

Meta-Analysis

Outcome of total hip arthroplasty versus hip hemiarthroplasty for femoral neck fractures in the elderly: a meta-analysis of randomized control trial

N. Indra Tri Cahyadi^{1*}, Paul Steven²

¹Ben Mboi Hospital, Kupang, East Nusa Tenggara, Indonesia

²Department of Orthopaedics, Ben Mboi Hospital, Kupang, East Nusa Tenggara, Indonesia

Received: 12 October 2024

Accepted: 15 November 2024

*Correspondence:

Dr. N. Indra Tri Cahyadi,

E-mail: 9eindratc17@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Roughly 50% of all hip fractures are femoral neck fractures, these fractures are subtype of intracapsular hip fractures. Elderly patient's femoral neck fracture is typically the consequence of a straightforward fall from standing height with low energy. Total hip arthroplasty (THA) versus hip hemiarthroplasty (HHA) is a topic of controversy that sparked discussions over half century ago, between these two types technique have own advantages and disadvantages.

Methods: A comprehensive search conducted across major electronic databases for relevant studies published from 2014-2024. Studies THA with HA for elderly patients with femoral neck fractures were included. Data regarding study characteristics, surgical techniques, outcomes, and garden classification were extracted and analyzed using appropriate statistical methods. Our primary outcomes were surgical duration, functional outcome and complications.

Results: The initial search yielded total 825 studies, which 7 studies met the inclusion criteria, consisting of total 747 patients THA and HA for elderly patients with femoral neck fractures. THA had longer surgery duration compared with HA (MD=32.48, 95% CI:5.13 to 59.83, p=0.02). THA showed better ratings Harris hip score (HHS) during a year follow-up periods (MD=2.31, 95 CI:0.42 to 4.21, p=0.02). There was no significant difference in complications.

Conclusions: THA advantageous over hemiarthroplasty in the terms of HHS but HA favoured in surgical duration. Ultimately, only large well-conducted studies will result in improvements in the outcomes of treatment and resolve the longstanding controversy of whether THA or HA is the preferred treatment modality for femoral neck fracture in elderly.

Keywords: Total hip arthroplasty, Hip hemiarthroplasty, Femoral neck fractures, Elderly

INTRODUCTION

Roughly 50% of all hip fractures are femoral neck fractures and 75% of it are displaced. These fractures are a subtype of intracapsular hip fractures, which are defined as bone fractures that occur inside the joint capsule and usually result in injury to the femoral head's blood supply. Global hip fracture rates are predicted to increase to 1.7 million by 2025 and 6.2 million by 2050.¹ Elderly patient's fracture is typically the consequence of a straightforward fall from a standing height.² These fractures significantly affect the patient's personal dependence, mobility, and

quality of life in addition to the overall expense of healthcare globally due to the high risk of mortality and morbidity following injury. The actual percentages are even higher because, even in selected patients, the one-year death rate following a femoral neck fracture range from 14% to 36%.³ Alcohol consumption, corticosteroid abuse, female gender, injury mechanism, neck femur anatomy, and bone density are the most significant risk factors include.⁴ The most often used classification scheme for intracapsular femoral neck fractures is the Garden classification, which is divided into four stages: type I is an incomplete fracture or valgus impacted fracture, type II

is a complete fracture without displacement, type III is a complete fracture with partial displacement of fracture fragments, and type IV is a complete fracture with total displacement of fracture fragments, allowing the femoral head to rotate back to its anatomical position within the acetabulum.^{1,2}

Hip arthroplasty is the most common surgical procedure for displaced femoral neck fractures in older patients. Other surgical alternatives include multiple screw fixation, sliding hip screw, and intramedullary nail, which are frequently employed in younger individuals.⁵ For elderly individuals with misplaced femoral neck fracture who are relatively healthy, lucid, and active, total hip arthroplasty (THA) is the preferable operation as it entails replacing the complete hip joint. In the other hand, hip hemiarthroplasty (HHA) these advanced procedures contribute significantly to the treatment by aiming to improve mobility and reduce pain by replacing only the femoral head and leaving the acetabulum intact to articulate with a big metal head.⁶ THA versus hemiarthroplasty (HA) is a topic of controversy that sparked discussions over half a century ago.⁷ Reduced dislocation rates, simpler surgery, quicker recovery periods, less blood loss, and lower costs initial expenditures are among the benefits of HA over THA that have been reported.⁸ According to patient-reported outcomes, THA was found to be a more satisfactory operation with higher postoperative Harris hip scores (HHS) following surgery. Additionally, patients who underwent THA reported less pain and greater pleasure than those who underwent HA treatment.^{1,9}

The aim of this meta-analysis is to thoroughly assess and compare the results of THA with HA for elderly patients with femur neck fractures. In order to help clinicians, make decisions that are specific to each patient's needs, we hope to synthesize the available evidence in order to clarify the subtle advantages, disadvantages, and clinical considerations associated with each technique. We also hope to update and analyzed current outcomes and evidence using the most recent study.

