

Return to sexual activity after posterior cruciate ligament reconstruction

Riccardo D'Ambrosi, Pietro Marchetti, MD Federico Valli, MD Amit Meena, MD



Faculty Disclosure Information

The authors declare they have nothing to disclose



Introduction

The anterior and posterior cruciate ligaments are essential for knee stability; following injuries, they can compromise knee stability and proprioceptive sensibility, resulting in instability, weakness, and diminished leg strength. Individuals may refrain from resuming their physical activity routines and may avoid exerting pressure on their knees. Furthermore, individuals may not recover the knee functions essential for sexual activity





Purpose

The purpose of this study was to investigate changes in sexual function and quality of life following arthroscopic PCL reconstruction. It was hypothesized that sexual function improves following arthroscopic PCL reconstruction.



Methods

The inclusion criteria were aged between 18 and 45 years, anatomical single-bundle arthroscopic PCL reconstruction, with a hamstring graft, the same rehabilitation protocol after surgery, followed for a minimum of 24 months, and less than 6 months from injury to surgery.

• The exclusion criteria were previous surgery (except arthroscopic meniscectomy); surgical site infection; bilateral PCL injuries; additional injuries, such as anterior cruciate ligament, medial collateral ligament, lateral collateral ligament, or posterolateral corner injury; no sexual activity; and additional internal, urological, or psychiatric problems that could affect sexual activity. Concomitant meniscal treatment (meniscal suture or meniscectomy) was not considered an exclusion criterion.





Methods

• Clinical assessments were conducted by two independent clinicians who were not involved in the clinical management of patients. At the time of hospital admission, each patient was asked to complete the New Sexual Satisfaction Scale-Short Form (NSSS-S), which was composed of questions inquiring about their sexual activity before injury (preinjury) and at the time of hospital admission (preoperative). In addition, patients were followed for a minimum of 24 months (final follow-up).

• Quality of life was measured using the Anterior Cruciate Ligament Quality of Life Questionnaire (ACL-QOL) at hospital admission (preoperative) and at the 24-month follow-up visit (final follow-up).





Results

• A total of 35 patients were included in the study, 24 (68.6%) were male and 11 were female (31.4%). The mean age at the time of surgery was 29.23 ± 7.52 years (range: 18-45) years, and the mean follow-up duration was 52.97 ± 22.69 months (range: 25-87). In all (100%) patients, the hamstring tendon was used.





Results

• Sexual activity at the last follow-up visit was significantly different from that preoperatively (p=0.024), while no difference was found between that preinjury and that at the last follow-up visit (p=0.243). Sexual activity was more frequent preinjury than preoperatively (p=0.009).

• Quality of life at the last follow-up visit was significantly better than the preoperative quality of life (p<0.001).





Discussion

- The main findings of our study indicate that PCL reconstruction can have a beneficial effect on sexual health, but due to limitations of the study these results should be interpreted with caution.
- Although there is evidence of abnormal tibiofemoral kinematics in people with PCL deficiency, no definitive prognostic indicators have been identified for determining which individuals may suffer from disability, discomfort, or osteoarthritis due to chronic PCL insufficiency. Moreover, inconsistencies between subjective and objective outcome assessments frequently occur in individuals with PCL injuries





Conclusions

Reconstructive surgery after PCL injury improves the

sexual health of patients regardless of age or sex.





