

# The Effect of Dorsal Screw Prominence in the Radial Shaft of Distal Radius Fractures Treated with Volar Locked Plating

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## Introduction

- Dorsal screw prominence with volar locked plating puts extensor tendons at risk
- Previous studies focus on distal screw fixation

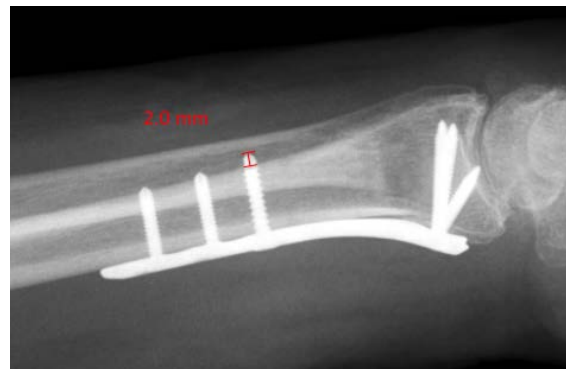
### Purpose

- To determine if prominent screws in the radial shaft increase the risk of complications

## Methods

- Retrospective review of 606 cases
- Reviewed:
  - Tendon irritation
  - Tendon rupture
  - Hardware removal
- Measured most prominent screw (Figure 1)

## Figure 1



## Results

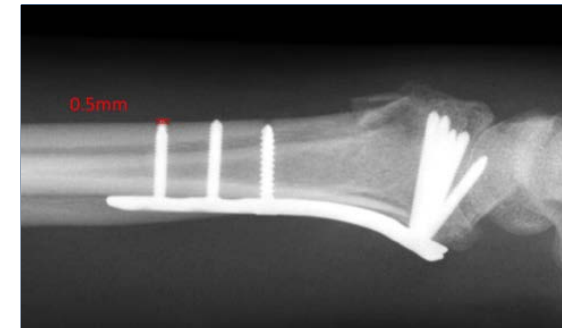
### Tendon Complications

- Irritation: 1.7%
- Rupture: 0.33%
- H'ware Removal: 7%

### Screw Statistics

- Mean proud: 1.4mm
- >2mm proud: 21%
- No difference in HR rates with screw prominence >2mm
- Powered to detect 4% difference in hardware removal

## Figure 2



Shaft screw measuring 0.5 mm proud

## Conclusions

- Dorsal screw prominence <2mm is not significant
- This study does not support downsizing prominent screws 2mm or less

## Complications

	Hardware Removal		p	Extensor Tendon Irritation		p	Extensor Tendon Rupture		p
	Yes	No		Yes	No		Yes	No	
Screw length, mm (SD)	42	564	0.42	10	596	.08	2	604	0.77
	1.53 (0.8)	1.43 (0.8)		1.86 (.8)	1.42 (0.8)		1.6 (1.7)	1.43 (.8)	
Screw >2mm, n (%)	11 (26)	116 (21)	0.39	4 (40)	123 (21)	0.23	1 (50)	126 (2)	0.38