

How can traditional methods of treatment affect the results of the distal radius fractures?

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Abstract

Objective: Traditional treatment of the wrist fractures can affect seriously the result of treatment

The aim of this study is to analyze the results of treatment of patients who have undergone traditional methods initially with patients who were treated only in hospital.

Methods: 248 out patients with distal radius fractures treated at emergency of our clinic from January 2014 to December 2015 were divided into two groups; patients who were treated only in hospital and patients who used traditional methods before being presented to the hospital. Social and demographic data of patients were collected in a database. Anatomic and functional outcomes of treatment were evaluated. All traditional methods of treatment were highlighted

Results: 248 patients, 128 (51.6%) females, with mean age 54.49 years. 166 (67.2%) of the patients came from rural area. 170 (68.9%) of patients came direct to hospital and 78 (34.1%) patients underwent conventional methods before presented to hospital

The majority of the fractures are extra articular 160 (64.3%) (Type A)

Anatomic outcomes were excellent in 24 (9.8%), good in 63 (25.8%), fair in 76 (30.7%) and poor in 85 (33.7%).

Conclusion: Poor functional outcomes of the fractures of distal radius may come from the use of some traditional methods of treatment.

Educating the population regarding trauma and treatment methods is one of the best ways to minimize the negative impact from the use of incorrect traditional methods.

KEYWORDS: distal radius fractures, traditional methods of treatment, bonesetter

Traditional treatment methods are often the cause of poor results.

Bone setting is an alternative of treatment in many societies in developing countries especially in Africa, Asia but it continue to be evident in some areas in Balkan countries. (1-3) Despite treatment from bonesetters is not seen as an alternative treatment in Albania, there are many patients who prefer to consult with them or to use their traditional method of treatment.

Experts of World Health Organization (WHO) reported in a special issue in 1978, many complications coming from traditional treatment methods. (3)

The situation is critical in the treatment of complexes fractures (5-8)

Patients and methods. All outpatients with fractures of distal radius between January 2014 and December 2015 were included in this study. Patients were divided into two groups, patients who were treated only in hospital and those who underwent initially traditional treatment at home or in bonesetter

Patient demographic data were registered, education's level, method of traditional treatment.

Anatomical results were evaluated after Batra score system (9). Functional outcomes are evaluated through Quick DASH score (10)

Mann-Whitney U test was used for statistical analyses. $P < 0.001$ was considered statistically significant

Results

248 patients with distal radius fractures were part of our study, 128 (51.6%) were female. Mean age of the patients was 54.49 years. Moreover, 166 (67.2%) of the patients came from rural area. 170 (68.9%) of patients were treated only in hospital and 78 (31.1%) patients underwent conventional methods before presented at hospital

149 fractures were left hand, 97 right and 2 both sides.

Most of the patients who underwent initially traditional treatment, have low education level 97% and lack information about the medical procedure of treatment totally (68%) or partially (32%). (Table 1).

Most of the patients (43%) use olive oil massage or hot water with soap, some other a traditional alcoholic drink (raki). Their fracture were reduced through vigorous manipulation and very tight immobilization (cartons with sheep wool, cartons with eggs and soap, piece of woods)

Table 1. Patients' level of education and information about medical procedure

	Patients underwent medical protocol immediately	Patients underwent traditional treatment initially
Level of education		
Primary school	51 (30%)	56 (72. %)
Secondary school	90 (52%)	20 (25%)
High school or University	39 (18%)	2(3%)
Level of information about the medical procedure		
No information at all	28 (17%)	53 (68%)
Some information about the medical procedure	72 (42%)	25 (32. %)
Informed about the medical procedures	70(41%)	0 (0%)
	170	78

Fractures were classified after AO classification and the majority of the fractures were extra articular 153 (63.7%) (Table 2)

Table 2. Fractures by type for both groups

Type of fracture	Number of patients who were treated only in hospital	Number of patients underwent traditional treatment initially	Number of patients

A2	75	36	111
A3	28	14	42
B1	4	6	10
B2	7	4	11
B3	6	0	6
C1	8	4	12
C2	28	12	40
C3	14	2	16
Total	170 (68.9%)	78 (31.1%)	248

Anatomic outcomes were excellent in 24 (9.8%), good in 63 (25.8%), fair in 76 (30.7%) and poor in 85 (33.7%).

