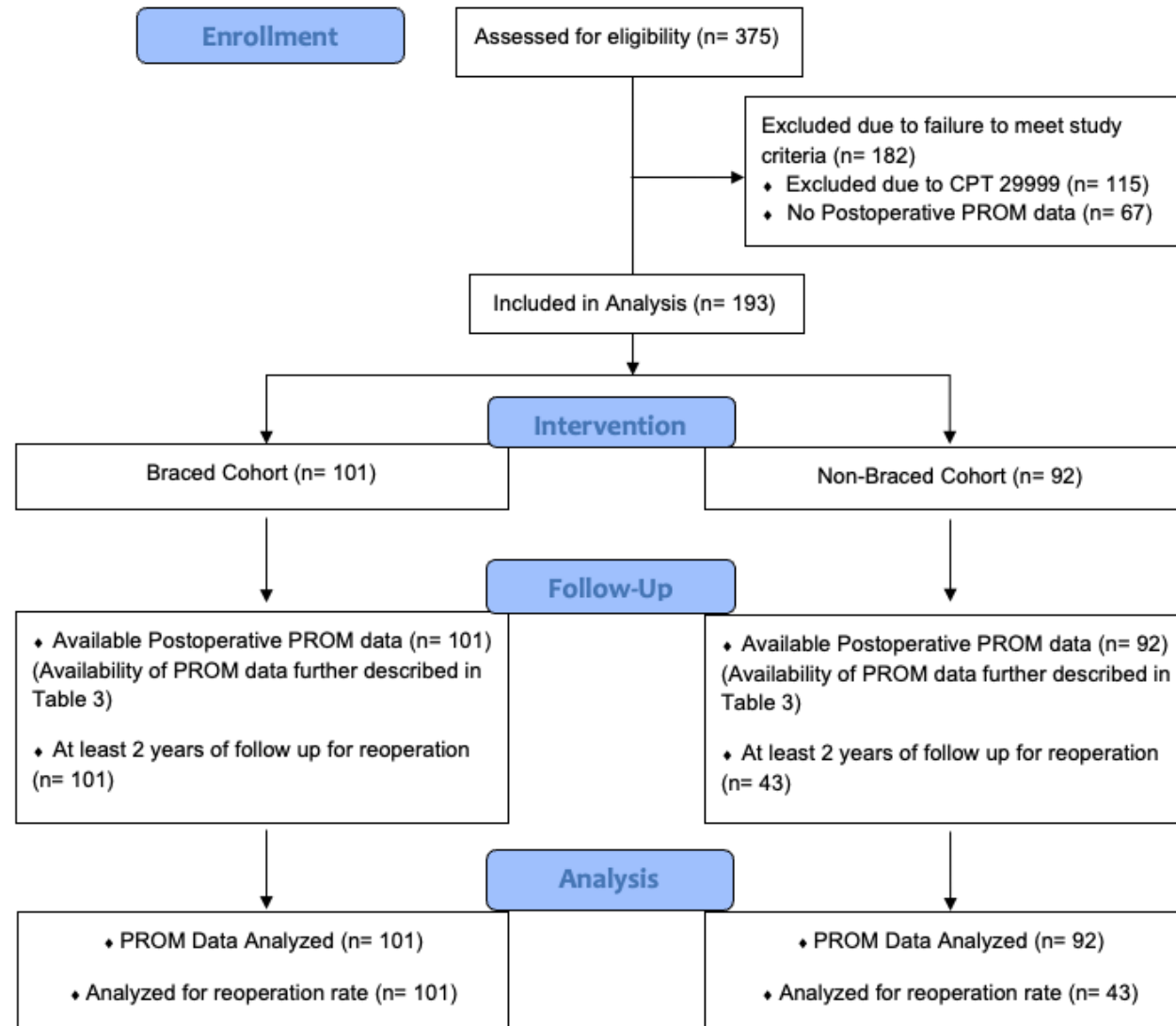
Background and Purpose

- Treatment of intra- and extra-articular pathologies of the hip via arthroscopy continues to gain popularity.
- To date, the impact of the routine use of postoperative hip bracing on patient reported outcome measures (PROMs) and re-operation rate has not been elucidated.
- Therefore, the purpose of this study is to determine if there is a difference in PROMs and re-operation rate for patients who were braced versus those who were not braced following routine hip arthroscopy.