METHODS

Search strategy and study selection

This meta-analysis conducted following the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines. The search was performed in August 2024 (focusing on 2014-2024 RCT research) on Pubmed, Cochrane library and Science Direct. The search strategy used keywords conforming to medical subject headings (MeSH) to identify relevant articles. The search terms used were "(elderly) and (femoral neck fracture or fracture of femoral neck) and (total hip arthroplasty or THA or total hip replacement or THR) and (hip hemiarthroplasty or HHA)." The present study was conducted according to the preferred reporting items for systematic reviews and meta-analysis (PRISMA).¹⁰ A preliminary guideline protocol was compiled: P (patient):

femoral neck fracture; I (intervention): total hip arthroplasty (THA); C (comparison): hip hemiarthroplasty (HHA); O (outcomes): surgical duration, functional outcome and complications.

Inclusion and exclusion criteria

The following inclusion criteria had to be met: randomized control trial research, patients aged 60 years or older with femoral neck fracture, inclusion of a treatment arm receiving any form of HA and THA, and data published in English and full text.

Studies not in English, <60 years age, other surgical technique except THA and HA, and all study except RCT were excluded.

Methodological quality assessment

For the methodological quality assessment, the Review Manager Software version 5.4 was used. Two authors independently performed the assessment. The Cochrane risk of bias assessment (RoB) tool analyses the included articles with regard to five aspects: selection bias (random sequence generation and allocation concealment), performance bias, detection bias, attrition bias, and reporting bias, shown in Figure 2.

Data extraction and analysis

Author examined all the identified studies and extracted data using a predetermined form. We recorded the first author, year, study design, enrolled sample number, age, sex, surgical treatment methods, surgical duration, HHS, dislocation rate, secondary procedure rate, 1-year mortality rate and post-operative infection rate. Statistical analysis was conducted using Review Manager version 5.4.1, employing a random-effects model to assess heterogeneity between studies. Forest plots were used to visualize outcomes, and significance was determined at $p < 0.05$.

RESULTS

A total of 825 articles from 3 databases were initially identified. Total 56 study removed after duplication, 524 excluded by title and abstract, 213 excluded because non-RCT study, and 25 excluded because did not meet the inclusion criteria. Subsequently, after underwent assessment, 7 studies met the eligibility criteria with a total of 747 patients.¹¹⁻¹⁷ PRISMA flow chart shown in Figure 1 and risk of bias assessment is shown in Figure 2. The demographic characteristics are outlined in Table 1.

Surgical duration

Four studies reported data on surgical duration (mean data in minutes) between THA versus HA for femoral neck fracture in elderly including 330 total patients.^{11,13,14,17} Heterogeneity exists between the four studies

($\text{Chi}^2=241.96$, $\text{df}=3$, $p<0.00001$, $I^2=99\%$) using a random-effects model. It shows that surgical duration in HA group shorter than THA group, and the difference is statistically significant ($\text{MD}=32.48$, 95% CI: 5.13 to 59.83, $p=0.02$) (Figure 3).

Harris hip score (functional outcome) a year post-operative

Four studies reported the HHS a year post-operative.^{11,13,14,17} The HHS ranges from 0 to 100 points and include function, pain, deformity and the range of motion. The higher the score, the better the outcome for the individual.²⁵ Heterogeneity exists between the four studies ($\text{Chi}^2=3.72$, $\text{df}=3$, $p=0.29$, $I^2=19\%$) using a random-effects model. It shows that patients treated with THA reported statistically significantly higher HHS ($\text{MD}=2.31$, 95% CI: 0.42 to 4.21, $p=0.02$) (Figure 4).

Post-operative complications

In this section consist of a year mortality rate, secondary procedure after the main surgery (include closed reduction and open reduction), post-operative hip dislocation and post-operative infection (include superficial and deep tissue infection).

