



The Impact Of Human Immunodeficiency Virus and Antiretroviral Therapy on Management And Complications of Distal Radius Fractures

Patients with HIV who were not taking antiretroviral therapy were less likely to undergo surgery.

All patients with HIV, especially those treated with surgery, were at greater risk for union complications after distal radius fractures.

Methods

Cohort and Complications

- Adults with isolated, unilateral DRF were identified in PearlDiver using ICD-10 codes.
- Patients were stratified by HIV status. Use of antiretroviral therapy was identified
- Malunion, nonunion, carpal tunnel syndrome, hardware complications and reoperations were identified within 1 year of treatment.

Statistical Analysis

- Proportion of patients undergoing open treatment was compared with a chi-squared test and a multivariable logistic regression controlling for patient characteristics and comorbidities.
- All adverse events were compared using chi-squared tests.

Final Cohorts

- 394,152 patients without HIV
- 2,331 patients with HIV

Complications

	No HIV	HIV	p-value
Malunion/nonunion	5,289 (1.6%)	46 (2.3%)	0.024
Arthritis	702 (0.2%)	12 (0.6%)	0.001
Carpal Tunnel Syndrome	9,962 (3.1%)	57 (2.9%)	0.60
Surgery for malunion/nonunion	1,806 (0.6%)	19 (1%)	0.028
Conversion to open fixation	953 (0.3%)	<11	-

Table 2. 1-year adverse events and reoperations for patients with closed treatment

	No HIV	HIV	p-value
Malunion/nonunion	1,565 (2.1%)	19 (5.5%)	0.002
Hardware complication	2,925 (4%)	19 (5.5%)	0.773
CTS	7,702 (10.6%)	39 (11.3%)	0.367
Surgery for malunion/nonunion	1,806 (0.6%)	<11	-

Table 3. 1-year adverse events and reoperations for patients with open treatment

Antiretroviral Therapy

- 57% with HIV were not on ART
- Patients with HIV who were on antiretroviral therapy had similar rates of surgery as patients without HIV
- Patients with HIV who were not on ART were less likely to undergo surgery compared than patients without HIV
- ART was not associated with complications

Conclusions

- The current study found that HIV alone is not associated with management of DRF; however, routine use of ART may affect decisions about fracture management.
- Following treatment, HIV is associated with bone healing complications and arthritis.
- To improve rates of bony union following DRF, surgeons should work within multidisciplinary teams to ensure their patients are medically optimized and have close follow-up after treatment.