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Traditional Methods Of Conservative Therapy In The Management Of Fracture As A Hurdle In Providing Complete Functionality To The Patients In The Developing World.

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Abstract: Study Design: *Retrospective study.*
Purpose: *Management of fracture has evolved significantly in the last few decades due to involvement of modern methods and technologies helping the patients attaining the pre trauma functionalities which has become the goal of modern practice of orthopaedics. But in the developing world like India is still lacking behind the goal due to hindrance of traditional methods of conservative therapy in the management of the fractures. In present study we have evaluated for the loss of functionality of the patients accepting traditional conservative therapy.*
Methods: *In the present study we included those patients visited to our hospital; Hi-Tech medical college &Hospital, during the period from January 2015 December 2017 previously treated by the traditional methods of conservative managements. Complete data regarding demographic and socio-economic status of patients was obtained in the history and each of them underwent through clinical and radiological evacuation and possible surgical intervention.*
Results*: Total of 58 pts were included in the study those were treated by traditional methods and undergone some form of intervention in our hospital. Majority of them presented with nonunion or malunion. Some other forms of presentations like stiffness, compartment syndrome and chronic osteomyelitis. Cost and fear of surgery had lead to noncompliance to the modern therapy in majority of case and accepting traditional conservative therapy.*
Conclusions: *Traditional conservative therapy (TCT), not only is becoming hindrance in providing complete functionality to the patient, but also misleading the patients and becoming the cause for additional procedures, increasing the overall expenditure of treatment and increasing rehabilitation period.*
Keywords: *Tradional coservative therapy (TCT), Bone setters, Complications*

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I. Introduction

In this scientific era, just getting treated is not the goal, how much functionality the patient is gaining back is the key. Bone has its inherent property to unite, we as surgeons help in union process by getting back the fracture fragments into their anatomical place and giving the limb or joint their alignment and congruency. However the traditional conservative therapy (TCT) providers without having any knowledge regarding anatomy of bone and physiology of musculoskeletal system are utilising bones' inherent property to show that they make the fracture unite[1]. Surprisingly in spite of wide spread availability modern care of orthopaedics practice 60% of musculoskeletal trauma patients are being treated by the traditional conservative therapy, which is an age old procedure and is still continuing to carter their modality of management and putting forward the fact of being better than modern orthopaedics surgery[2]. In due course patients are getting trapped and ending up in loss of functionality of the limb in some case loss of limb. After being drained out of time and money patient are coming back for the modern orthopaedics help, we as surgeons finding it more difficult to provide full functionality to the patient. In present study we have evaluated for the loss of functionality of the patients accepting traditional conservative therapy.

II. Material And Methods:

In the present study we included those patients visited to our hospital; Hi-Tech medical college &Hospital, during the period from January 2015 December 2017 previously treated by the traditional methods of conservative therapy. Total of 58 patients were included in our study. Informed consent was being obtained. Complete data regarding demographic and socio-economic status of patients was obtained in the history and each of them underwent through clinical and radiological evacuation and possible surgical intervention.

III. Observation

Out of 58 patients 26(44.8%) are females and 32(55%) are males out of which 33(56.89%) number of patients fall in adult age group from 21year to 50 year. 33 number of patients (56.89%) were belonging to APL group having good socio-economic status and 38 out of 58 patients (65%) are educated having primary or above level of education. In our present study number of patients with upper limb injury 27(46.55%) and lower limb injury 31(53.44%) of which 52 cases (89.65%) having simple injury and 6 (10.34%) having compound injury. Out of 58 cases 47 patients initially came across hospital or institution or doctors were never turned up and 11 number of patients directly visited bone setter/quack. When inquired about the reason of visiting the bone-setter, cost was being the commonest factor (51.7%) which made them to take the traditional conservative therapy. Out of which 56.7% of cases were educated. Other reasons for getting TCT are fear of surgery 11(18.96%), lack of awareness 4(6.89), local belief or tradition 6(10.34%), easy accessibility 7(12.6%).

Non union was most common mode of presentation with 28(48.27%), Mal-union counting the second 24 patients (41.37%), Chronic Osteomylities 3 patients (5.17%), stiffness around the joints 2 patients (3.44%). one 5 years old male child presented with gangrene after 3 weeks of trauma on TCT ended up in Amputation.

Most of the patients (44 out of 58) underwent open reduction and bone grafting, 5 patients underwent corrective osteotomy and fixation, 5 patients Ilizarov external fixation, 2 patients Manipulation under anaesthesia. Average blood loss during operation was more than 350ml and average duration of the surgery was 1.5 times longer than the primary procedure which is expected for a fresh fracture.