A year mortality rate

Four studies reported data on a year mortality rate between THA versus HA for femoral neck fracture in elderly including 511 total patients.^{12,15-17} Heterogeneity exists between the four studies ($\text{Chi}^2=2.35$, $\text{df}=3$, $p=0.50$, $I^2=0\%$) using a random-effects model. It shows that there is no significant difference one-year mortality rate in THA

group and HA group, ($\text{MD}=0.90$, 95% CI: 0.53 to 1.52, $p=0.70$) (Figure 5).

Secondary procedure

Four studies reported data on secondary procedure between THA versus HA for femoral neck fracture in elderly including 379 total patients.^{14,15-17} Heterogeneity exists between the four studies ($\text{Chi}^2=5.15$, $\text{df}=3$, $p=0.16$, $I^2=42\%$) using a random-effects model. It shows that there is no significant difference secondary procedure in THA group and HA group, ($\text{MD}=0.64$, 95% CI: 0.13 to 3.14, $p=0.58$) (Figure 6).

Post-operative hip dislocation

Four studies reported data on post-operative hip dislocation between THA versus HA for femoral neck fracture in elderly including 361 total patients.¹³⁻¹⁶ Heterogeneity exists between the four studies ($\text{Chi}^2=4.96$, $\text{df}=3$, $p=0.18$, $I^2=39\%$) using a random-effects model. It shows that there is no significant difference post-operative hip dislocation in THA group and HA group, ($\text{MD}=0.77$, 95% CI: 0.12 to 4.94, $p=0.79$) (Figure 7).

Post-operative infection

Four studies reported data on post-operative infection between THA versus HA for femoral neck fracture in elderly including 319 total patients.^{14,16,17} Heterogeneity exists between the four studies ($\text{Chi}^2=0.26$, $\text{df}=2$, $p=0.88$, $I^2=0\%$) using a random-effects model. It shows that there is no significant difference post-operative infection in THA group and HA group, ($\text{MD}=1.17$, 95% CI: 0.38 to 3.61, $p=0.78$) (Figure 8).

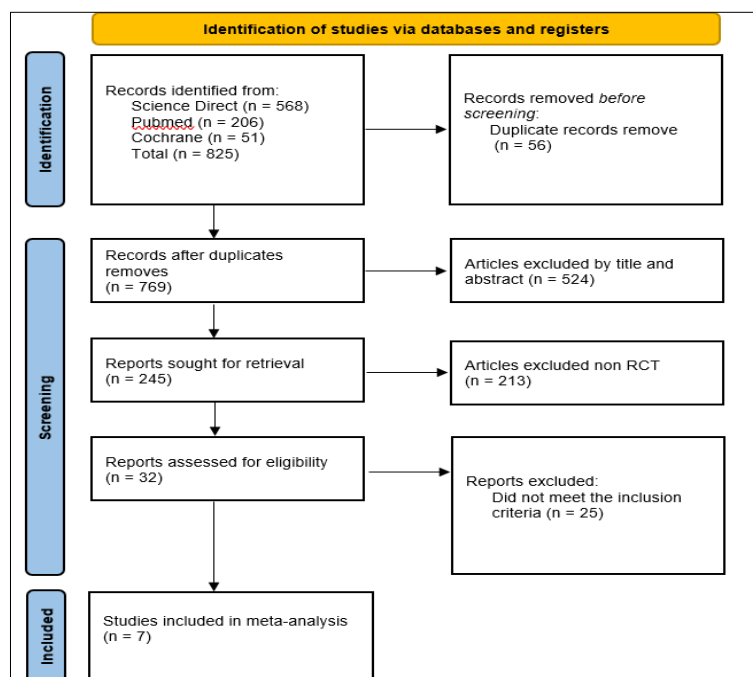


Figure 1: Prisma flow chart of literature search.

