Comparison of Inpatient and Outpatient Ankle Fracture Surgery: A Multi-center Retrospective Review

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NO CONFLICTS TO DISCLOSE

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Our disclosures are in the Final AOFAS mobile app. We have no potential conflicts with this presentation.
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- One of the emerging trends in contemporary healthcare is the shift in surgical resources to the outpatient setting coupled with reductions in the inpatient length of stay.
- Factors including patient’s comorbidities and demographics as well as the surgeon’s fellowship training experience and practice management may determine the selection of inpatient admission or outpatient setting for performing ankle fracture surgery.
- Important to assess practice management in an effort to realize institutional cost savings while facilitating enhanced patient care.
Methods

- Multi-center retrospective cohort study of 240 surgically treated ankle fractures over a two-year period involving two tertiary care hospitals and their affiliated ambulatory surgery centers

Case Selection

- Patient selection criteria based on CPT codes
- Exclusion criteria included open trauma, pilon fracture, history of prior ankle fracture, or pediatric patients

Patient Demographics and Risk Factors

- Patient age, presence of poly-trauma, medical co-morbidities (syncope, hypertension, diabetes, as well as coronary artery, pulmonary, renal or hepatic disease), and ordering of CT-scan were evaluated

Stratification by Specialty

- Surgeons divided into three groups according to fellowship training: foot and ankle (Group 1: two surgeons), trauma (Group 2: five surgeons), and general/other (Group 3: nine surgeons including fellowships in sports, hand, and spine)
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Results

- 142 inpatient surgeries were performed with 5 days median length of stay
- 98 outpatient surgeries were performed in the ambulatory surgery care setting
- Majority of ankle fracture surgeries performed by Group 1 surgeons (84%) and Group 3 surgeons (61%) were outpatient cases
- Minority of ankle fracture surgeries performed by Group 2 surgeons (29%) were outpatient cases
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- Results
  - Statistically significant higher percentages were recorded among inpatients in the following demographic categories and risk factors: age 65+ years (p < 0.0003), hypertension (p < 0.0230), presence of poly-trauma (p < 0.0149), and ordering of CT-scan (p < 0.0001).
  - There were no statistically significant differences in the demographics and medical risk factors among patient populations in the three surgeon subspecialty training groups.
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Discussion and Conclusion

- Age (65+ years-old), hypertension, presence of poly-trauma and ordering of pre-operative CT-scan are each statistically associated with inpatient admission for ankle fracture surgery.

- Trauma fellowship trained surgeons on-call were more likely to hospitalize their patients in preparation for surgery, while foot and ankle fellowship trained surgeons were more likely to perform ankle fracture surgery on an outpatient basis.

- The differences in the relative utilization of outpatient surgery centers between foot and ankle trained surgeons and orthopedic generalists (Groups 1 and 3) versus trauma trained surgeons (Group 2) can not be explained alone by patient population demographics and thus may also be attributable to individual surgeon preference.
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- Discussion and Conclusion
  - Two of the busiest trauma trained surgeons from Group 2 performed more than 90% of their ankle fracture surgeries on an inpatient basis. Contrastingly, the two foot and ankle trained surgeons from Group 1 performed 84% of their ankle fracture surgeries on an outpatient basis.
  - The health care institution may realize substantial practice management cost savings by shifting cases to the outpatient setting using the ambulatory care model of foot and ankle fellowship trained surgeons.
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References


