Research Paper

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Different Modalities of Treatment in Floating Knee Injury – A Research Paper

MEDICAL SCIENCE

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DR. PRASHANT TRIPATHI	RESIDENT DOCTOR DEPARTMENT OF ORTHOPAEDICS GMC BHAVNAGAR
DR.PINAKIN I VORA	ASSOCIATE PROFESSOR DEPARTMENT OF ORTHOPAEDICS GMC,BHAVNAGAR
DR.SURESH PARMAR	SENIOR RESIDENT DEPARTMENT OF ORTHOPAEDICS GMC BHAVNAGAR
DR.DINESH AGARWAL	RESIDENT DOCTOR DEPARTMENT OF ORTHOPAEDICS GMC BHAVNAGAR
DR.PRERAK YADAV	RESIDENT DOCTOR DEPARTMENT OF ORTHOPAEDICS GMC BHAVNAGAR
DR.VATSAL PARMAR	RESIDENT DOCTOR DEPARTMENT OF ORTHOPAEDICS GMC BHAVNAGAR

ABSTRACT

"Allfracture, is an individual problem and the decision to treat it by internal fixation or indeed conservatively should be based on realistic assessment of the advantages and hazards of each method in circumstances of those particular cases .This calls for high degree of clinical judgment which is harder to acquire or to impart technical virtuosity in operating theatre".

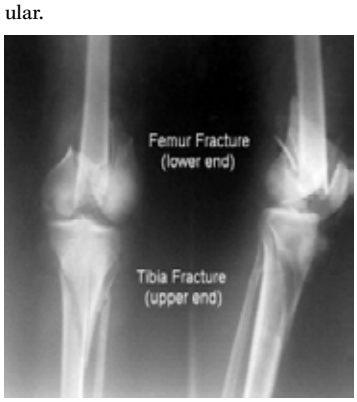
INTRODUCTION

Among all the open fractures tibia and femur is largest bone that is involved in open to the increase in vehicular accidents and industrial mishaps; high velocity trauma produces open tibial and femoral fractures. Stabilization of fractures by external fixations proved to be cumbersome, and high percentage of complication associated with casting and compression plating has led to increase in popularity of intramedullary nailing in tibia.

Ipsilateral fractures of femur and tibia have been called "FLOATING KNEE INJURY'" and may include combinations of diaphyseal, metaphyseal and intra articular fractures.

Floating Knee injuries are complex injuries. The type of fractures, soft tissue and associated injuries make this a challenging problem to manage. We present the outcome of these injuries after surgical management.

Collateral ligament and meniscus injuries may also be associated with this fracture complex. Complications (such as compartment syndrome, loss of knee motion, failure to diagnose knee ligament injury, and the need for amputation) are frequent. Better results and fewer complications are observed when both fractures are in diaphysis than when one or both are intra-articular.



This is supracondylar- femur with upper-end tibia, with inter-condoyle extension

CASE REPORT

I have studied 34 factures, in this 30 patients were used prospectively studied in our series having varying degree of open and closed floating knee injury .There were 04 patients died in emergency department due to associated injury like head, chest and abdominal injury

OBSERVATION AND DISCUSSION

The associated injuries and the type of fracture (open, intra-articular, communation) are prognostic indicators in the Floating knee. Appropriate management of the associated injuries, external fixator, intramedullary nailing of both the fractures and post operative rehabilitation are necessary for good final outcome. In children with ipsilateral femoral and tibial fractures, far better results were seen after operative treatment of their injurieS

The best results were seen when both fractures were treated by intramedullary nailing. We found that these patients returned to their normal level of activity earlier than when the fractures were treated with other modalities. Tibia fractures treated with external fixation had a longer union time probably related to the soft tissue injury and comminution at the initial injury. In our study patients with tibia plateau fractures who had knee stiffness and persisting pain in the knee while the other patient had a Grade 3B open tibia fracture treated by external fixation. This shows that the poor prognostic factors were related to the type of fracture (open or closed, intra-articular fractures, severe comminution).

Omer GE treated the, Floating Knee by both conservative and operative fixation found that where internal fixation was done for both femoral and tibia fractures, the healing time was about 8 weeks earlier than the group managed conservatively. Behr JT treated patients with the Floating knee by closed intramedullary nailing with Ender nails and achieved femoral union at an average of 10.3 weeks and tibial union at 18 weeks. Ostrum RF treated patients with a retrograde femoral tibial intramedullary nail through a 4 cm medial Para patellar incision. The average time to union of the femoral fractures was 14.7 weeks and that for the tibial fractures was 23 weeks. They opined that this method was an excellent treatment option. The general consensus in recent studies is that the best management for the Floating knee is surgical fixation of both the fractures with intramed-

ullary nails.

Table1. Classification according to Gustilo-Anderson

	No.	Percentage
Closed	5	14.70%
Open grade I	5	14.70%
Open grade II	7	20.58%
Open grade IIIABC	17	50.00%
Total	34	100%

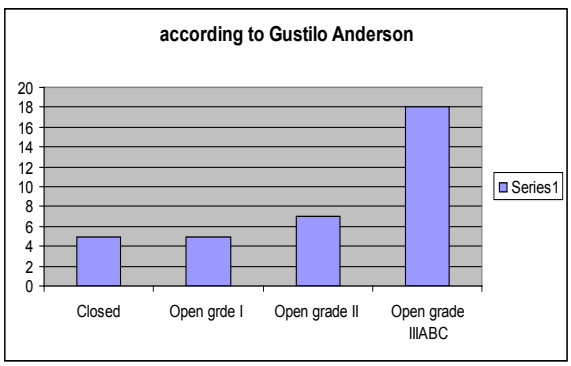


Table2. Associated injuries:

Associated injuries	No	Percentage
Head injury	4	11.76%
Systemic injury(abdominal injury)	2	05.88%
Associated fractures	3	08.82%

CONCLUSION

In this series, Total 34 fractures in 30 patients were used prospectively studied in our series having varying degree of open and closed floating knee injury.

There were 04 patients died in emergency department due to severe head injury, chest injury and abdominal injury and neurovascular injury.

Mean age in the present series is 38.43 years.

There are more male patients than female (male 33 and female02)

Road traffic injury is the most common cause mode of injury leading to floating knee injury.

95 % patients had open fractures.

8o% patients having ligamentous injury.

Majority of patients were operated within 72 hours of the injury.

85% patients required secondary bony procedure like bone grafting like autologous, artificial bone graft.

85 % patients required secondary plastic surgery procedures like split thickness graft and flaps and other like quadricepsplasty

60% patients having post traumatic chronic osteomyelitis with infection. The associated injuries and the type of fracture (open, intra-articular, comminution) were prognostic indicators in the Floating knee. Rehabilitation was very slow and loss of wages in terms of occupational disability was significanantly reduced.

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