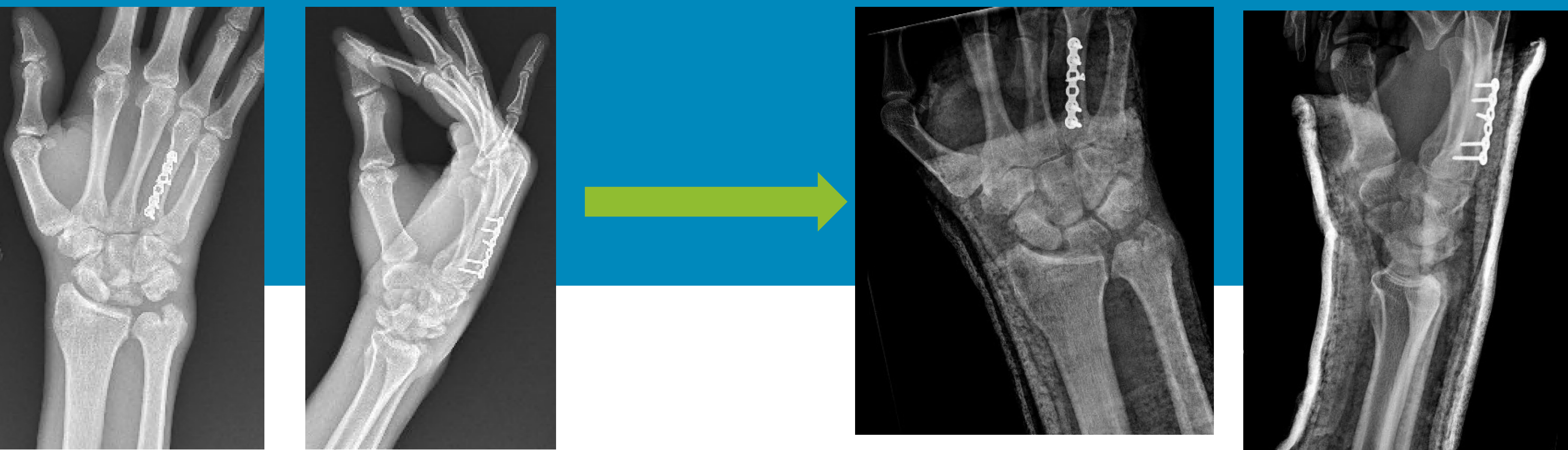


Epidemiology and Management of Perilunate Injuries

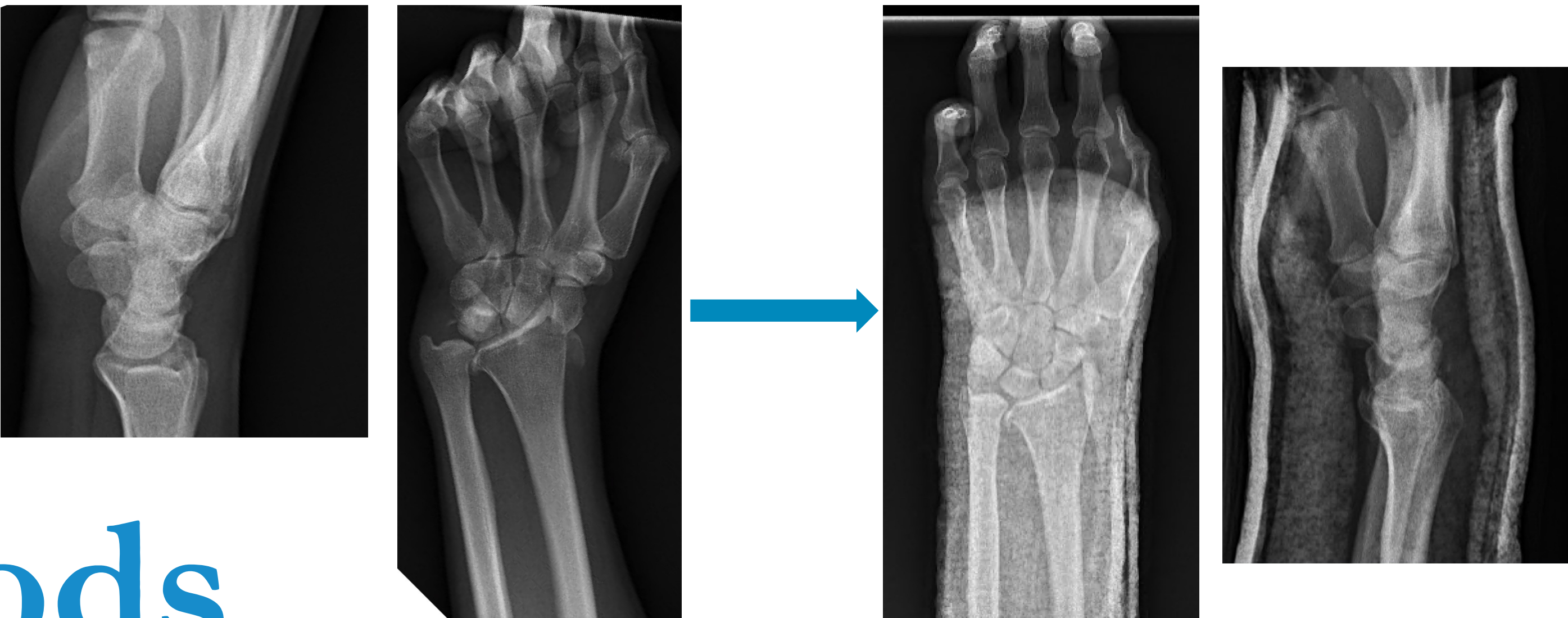
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Background