Table 1 . Demography

Variables	Age group	Frequency	Percentage	
Age	0-10	5	8.62	
	11-20	9	15.51	
	21-30	11	33	56.89
	31-40	13		
	41-50	9		
	51-60	7	12.06	
	>60	4	6.89	
Sex	Male	32	55.18	
	Female	26	44.82	
Socio-Economic Status	BPL	25	43.1	
	APL	33	56.9	
Literacy & education	Educated	38	65.52	
	Non-Educated	20	34.48	

Table 2 .Extremity and Injury

Extremity involved	Lower limb	31	53.44
	Upper Limb	27	46.55
Injury	Simple	52	89.65
	Compound	6	10.34

Table 3 .Point of Initial Contact

Hospital/Inst/Doctors	47	81.03
Bone Setter/Quack	11	18.97

Table 4. Reason for getting TCT

CAUSES	FREQUENCY	PERCENTAGE
Cost	30	51.72
Fear of u=Surgery	11	18.96
Lack of Awareness	4	6.89
Local Belief/Tradition	6	10.34
Easy Accessibility	7	12.06

Table 5. Mode of Presentation.

MODES	FREQUENCY	PERCENTAGE
Non- Union	28	48.27
Mal-Union	24	41.37
Chronic Osteomyelitis	3	5.17
Stiffness	2	3.44
Gangrene	1	1.72

Table 6. Procedures done

PROCEDURES	FREQUENCY	PERCENTAGE
ORIF + BG	44	75.88
Corrective Osteotomy	5	8.6
Ilizarove	5	8.6
MUA	2	3.46
Debridement	1	1.73
Amputation	1	1.73

IV. Discussion

Human civilisation has moved a far away from the stone era to this scientific era. There have been so many developments in the health care system due to incorporation modern infrastructure, modern equipment and new skilled and equipped man force. Still the prevalence of traditional based conservative therapy in this developing world attracts the attention of many patients of musculoskeletal injuries[3]. In our present study we have included total of 58 such cases which have taken treatment from traditional based conservative therapy, and eventually landed in some form of complication and ended up in surgery. When we analysed the results after interacting thoroughly with the pts, cost (51.72%) of therapy was the issue for them not to accept the modern therapy[4, 5, 6]. But later again they have accepted the modern treatment , which costed them more along with delay in getting treated and getting full functionality, and making the job more difficult for the surgeon. Management of an old fracture (malunion or nonunion) is more time consuming and cumbersome procedure. Increase in duration of surgery and intra-operative blood loss have more adverse effects on the physiological condition of the patients. Out of 58 cases 47 (81.03%) case had visited any institution or hospital or doctor, but for somehow they could not get the modern medical therapy. Again analysing this fact we came across that due lack of infrastructure and long waiting period at the govt. institutions and increased cost of treatment at the pvt. hospitals made them to accept the traditional conservative therapy, and eventually when landed up in complications. They were again compelled to accept the modern therapy after getting drained out of the money and time at the TCTs. Some of them initially never visited the hospital in the fear of surgery presuming that visiting doctors would put knife on them and directly contacted the traditional bone setters, and many of them flew after consulting the doctor in the fear of being operated. In our study 33 out of 58 are APL, well affording, cost of therapy may be cause but not the sole cause for accepting TCTs. Out of 58 pt s 38 (65.52%) were educated. and only 34.48% are uneducated, so level of education also could not be counted as the cause for this. After being referred or regretted from initial hospital setup, they are coming under the trap of the TCT providers, in the hope that they will get cured up without the touch of knife. The traditional bone setters used to apply some paste like material surrounding the fracture site, tightly apply with some cotton cloth with or without bracing with bamboo or some wooden sticks without any knowledge of anatomy and physiology without following the principle of immobilization (one joint above and below) in the view that leaving them free will help the patient to gain functionality early[7, 8, 9]. But adversely it increases the mobility at fracture site either lead to large amount of extra callous formation and mal union, or atrophic non-union with pseudoarthrosis with large amount of fibrous tissue surrounding the fracture ends and atrophy of muscles and surrounding skin and subcutaneous tissue with scaring which becomes a hurdle even after any surgical procedure they undergo in future.

In our study most common complication we encountered was non-union (28/58; 48.27%, both atrophic (18/28) and hypertrophic (10/28) type. Malunion in (24/58; 41.37%) case. One young boy presented after 3 weeks of trauma with gangrene, for which he has to lose his limb[10, 11] . In most of the cases an additional procedure in the form of bone grafting was needed which was either harvested from the iliac crest a or from the fibula, with gave the patient additional morbidity which could have been avoided, had them been managed at fresh stage and further increasing operative time and blood loss and increased hospital stay for rehabilitation purpose. Even after every possible effort, still to provide the patient full functionality becoming a challenge[12].

V. Conclusion

With no offence to anyone, to avoid such avoidable complications we all have to take the responsibility on our shoulders, not just treating the patient; making the patient and their relatives aware of these complications like loss of time, money, and functionality of the patients is very essential. Govt should take

appropriate steps to increase the infrastructure to provide health care to patients as easily and early as possible. We surgeons should create awareness among the patients and apprise them of modern surgical procedures and safe anaesthesia practices to reduce fear of surgery. Moreover traditional bone setters should not be barred from giving primary care to the patients but with the knowledge of basic principles of primary management of fracture and timely reference to the patients to take medical advice without just misleading them and exploiting them[13, 14].

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