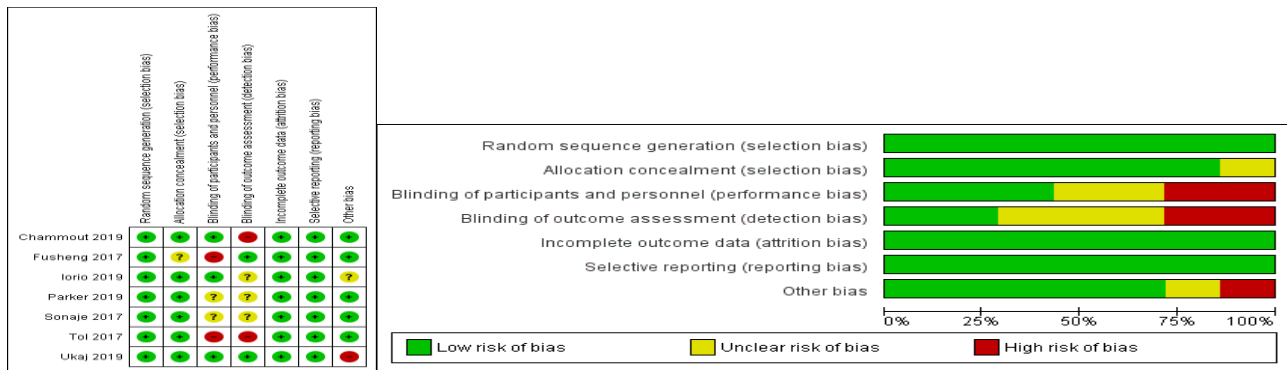


Figure 2: Risk of bias graph and summary of the included studies.

Table 1: The characteristics of included studies.

Study	Year	Country	Patients		Age (years)		Garden classification	Total patients/male
			THA	HHA	THA	HHA		
Sonaje ¹¹	2017	India	20	20	66.4 (60-74)	65.3 (61-73)	III-IV	40/13
Tol ¹²	2017	Netherlands	115	137	82.1±6.3	80.3±6.2	N/A	252/47
Fusheng ¹³	2017	China	38	38	76.16±6.53	75.45±6.52	N/A	76/27
Chammout ¹⁴	2019	Sweden	60	60	85±4	86±4	III-IV	120/30
Iorio ¹⁵	2019	Italy	30	30	82±4	83±3	III-IV	60/25
Parker ¹⁶	2019	UK	52	53	77.1 (67-89)	77.1 (60-89)	N/A	105/20
Ukaj ¹⁷	2019	Kosovo	47	47	78.11±5.4	77.64±4.7	N/A	94/68%

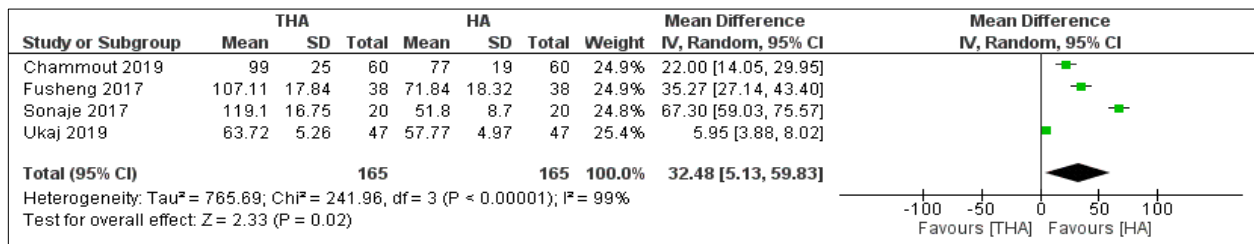


Figure 3: Analysis of surgical duration between two groups.

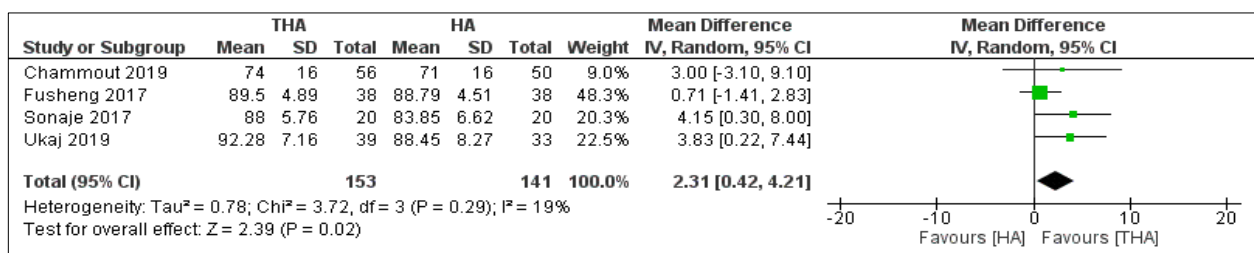


Figure 4: Analysis of a year post-operative Harris hip score between two groups.

