

A retrospective comparison of internal fixation versus arthroplasty for femoral neck fractures in non-geriatric patients

Introduction

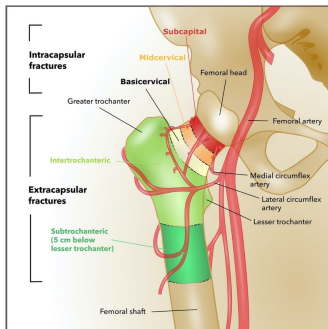
Fixation of femoral neck fractures in non-geriatric patients can be challenging. A recent multicenter study found that reoperations occurred in up to 52% of these patients. In older patients, arthroplasty is the standard of care for displaced femoral neck fractures due to unacceptably high failure rates. Considering the high failure rate in younger patients and the longevity of modern arthroplasty implants, arthroplasty may be the superior treatment option in younger patients as well.

Purpose

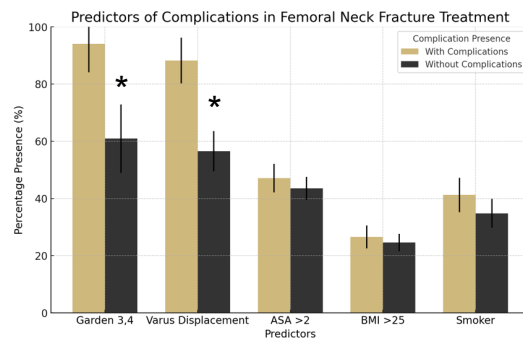
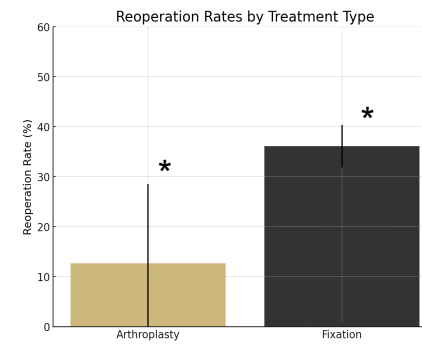
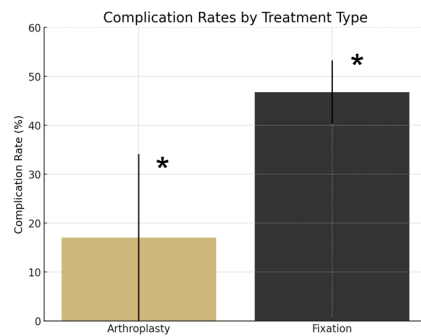
- Compare the major complication rate between arthroplasty and internal fixation of femoral neck fractures in non-geriatric patients
- Evaluate what variables were associated with failure of fixation of these fractures

Methods

Retrospective review of skeletally mature patients less than 65 years old who received surgical treatment for a femoral neck fracture at a level one trauma center between January 1st, 2016 and May 1st, 2024. Demographics, treatment, and radiographic parameters were recorded and analyzed for statistical significance.



Results



* Denotes statistically significant results (p < 0.05)

Conclusions

- Arthroplasty associated with fewer complications when compared to internal fixation of femoral neck fractures
- Failure of healing in patients treated with internal fixation was only associated with initial fracture displacement and varus displacement on injury radiographs - these fracture qualities may benefit from arthroplasty

Future Work

- Additional data collection underway to contribute to multi-site study investigation femoral neck fracture treatment methods and outcomes
- Further risk benefit analysis should be performed to determine increased wear rates of arthroplasty implants in a younger patient population to weigh into treatment decisions for surgeons
- Prospective studies should be considered to further evaluate arthroplasty versus internal fixation in femoral neck fractures

References

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