Methods

- This was a retrospective review of 193 patients who underwent hip arthroscopy (femoroplasty, acetabuloplasty and labral repair) from 2018 to 2021 by two orthopedic surgeons at a single institution.
- Patients prior to July 1, 2019 were immobilized in a hip orthosis following hip arthroscopy whereas those after July 1, 2019 were not.
- Baseline patient reported outcomes in the form of visual analog pain scale (VAS), modified Harris Hip Score (M-HHS), single assessment numeric evaluation (SANE) hip scores, VR-12 physical score, VR-12 mental score were obtained for all patients in both cohorts and postoperatively repeated at two weeks, four weeks, three months, six months, one year, and two years.
- Additionally, results were stratified by gender to assess gender-based differences.
- The groups were then compared to evaluate for a difference in PROMs and reoperation rates over time. Only individual with two years of follow up data were analyzed for reoperation.

Flow Diagram



Patient Demographics and Radiographic Parameters

Demographics	Braced	Non-Braced
Sample Size	101	92
Females	67 (66.3%)	66 (71.7%)
Males	34 (33.6%)	26 (28.3%)
Age (yr)	33.2±13.0	30.2±11.5
BMI (kg/m ²)	28.9±6.0	28±6.2
Preoperative Radiographic Parameters		
Alpha angle (°)	63.2±12.7	62.0±10.1
LCEA (°)	32.9±6.1	35.1±8.5

VAS Results

In the combined gender analysis, there were no significant differences in VAS at any follow-up between non-braced and braced groups. In the individual gender analyses, non-braced males reported slightly lower VAS pain scores ($p=0.043$).

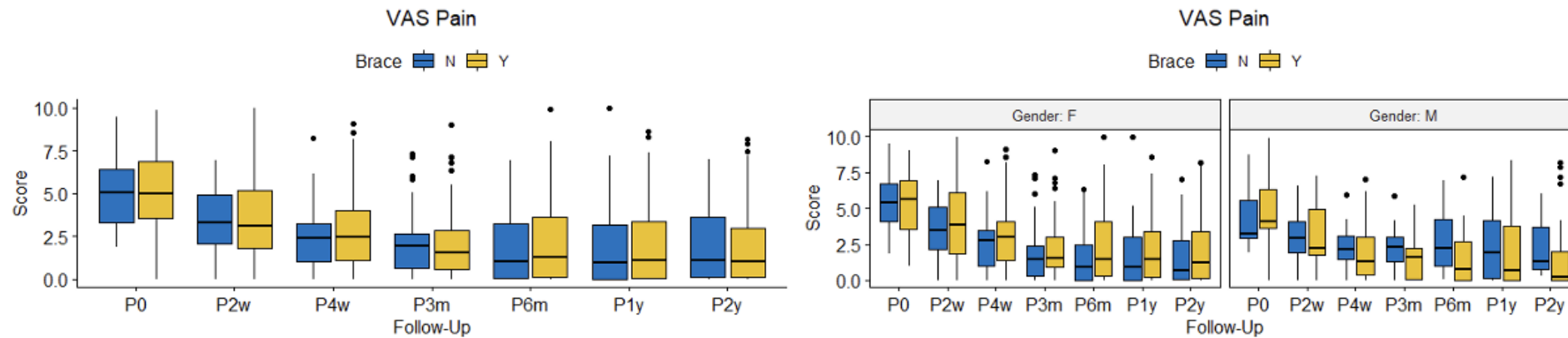


Figure 1: Comparison of visual analog scale (VAS) pain scores for each follow-up between non-braced (N) and braced (Y) hip arthroscopy patients. The left plot is for combined gender, the right plots are separated by female (F) and male (M).

MHHS Results

In both combined and separated gender analyses, there were no significant differences in MHHS at any follow-up between non-braced and braced groups.