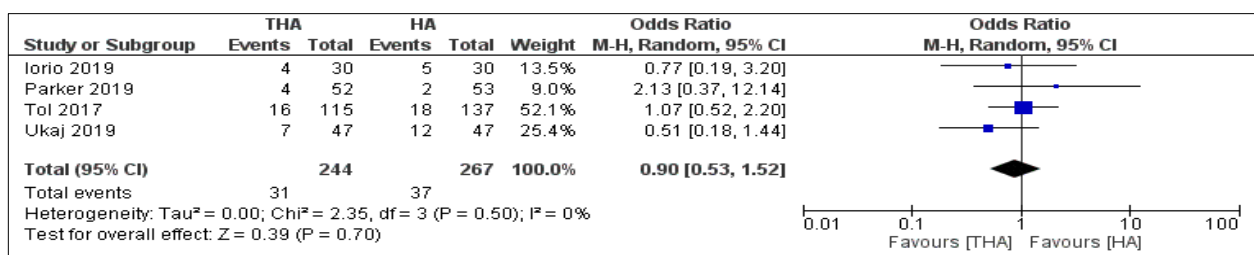


Figure 5: Analysis of a year mortality rate between two groups.

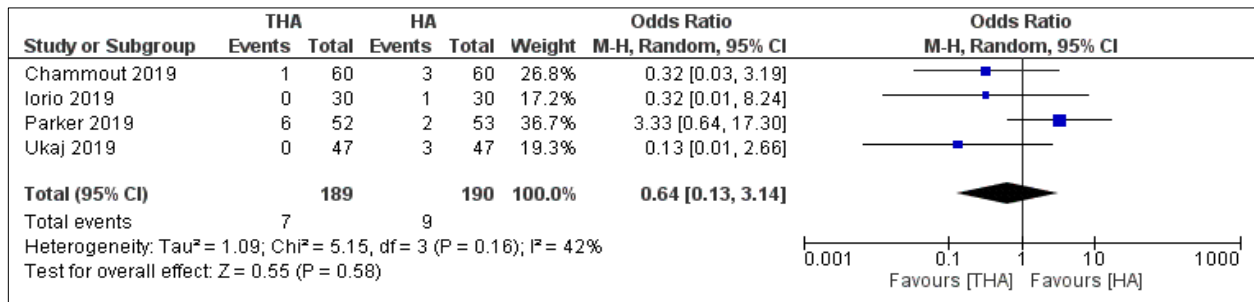


Figure 6: Analysis of secondary procedure between two groups.

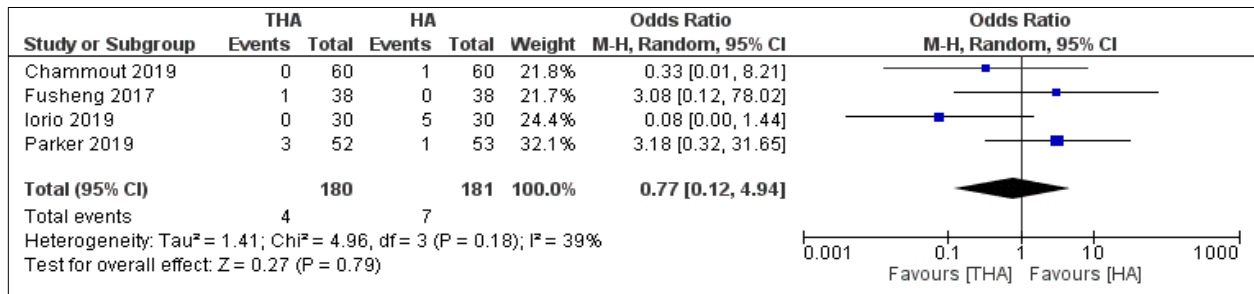


Figure 7: Analysis of post-operative hip dislocation between two groups.

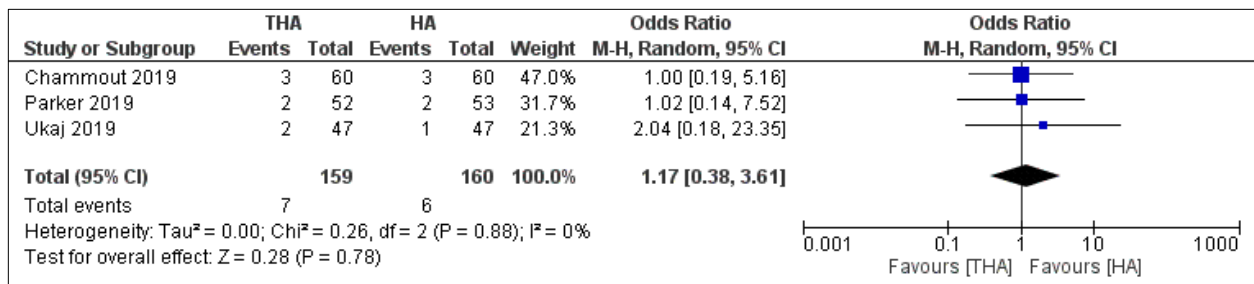


Figure 8: Analysis of post-operative infection between two groups.