References

- Akpinar B, DeClouette B, Gonzalez-Lomas G, Alaia MJ. Posterior Cruciate Ligament Reconstruction Current Concepts Review. Bull Hosp Jt Dis (2013). 2024;82:4-9.
- Lind M, Nielsen TG, Behrndtz K. Both isolated and multi-ligament posterior cruciate ligament reconstruction results in improved subjective outcome: results from the danish knee ligament reconstruction registry. Knee Surg Sports Traumatol Arthrosc. 2018;26:1190-1196
- 3. Sanders TL, Pareek A, Barrett IJ, et al. Incidence and long-term follow-up of isolated posterior cruciate ligament tears. Knee Surg Sports Traumatol Arthrosc. 2017;25:3017–3023.
- Fanelli GC. Posterior Cruciate Ligament. Sports Med Arthrosc Rev. 2020;28:1.
- Winkler PW, Zsidai B, Wagala NN, et al. Evolving evidence in the treatment of primary and recurrent posterior cruciate ligament injuries, part 1: anatomy, biomechanics and diagnostics. Knee Surg Sports Traumatol Arthrosc. 2021;29:672-681.
- 6. D'Ambrosi R, Hallé A, Hardy A. Good clinical and radiological results following remnant-preserving posterior cruciate ligament reconstruction: a systematic review. Knee Surg Sports Traumatol Arthrosc. 2023;31:2418-2432.
- Flynn KE, Lin L, Bruner DW, Cyranowski JM, Hahn EA, Jeffery DD, Reese JB, Reeve BB, Shelby RA, Weinfurt KP. Sexual Satisfaction and the Importance of Sexual Health to Quality of Life Throughout the Life Course of U.S. Adults. J Sex Med. 2016;13:1642-1650.
- 8. Grinde, B. The Contribution of Sex to Quality of Life in Modern Societies. Applied Research Quality Life 2022;17:449–465.
- 9. D'Ambrosi R, Meena A, Raj A, Giorgino R, Ursino N, Mangiavini L, Karlsson J. Good results after treatment of RAMP lesions in association with ACL reconstruction: a systematic review. Knee Surg Sports Traumatol Arthrosc. 2023;31:358-371.
- 10. Davis S. Declaration of Helsinki: Can it still serve as a North star for ethics in regulatory trials? Perspect Clin Res. 2023;14:1-2.
- 11. Cuschieri S. The STROBE guidelines. Saudi J Anaesth. 2019;13:S31-S34.
- 12. Mark KP, Herbenick D, Fortenberry JD, Sanders S, Reece M. A psychometric comparison of three scales and a single-item measure to assess sexual satisfaction. J Sex Res. 2014;51:159-169.
- 13. Filbay SR, Ackerman IN, Russell TG, Macri EM, Crossley KM. Health-related quality of life after anterior cruciate ligament reconstruction: a systematic review. Am J Sports Med. 2014;42:1247-1255.
- 14. Talbot M, Berry G, Fernandes J, Ranger P. Knee dislocations: experience at the Hôpital du Sacré-Coeur de Montréal. Can J Surg. 2004;47:20-24.
- 15. Bedi A, Musahl V, Cowan JB. Management of Posterior Cruciate Ligament Injuries: An Evidence-Based Review. J Am Acad Orthop Surg. 2016;24:277-289.
- 16. Mazlum EC, Gunay AE, Kahraman M, Sahbaz E, Ekici M, Ozan F. Effects of anterior cruciate ligament rupture and reconstruction on sexual activity of male patients. Jt Dis Relat Surg. 2023;34:138-143.
- 17. Kazarian GS, Lonner JH, Hozack WJ, Woodward L, Chen AF. Improvements in Sexual Activity After Total Knee Arthroplasty. J Arthroplasty. 2017;32:1159-1163.
- 18. Ihle C, Ateschrang A, Albrecht D, Mueller J, Stöckle U, Schröter S. Occupational consequences after isolated reconstruction of the insufficient posterior cruciate ligament. BMC Res Notes. 2014;7:201.
- 19. Ochiai S, Hagino T, Senga S, Yamashita T, Ando T, Haro H. Prospective analysis using a patient-based health-related scale shows lower functional scores after posterior cruciate ligament reconstructions as compared with anterior cruciate ligament reconstructions of the knee. *Int Orthop.* 2016;40:1891-1898.
- Winkler PW, Zsidai B, Narup E, et al. Sports activity and quality of life improve after isolated ACL, isolated PCL, and combined ACL/PCL reconstruction. Knee Surg Sports Traumatol Arthrosc. 2023;31:1781-1789.
- Filbay SR, Ackerman IN, Dhupelia S, Arden NK, Crossley KM. Quality of Life in Symptomatic Individuals After Anterior Cruciate Ligament Reconstruction, With and Without Radiographic Knee Osteoarthritis. J Orthop Sports Phys Ther. 2018;48:398-408.