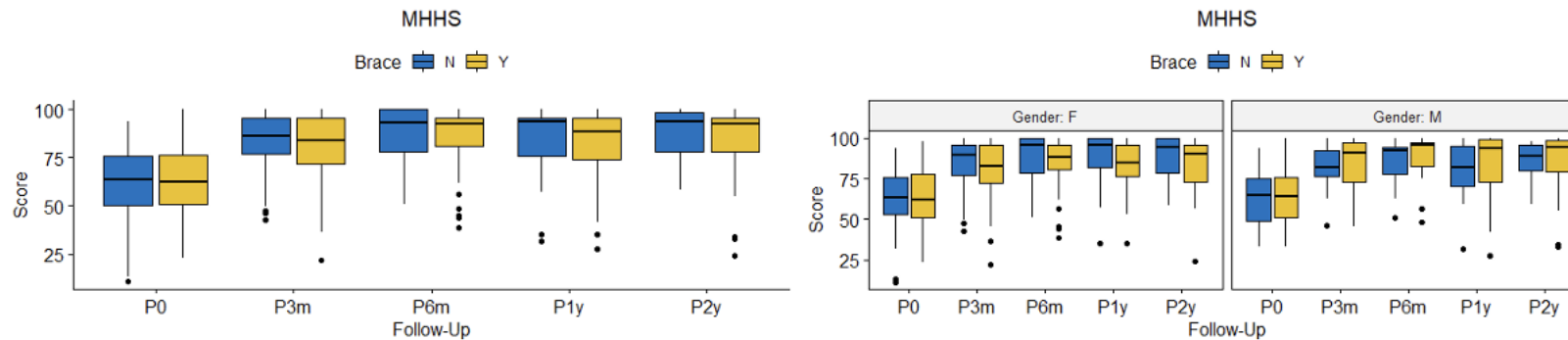


Figure 2: Comparison of modified Harris hip scores (MHHS) for each follow-up between non-braced (N) and braced (Y) hip arthroscopy patients. The left plot is for combined gender, the right is separated by female (F) and male (M).

SANE Results

In both combined and separated gender analyses, there were no significant differences in SANE scores at any follow-up between non-braced and braced groups.

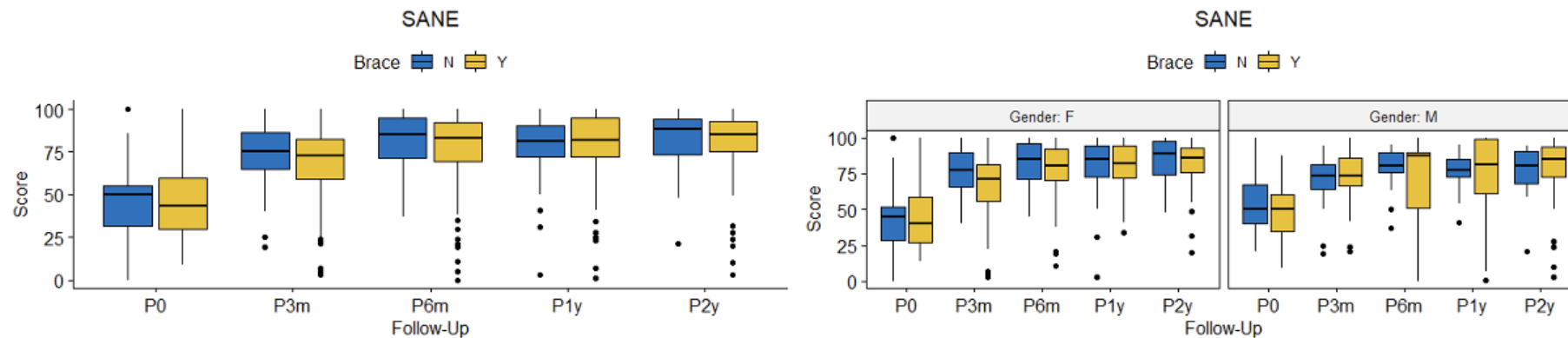


Figure 3: Comparison of single assessment numeric evaluation (SANE) scores for each follow-up between non-braced (N) and braced (Y) hip arthroscopy patients. The left is for combined gender, the right is separated by female (F) and male (M).

VR12 Physical Results

In both combined and separated gender analyses, there were no significant differences in VR12 Physical scores at any follow-up between non-braced and braced groups.