DISCUSSION

Studies from seven RCTs including a total of 362 patients treated with THA and 385 patients treated with HA were included in this investigation. surgery duration, HHS, dislocation rate, secondary procedures, rate of 1-year mortality, and rate of post-operative infection were among the outcomes that were looked at. When comparing the THA group to the HA group, our meta-analysis revealed no statistically significant difference in the rates of dislocation, secondary procedures, 1-year mortality, and post-operative infection. In comparison to the THA group, the HA group had a shorter surgical duration (MD=32.48, 95% CI: 5.13 to 59.83, $p=0.02$). One-year follow-up HHS revealed that the THA group had statistically substantially higher scores than the HA group (MD=2.31, 95% CI: 0.42 to 4.21, $p=0.02$).

The decision between HA and THA is a concern mostly for patients 60 years of age and older, for whom there is debate regarding the best course of action. For many years, there has been a heated discussion about the best course

for treating a recent femur neck fracture. There is general agreement that internal fixation is better for people under 60 years of age, while HA is better for older patients who are dependent and have a short lifespan. THA is linked to very good functional outcomes, but at the expense of increased rates of comorbidities, including instability.^{5,7} Four studies that include surgical duration shown which HA had shorter duration than THA consistence with our results.^{11,13,14,17} This result was expected, since HHA requires less operative installation steps. Indeed, even if there is little variability within-technique operating time, the overall estimated effect was strongly in favour of the HHA group. We consider the main reasons are that HA requires less operative installation steps of cup preparation and implantation. Three meta-analysis by Burgers et al, Hsiao-Ma et al and Ekhtiari et al reported that HA also had shorter operative time than THA.^{3,18,19}

Many studies have proved better outcomes in THA group in terms of HHS, a study by Tang et al created subgroups depending on follow-up durations and found that the THA group had higher score compare with HA group in medium

term (1–5 years) but no difference in short term (<6 months) or long term (>9 years).²⁵ The Harris hip score was assessed in order to look into hip function, bigger score means better outcome for the patients. Another HHS were reported Yu et al in the THA at the 1, 3, and 4-year follow-up.²⁰ Even Burgers et al which included over 300 patients, discovered statistically better HHS in the THA group.³ The same results reported from our study, HHS favored THA group compare with HA group. The current meta-analysis showed that the Harris hip score had a more positive impact on THA. Our studies that include dislocation rate post-operative shown no significant difference within these two groups.¹³⁻¹⁶ As one of the primary causes of revision, dislocations are a constant source of concern for clinical physicians. A statistically significant decrease in the dislocation rate was noted in the HA group, according to a study by Migliorini et al.⁷ The weight distribution was variable in the forest plot, with confident intervals largely overlapping. The study by Burgers et al, dislocations involving nearly 800 patients were analyzed, and the reduced risk ratio favoring HA was 2.53.³ Similarly, Yu et al discovered that the HA group had a risk ratio of 1.99.²⁰ Dislocation at 1, 2, 4, and more than 4 years of follow-up was analyzed by Wang et al.²³ Only at 4 years did they discover a statistically significant minor reduction (risk ratio of 0.2) in favor of the HHA group. After studying dislocations in 1122 patients, Zi-Sheng et al discovered a statistically significant risk ratio of 0.49 that favored the HHA group.²⁴

