www.journalmsr.com

الجمعية السعودية لجراحة العظام
Saudi Orthopedic Association

Journal of Musculoskeletal Surgery and Research

Editorial

Post-traumatic hip arthritis, is total hip arthroplasty the right choice?

Mojieb Manzary, MD., FRCSC.

Department of Orthopedic Surgery, Johns Hopkins Aramco Health Care Center, Dhahran, Saudi Arabia.

***Corresponding author:**
Mojieb Manzary,
Department of Orthopedic Surgery, Johns Hopkins Aramco Health Care Center, Dhahran, Saudi Arabia. Assistant Professor, Adj. The Johns Hopkins University Medical School, Baltimore, MD, USA.

mojieb@gmail.com

Received : 15 October 2021
Accepted : 29 October 2021
Published : 13 November 2021

DOI
10.25259/JMSR_131_2021

Quick Response Code:

Post-traumatic arthritis of the hip is a well-recognized sequela of acetabular and/or proximal femoral fractures. There have been improvements in the techniques of acetabular fracture fixation that has been placed in the past 2–3 decades. However, post-traumatic acetabular arthritis is inevitable.[1] The etiological factors are not limited to how well the fractured acetabulum's congruency or its columns' structural integrity has been restored. Still, other variables like the loss of cartilage at the time of initial trauma and any associated bone defects resulting from the trauma itself.[1] These ultimately lead to common sequelae of chronic pain, loss of function, and disability, making the total hip arthroplasty a favorable option. Rarely, some patients may prefer a non-operative approach by modifying their lifestyle and use analgesics and non-steroidal anti-inflammatory medications.

Up until a decade or two ago, there was a debate on the role of total hip arthroplasty in these patients. The concept of preserving their native joints took precedence over a replaced artificial joint. These concerns were valid due to the rate of wear, osteolysis, and aseptic loosening, particularly in the younger patient population, in whom there is a high demand on their hip joints given their activity levels in comparison to the older population who have a lower demand. Those are genuine concerns despite better functional results of total hip arthroplasty.

With the availability of hard-on-hard bearing, for example, ceramic head on ceramic liners, or metal and/or ceramic head on highly cross linked polyethylene liner, along with ultra-porous materials that have proven better fixation, the risk of wear and loosening has certainly decreased. The results from studies have shown that the use of cemented components had a higher rate of revisions in comparison to uncemented components.[2,3] Other factors associated with the higher revisions were previous infection, non-anatomic reduction of fracture as well as complications related to hardware.[4] The mode of failure in patients who had cementless acetabular components was predominantly wear and related osteolysis with subsequent loosening of the acetabular components.[3]

The improved strategies of fracture fixation with minimal soft-tissue stripping and biologic fixation techniques have resulted in improved fracture treatment results leading to reconstitution of the acetabulum and/or femoral structural integrity. It also allows for a healthier platform on which a new artificial total hip could be performed.

The technical challenges of dealing with scar tissues and the presence of hardware, although still existing, have relatively improved with the use of more sophisticated techniques and intraoperative imaging.

How to cite this article: Manzary M. Post-traumatic hip arthritis: Is total hip arthroplasty the right choice? J Musculoskelet Surg Res 2021;5:225-6.

The end result is a superior functional outcome with total hip arthroplasty, with much-improved pain and functional scores along with components that potentially have longer survivorship.[5,6]

The concept of performing total hip arthroplasty in post-traumatic arthritis has a huge implication in the global problem of trauma, as road traffic accidents and other high energy trauma causes are among the commonest reasons for mortality and morbidity.

The victims are usually young adults in their second or third decades of life. They are the productive members of the society. However, they do get an emergent or urgent fixation of their acetabular/proximal femur fractures with ongoing pain, discomfort, and disability. Not to mention the loss of their working hours or college days.

These patients could get a total hip arthroplasty to ensure the minimal functional loss, if any, with minimal pain and the ability to go back to their day-to-day life.

The threshold to convert these patients to a well-functioning total hip arthroplasty should be based on the availability of the optimal resources and expertise to give these patients the best available outcomes.[7]

Certainly, the threshold for consideration for total hip arthroplasty should probably be lowered than what it was 20 years ago.

AUTHOR'S CONTRIBUTION

The author has critically reviewed and approved the final draft and is responsible for the manuscript's content and similarity index.

ETHICAL APPROVAL

The author confirms that this editorial had been prepared in accordance with COPE roles and regulations. Given the nature of the editorial, the IRB review was not required.

Declaration of patient consent

Patient's consent not required as there are no patients in this editorial.

Financial support and sponsorship

This editorial did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Stibolt RD, Patel HA, Huntley SR, Lehtonen EJ, Shah AB, Naranje SM. Total hip arthroplasty for posttraumatic osteoarthritis following acetabular fracture: A systematic review of characteristics, outcomes, and complications. Chin J Traumatol 2018;21:176-81.
2. Morison Z, Moojen DJ, Nauth A, Hall J, Mckee MD, Waddell JP. Total hip arthroplasty after acetabular fracture is associated with lower survivorship and more complications. Clin Orthop Relat Res 2016;474:392-8.
3. Berry DJ, Halasy M. Uncemented acetabular components for arthritis after acetabular fracture. Clin Orthop Relat Res 2002;405:164-7.
4. Ranawat A, Zelken J, Helfet D, Buly R. Total hip arthroplasty for posttraumatic arthritis after acetabular fracture. J Arthroplasty 2009;24:759-67.
5. Chiu FY, Lin YP, Hung SH, Hung SH, Su YP, Liu CL. Cementless acetabular reconstruction for arthropathy in old acetabular fractures. Orthopedics 2015;38:e934-9.
6. Zhang L, Zhou Y, Li Y, Xu H, Guo X, Zhou Y. Total hip arthroplasty for failed treatment of acetabular fractures: A 5-year follow-up study. J Arthroplasty 2011;26:1189-93.
7. Luthra JS, Habsi SAL. Delayed total hip arthroplasty in patients developing osteoarthritis following acetabular fractures. J Musculoskelet Surg Res 2021;5:257-61.