- Perilunate injuries and dislocations are often caused by high impact trauma
- Can result in acute compression of the median nerve
- Patients may present long after injury with pain, tendon ruptures, or long-standing carpal tunnel syndrome
- We describe the epidemiology, injury mechanism, immediate treatment, and rate of need for carpal tunnel release (CTR).

References (1.) Najarian R, et. al. 2010; (2.) Herzberg G, et. al. (2002).



Methods

- Reviewed injuries at a single Level 1 trauma center from 1/1/2014 to 10/1/2023.
- Data on patient demographics, injury mechanism, initial management, and operative management were collected.

Results

Table 1: Demographics		
Gender	Male	32 (97%)
	Female	1 (3%)
Age	Average	33.9
	SD	9.9
Initial Imaging Modality	XR	19 (58%)
	CT	2 (6%)
	XR and CT	12 (36%)

Table 2: Injury Characteristics		
Injured Extremity	Right	20 (61%)
	Left	13 (39%)
Injury Mechanism	Fall from 0 to 10 feet	8 (24%)
	Fall from greater than 10 feet	8 (24%)
	Motor vehicle accident	8 (24%)
	Bicyclist struck by automobile	3 (10%)
	Assault	3 (10%)
	Pedestrian struck by automobile	2 (5%)
Diagnosis	Crush injury	1 (3%)
	Trans-scaphoid Perilunate Dislocation	20 (61%)
	Perilunate Dislocation	8 (24%)
	Perilunate Fracture Dislocation	3 (10%)
	Perilunate dislocation + other nonscaphoid carpal bone injury	2 (5%)
		2 (5%)
Mayfield Classification	I	1 (3%)
	II	1 (3%)
	III	18 (55%)
	IV	13 (39%)
Symptoms of Median Nerve Compression on Initial Exam	Yes	16 (48%)
	No	17 (52%)

Table 3: Management		
Consulting Team	Orthopedic Surgery	18 (55%)
	Plastic Surgery	15 (45%)
Initial ED Treatment	Reduction successful with delayed OR	19 (60%)
	Reduction successful with immediate OR	5 (15%)
	Splinting only (no documented reduction)	4 (12%)
	Reduction successful with no OR intervention	2 (5%)
	Reduction Unsuccessful with immediate OR	2 (5%)
OR Treatment	Initial presentation to clinic/outpatient	1 (3%)
	Yes	30 (91%)
	No	3 (9%)
Time to OR (n=30)	Within 24 Hours	10 (33%)
	>24 hours to 1 week	16 (53%)
	>1 week to 6 months	4 (14%)
Specific OR Intervention (n=30)	ORIF	17 (56%)
	ORPP	9 (30%)
	OR reduction only (no ORIF or CRPP)	2 (7%)
	CRPP	2 (7%)
Needs for CTR	Yes	17 (52%)
	No	16 (48%)

Conclusion

- While overall uncommon, perilunate injuries still require prompt evaluation and treatment.
- If initial reduction is not successful, urgent operative intervention will be needed.
- However, there are some instances where delayed operative management is appropriate.
- There are multiple acceptable methods of operative fixation to realign the carpal bones.