Our study's 1-year mortality rate was not statistically significant between groups, and other meta-analyses produced similar findings by Migliorini et al, Lewis et al and Yoo et al.^{7,21,22} In the meantime, Hsiao Ma investigation revealed that all causes of death were recorded in the first year after.¹⁸ Included were six studies with a 1-year mortality rate and 396 THA and 431 HA operations and HA group had a greater 1-year mortality rate (OR=1.644, 95% CI: 1.120 to 2.414, $I_2=0$). Four studies that include secondary procedure or revision shown no significant difference within these two groups.¹⁴⁻¹⁷ In the following research, different ultimate results were reached. Study by Yu et al found a statistically significant halved risk ratio of revision in the HA group, but Burgers et al did not find any differences at the 1-year follow-up.^{3,20} Wang et al conducted follow-up subgroup analyses as part of their meta-analysis.²³ Likewise, they discovered that the THA group benefited from prolonged follow-up (risk ratio 3.3 at >4-year follow-up). The post-operative infection rate in our investigation was not statistically significant across groups, according to three studies.^{14,16,17} In accordance with meta-analysis study by Tang et al, five studies that reported post-operative infection rate, with 967 THA and 974 HA procedures.²⁵ Data from these five studies showed a non-significant result between two groups $p=0.929$.

It was also necessary to note that there are certain limitations. First, the patient characteristics vary across the research. Second, several different outcome criteria and

techniques for presenting the findings were applied. As a result, analysis of interesting parameters was not possible. Thirdly, our data only reported short terms results, even though our data indicated a difference between short-term outcomes in functional outcomes. Consequently, future research should take into account multicentered and large population-based designs, and more targeted and published long-term follow-up surveys are needed.

CONCLUSION

This study including the most recent evidence shows that in a selected group of patients suffering displaced femoral neck fractures, THA may be advantageous over HA in the terms of HHS but HA favoured in surgical duration. Ultimately, only large, well-designed and well-conducted studies will result in improvements in the outcomes of treatment and resolve the longstanding controversy of whether THA or HA is the preferred treatment modality for femoral neck fracture in elderly.

ACKNOWLEDGEMENTS

Authors would like to thank the chief executive officer of Ben Mboi Hospital. The authors are also grateful to Dr. Paul Steven, Sp. OT.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Chammout G. Treatment of Displaced Femoral Neck Fractures in the Elderly. Thesis for PhD degree. Wolter Kluwer and Taylor and Francis Publisher. 2017.
2. Apley GA, Solomon L. Apley's System of Orthopaedics and Fractures. 10th edition. London: Hodder Arnold. 2017.
3. Burgers PT, Van Geene AR, Van den Bekerom MP, Van Lieshout EM, Blom B, Aleem IS, et al. Total hip arthroplasty versus hemiarthroplasty for displaced femoral neck fractures in the healthy elderly: a meta-analysis and systematic review of randomized trials. *Int Orthop*. 2012;36(8):1549-60.
4. Benetos IS, Babis GC, Zoubos AB, Benetou V, Soucacos PN. Factors affecting the risk of hip fractures. *Injury*. 2007;38(7):735-44.
5. National Institute for Health and Care Excellence. Hip fracture: management. NICE clinical guidelines. 2011. Available at: <https://www.nice.org.uk/guidance/cg124>. Accessed on 12 August 2024.
6. Taosuwan S, Yuenyongviwat V. Outcomes Comparison in the Management of Displaced Femoral Neck Fractures among Elderly Patients: Total Hip Arthroplasty versus Bipolar Hemiarthroplasty. *Vajira Med J*. 2024;68(1):e266094.

