

Original article:

Study of Fractures of distal radius: an observational study

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Abstract:

Introduction: Distal radius fractures are one of the most common types of fractures, with over 640,000 cases reported during 2001 in the US alone. For reasons not fully understood, and likely multi-factorial, the incidence of this fracture appears to be on the rise in the US and abroad.

Methodology: The present study was conducted in our Department during last one year. All the patients admitted with distal radius fractures were included in present study. The detail history record of patients was collected by taking history and from their case record book. The multiple injury patients were excluded from present study. The pediatric cases were also excluded from our study. The study was carried out and filled our data sheet. Followed by statistical analysis was carried out.

Results : In our present, we found incidence of radius fracture was found more in male with middle age groups . It was also noted high in rural population as compared to urban . It was seen more in lower socioeconomically patients.

Conclusion: Possessing a knowledge of the incidence and outcomes of distal radius fractures allows the physician to better counsel individual patients and determine the best management to optimize treatment.

Keywords : Radius fracture , malunion

Introduction:

Distal radius fractures are one of the most common types of fractures, with over 640,000 cases reported during 2001 in the US alone.¹ For reasons not fully understood, and likely multi-factorial, the incidence of this fracture appears to be on the rise in the US and abroad.^{2,3} Many of the societal effects of these fractures extend beyond the significant medical costs, including decreased school attendance, lost work hours, loss of independence and lasting disability. Fragmented care and coding discrepancies can make accounting for the true number of these fractures difficult, likely underestimating the rates typically quoted in the literature. When analyzing the incidence of distal radius

fractures, there are three major populations to consider: children and adolescents, young adults, and the elderly. The pediatric and elderly populations are both considered at high risk for this injury, and the contributing factors will be examined in this paper. In addition to the 3 main age groups, gender and ethnicity may also be considered distinct risk factors within each of these populations.

Methodology:

The present study was conducted in our Department during last one year. All the patients admitted with distal radius fractures were included in present study. The detail history record of patients was collected by taking history and from their case record book. The multiple injury patients were excluded from present study. The pediatric cases were also excluded from our study.

The study was carried out and filled our data sheet. Followed by statistical analysis was carried out.

This was observational study. The sample size was approved by expert from statistics. 40 patients were included in present study.

Results:

S.NO.	Variable	Number of patients (N=40)
1	Age group (In years)	
	20 – 40	8
	41-60	22
	61-70	10
2	Urban	7
	Rural	33
3	Socioeconomically	
	Lower	22
	Middle	16
	Higher	02
4	Gender	
	Male	32
	Female	08

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Discussion:

Over the past decade, a multitude of studies have attempted to discover and understand the factors that define treatment options and optimize outcomes in the active elderly patient following a distal radius fracture. However, these factors are often interconnected and difficult to isolate for evaluation from an epidemiologic perspective. One of the major limiting factors in examining these outcomes is that few studies designate whether the fracture has intra-articular extension. This seems to be emerging as an important factor for regaining functional motion and strength, rather than absolute measures of fracture alignment and malunion.⁴

In our present, we found incidence of radius fracture was found more in male with middle age groups . It was also noted high in rural population as compared to urban . It was seen more in lower socioeconomically patients.

The increased tendency for surgical manipulation in recent years has been coupled with a shift in favor of open reduction and internal fixation over other treatment options. Although this new treatment is exciting, no conclusive evidence has shown it to be more effective than any other treatment protocol. It is not clear why this increase is occurring, but it may be because more distal radius fractures are being treated by hand surgeons. It also may be the result of increasingly successful marketing schemes directed towards surgeons, or even just the excitement that comes with the novelty of a new technology.⁵

Conclusion:

Possessing a knowledge of the incidence and outcomes of distal radius fractures allows the physician to better counsel individual patients and determine the best management to optimize treatment.

References:

1. Mathison DJ, Agrawal D. An update on the epidemiology of pediatric fractures. *Pediatr Emerg Care.* 2010;26:594–603. quiz 4–6.
2. Wood AM, Robertson GA, Rennie L, Caesar BC, Court-Brown CM. The epidemiology of sports-related fractures in adolescents. *Injury.* 2010;41:834–838
3. Bailey DA, Wedge JH, McCulloch RG, Martin AD, Bernhardson SC. Epidemiology of fractures of the distal end of the radius in children as associated with growth. *J Bone Joint Surg Am.* 1989;71:1225–1231.
4. Caspersen CJ, Pereira MA, Curran KM. Changes in physical activity patterns in the United States, by sex and cross-sectional age. *Med Sci Sports Exerc.* 2000;32:1601–1609.
5. Krabbe S, Christiansen C, Rodbro P, Transbol I. Effect of puberty on rates of bone growth and mineralisation: with observations in male delayed puberty. *Arch Dis Child.* 1979;54:950–953