Table 3. Anatomic results using Batra scoring system.

	Anatomic results			
	Excellent	Good	Fair	Poor
Patients who were treated only in hospital	18	46	58	48
Patients underwent traditional treatment initially	6	17	18	37
total	24 (9.8%)	63 (25.8%)	76 (30.7%)	85 (33.7%)

Functional results, evaluated with QuickDASH score correlate with anatomic results only with the group coming directly to the hospital. (Table 4)

Table 4. Mean QuickDASH Scores (Standard Deviation) for each group

	Patients who were treated only in hospital		Patients underwent traditional treatment initially		Mann-Whitney U test
	no patients	QuickDASH	no patients	QuickDASH	
Excellent	(n14)	17.3±1.2	(n8)	60.8±14.4	p<0.001
Good	(n37)	26.0±6.35	(n17)	78.4±12.5	p<0.001
Fair	(n55)	44.0±3.0	(n28)	83.9±5.33	p<0.001
Poor	(n64)	72.4±4.8	(n25)	88.23±12.5	p<0.001

Discussion

Treatment by bonesetter is a reality in developing country that comes from the lack of specialist and coverage with medical care. Their treatment some time is incorrect and may be considered malpractice.

WHO's experts in their report on traditional treatment methods reported for very high risk of irreversible complications. (4)

In Albania the consulting with a bonesetter is not a reality, the use of some traditional methods inherited from bonesetters continues to be a problem.

Current study shows that one of the important factors for preferring the bonesetter or using their methods is the opinion of family and friends. Most patients are advised by older members of the family to be treated by these traditional methods. All the people who underwent initially traditional treatment came from a low education level. Familiarity with these bonesetter methods is inherited by the oldest member of the family especially for people coming from rural areas and societies which have had traditionally bone setters in their area.

Bonesetters have no medical training, they practice traditional methods passed down over generations. (9)

These techniques may give chance to limb ischemia; promote edema of the limb which could be complicated with, joint stiffness, Volkmann's ischemia, Morbus Sudeck. (12, 13)

Gangrene from bonesetter methods is reported. (14)

These traditional methods are performed from old member of family or neighbors or in some districts there are special people (bonesetters) who know better these methods.

People prefer to go first to a bonesetter is because of the easy accessibility. They fear also the immobilization with cast or surgical treatment and they try to find easy solution.

Bonesetters may success in simple closed fractures, but the use of hot procedures, rubbing with olive oil may all lead to very bad complications. They use to message the fracture site during reduction and use very constrictive dressing to keep the reduction.(13)

Bonesetters can success in some ways in for simple fractures, joint distortion and dislocation.

Many authors report malunion by bonesetters in more than half of the fractures. (14)

In our study, patients are intervened initially by a bonesetter but they completed their treatment in hospital where their anatomic reduction was rechecked.

Difference in functional results between two groups come from the complication from the improperly methods used by bonesetter

We found also a correlation between functional outcomes and time presenting to emergency after being intervened by bonesetters.

Bonesetters relate their skills to social, cultural, metaphysical, and religious principles especially in Africa. (16)

Treatment by bonesetters in Albania is limited in some areas of the country. People do not believe that bonesetter possess some metaphysical or religious power as some other peoples do, but they choose them especially for the facilities they offer. They live usually near their residence.

The tradition to go to bonesetters or to use their traditional methods comes from rural areas, where a bonesetter has been traditionally.

In our study they are coming from areas in north and north east of Albania, areas which lack orthopedic service even nowadays. Most of them think that orthopedics do only surgery.

Only 28% of patients have information about the medical procedure.

Conclusion: Poor functional outcomes of the fractures of distal radius may come from the use of some traditional methods of treatment.

Educating the population regarding trauma and treatment methods is one of the best ways to minimize the negative impact from the use of incorrect traditional methods.

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