7. Migliorini F, Trivellas A, Driessen A, Quack V, El Mansy Y, Schenker H, et al. Hemiarthroplasty versus total arthroplasty for displaced femoral neck fractures in the elderly: meta-analysis of randomized clinical trials. *Arch Orthop Trauma Surg.* 2020;140(11):1695-704.
8. Keating JF, Grant A, Masson M, Scott NW, Forbes JF. Displaced intracapsular hip fractures in fit, older people: a randomised comparison of reduction and fixation, bipolar hemiarthroplasty and total hip arthroplasty. *Health Technol Assess.* 2005;9(41):1-65.
9. Fahad S, Nawaz Khan MZ, Aqueel T, Hashmi P. Comparison of bipolar hemiarthroplasty and total hip arthroplasty with dual mobility cup in the treatment of old active patients with displaced neck of femur fracture: a retrospective cohort study. *Ann Med Surg (Lond).* 2019;45:62-5.
10. Moher D, Liberati A, Tetzlaff J, Altman DG, Group P. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ.* 2009;339:b2535.
11. Sonaje JC, Meena PK, Bansiwat RC, Bobade SS. Comparison of functional outcome of bipolar hip arthroplasty and total hip replacement in displaced femoral neck fractures in elderly in a developing country: a 2-year prospective study. *Eur J Orthop Surg Traumatol.* 2018;28(3):493-8.
12. Tol MC, van den Bekerom MP, Sierevelt IN, Hilverdink EF, Raaymakers EL, Goslings JC. Hemiarthroplasty or total hip arthroplasty for the treatment of a displaced intracapsular fracture in active elderly patients: 12-year follow-up of randomised trial. *Bone Jt J.* 2017;99-B(2):250-4.
13. Xu F, Ke R, Gu Y, Qi W. Bipolar hemiarthroplasty vs. total hip replacement in elderly. *Int J Clin Exp Med.* 2017;10(5):7911-20.
14. Chammout G, Kelly-Pettersson P, Hedbeck CJ, Stark A, Mukka S, Sköldenberg O. HOPE-Trial: Hemiarthroplasty Compared with Total Hip Arthroplasty for Displaced Femoral Neck Fractures in Octogenarians: A Randomized Controlled Trial. *JB JS Open Access.* 2019;4(2):e0059.
15. Iorio R, Iannotti F, Mazza D, Speranza A, Massafra C, Guzzini M, et al. Is dual cup mobility better than hemiarthroplasty in patients with dementia and femoral neck fracture? A randomized controlled trial. *SICOT J.* 2019;5:38.
16. Parker MJ, Cawley S. Treatment of the displaced intracapsular fracture for the 'fitter' elderly patients: A randomised trial of total hip arthroplasty versus hemiarthroplasty for 105 patients. *Injury.* 2019;50(11):2009-13.
17. Ukaj S, Zhuri O, Ukaj F, Podvorica V, Grezda K, Caton J, et al. Dual mobility acetabular cup versus hemiarthroplasty in treatment of displaced femoral neck fractures in elderly patients: comparative study and results at minimum 3-year follow-up. *Geriatr Orthop Surg Rehabil.* 2019;10:2151459319848610.
18. Ma HH, Chou TA, Pai FY, Tsai SW, Chen CF, Wu PK, et al. Outcomes of dual-mobility total hip arthroplasty versus bipolar hemiarthroplasty for patients with femoral neck fractures: a systematic review and meta-analysis. *J Orthop Surg Res.* 2021;16(1):152.
19. Ekhtiari S, Gormley J, Axelrod DE, Devji T, Bhandari M, Guyatt GH. Total Hip Arthroplasty Versus Hemiarthroplasty for Displaced Femoral Neck Fracture: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *J Bone Joint Surg Am.* 2020;102(18):1638-45.
20. Yu L, Wang Y, Chen J. Total hip arthroplasty versus hemiarthroplasty for displaced femoral neck fractures: meta-analysis of randomized trials. *Clin Orthop Relat Res.* 2012;470(8):2235-43.
21. Lewis DP, Wæver D, Thorninger R, Donnelly WJ. Hemiarthroplasty vs Total Hip Arthroplasty for the Management of Displaced Neck of Femur Fractures: A Systematic Review and Meta-Analysis. *J Arthroplasty.* 2019;34(8):1837-43.
22. Yoo JI, Cha YH, Kim JT, Park CH. Clinical outcomes of bipolar hemiarthroplasty versus total hip arthroplasty: assessing the potential impact of cement use and pre-injury activity levels in elderly patients with femoral neck fractures. *Hip Pelvis.* 2019;31(2):63-74.
23. Wang F, Zhang H, Zhang Z, Ma C, Feng X. Comparison of bipolar hemiarthroplasty and total hip arthroplasty for displaced femoral neck fractures in the healthy elderly: a meta-analysis. *BMC Musculoskelet Disord.* 2015;16:229.
24. Zi-Sheng A, You-Shui G, Zhi-Zhen J, Ting Y, Chang-Qing Z. Hemiarthroplasty vs primary total hip arthroplasty for displaced fractures of the femoral neck in the elderly: a metaanalysis. *J Arthroplasty.* 2012;27(4):583-90.
25. Tang X, Wang D, Liu Y, Chen J, Zhou Z, Li P, et al. The comparison between total hip arthroplasty and hemiarthroplasty in patients with femoral neck fractures: a systematic review and meta-analysis based on 25 randomized controlled trials. *J Orthop Surg Res.* 2020;15(1):596.

Cite this article as: Cahyadi NIT, Steven P. Outcome of total hip arthroplasty versus hip hemiarthroplasty for femoral neck fractures in the elderly: a meta-analysis of randomized control trial. *Int Surg J* 2024;11:2063-9.