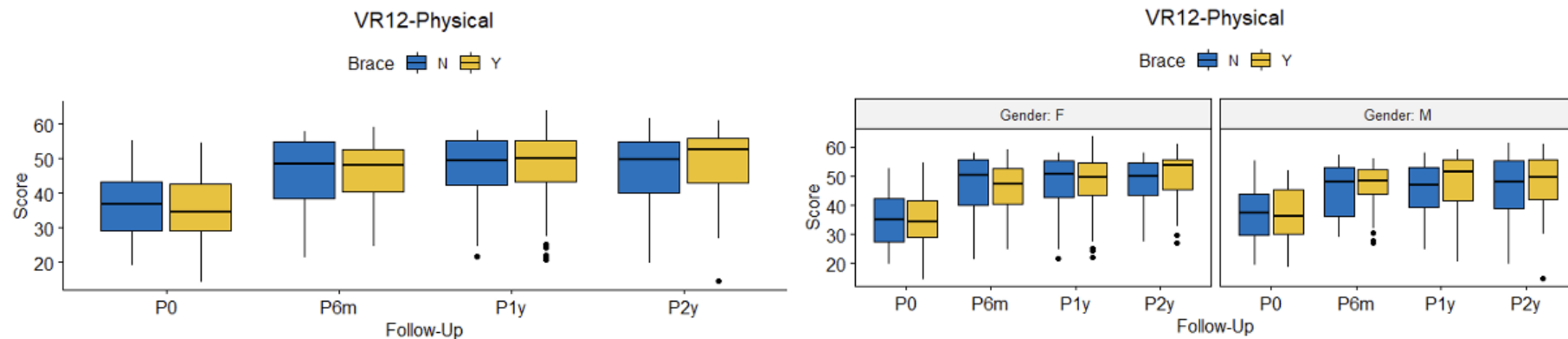


Figure 4: Comparison of Veterans Rand 12-item (VR-12) physical component scores for each follow-up between non-braced (N) and braced (Y) hip arthroscopy patients. The left plot is for combined gender, the right is separated by female (F) and male (M).

VR12 Mental Results

In the combined gender analysis, there were no significant differences in VR12 Mental scores at any follow-up between non-braced and braced groups. In the individual gender analyses, non-braced males reported slightly lower VR12 Mental scores ($p=0.026$).

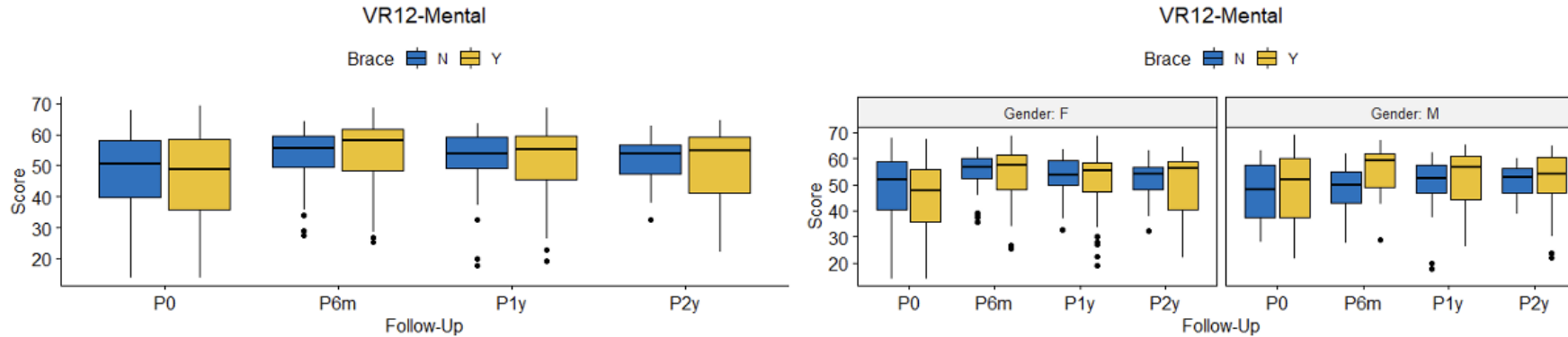


Figure 5: Comparison of Veterans Rand 12-item (VR-12) mental component scores for each follow-up between non-braced (N) and braced (Y) hip arthroscopy patients. The left plot is for combined gender, the right is separated by female (F) and male (M).

Reoperation Results

- In the braced cohort 8 of 101 (7.9%) of these patients underwent a reoperation, while 1 of 43 (2.3%) patients underwent a reoperation in the non-braced cohort. No significant difference in the reoperation rates for all braced vs non-braced patients with 2-year follow-up was detected ($p=0.208$).
- Of the braced cohort, 5 of the revision procedures were labral repairs, 1 was a labral reconstruction, 1 was iliopsoas fractional lengthening, and 1 was a lysis of adhesions.
- For the non-braced cohort, the singular revision procedure was a labral repair

Conclusion

- The findings suggest the use of an orthosis following routine hip arthroscopy does not significantly improve patient reported outcomes or significantly impact the reoperation rate.
- Postoperative bracing increases perioperative cost and by foregoing routine bracing, patients may avoid associated morbidity that can come with wearing a brace for a prolonged period of time.



Thank you!