



# Bugs and Bullets: Infections following Ballistic Injuries to the Foot and Ankle

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## BACKGROUND

Up to 45% of accidental injuries and 35% of assaults by firearm involve injuries to the foot and ankle. Although frequently non-fatal, ballistic injuries to the foot and ankle can lead to significant functional impairment. Developing an infection can exacerbate the morbidity of this injury. Previous studies have been conflicting about selection and duration of antibiotics for patients with GSW wounds to foot and ankle. We aim to evaluate the risk factors for, and rate of infection in relation to ballistic injuries to the foot and ankle to help us better guide use of antibiotics when managing these injuries.

## METHODS

❖ A retrospective review was performed of patients who sustained a ballistic injury to the foot and ankle at a level one trauma institution from 2011 to 2020.

❖ Thirty patients were identified

❖ Charts analyzed for:

❖ Demographics

❖ Foot and ankle injury sustained

❖ Antibiotics received

❖ Procedures performed

❖ Documented complications



## RESULTS

❖ Predominantly males affected (29/30)

❖ Average age 28 (Range 11-57)

❖ All patients received antibiotics at presentation, 97% cefazolin, 3% other

❖ Three patients developed wound infections (10%), 2 of the 3 infections occurred in patients with vascular injury.

❖ Four patients had documented vascular injury to the ipsilateral extremity (13.3%)

❖ Of patients with vascular injury, 2 (50%) developed infection with one patient requiring amputation. No other amputations reported in this series.

❖ Of patients without vascular injury, only 1 infection reported (3.8%)



## DISCUSSION

❖ Although only a small number of patients, those with vascular injury had a 50% infection rate.

❖ Total infection rate of 10% slightly higher than previous quoted numbers (3.8%<sup>2</sup>), due to 50% infection rate in vascular injury group



## CONCLUSION

❖ Patients with vascular injury and GSW to foot and ankle are at higher risk for infection of wounds.

❖ Further study warranted for optimal use of antibiotics in GSW to foot and ankle especially those with vascular injury with regards to specific agents and duration of therapy.

## REFERENCES

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