

Outcome Analysis Of Pelvic Fractures In Tertiary Care Health Centre

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Abstract:

Background: Pelvic ring fractures represent 3-8% of all selected injury and have a high mortality rate of around 20%. In Polytrauma patients the occurrence of Pelvis ring fractures is higher which is observed in 20-25%. In young individuals it occurs as a consequence of high energy trauma. The main aim of this study is to assess the functional outcome of pelvic fractures managed operatively and conservatively and providing a basic local data regarding pelvic fracture management and results obtained.

Objectives: The main objectives are to note the functional outcome using Majeed pelvic score and to assess the radiological outcome by using suitable parameters.

Methodology: This is an observational study in which a minimum of 25 patients presented as pelvic fracture in Casualty of AVBRH are admitted in orthopaedic ward. This study will include both prospective and retrospective domains. Retrospective cases from January 2015 will be enrolled and the data will be collected from MRD department as well as telephonic calls. Period of study is From July 2019 to September 2021 and collection of data is from July 2015 to June 2021. Fracture pattern will be classified as per the Tile's classification and the functional outcome of patients managed operatively and conservatively will be assessed as per Majeed pelvic score.

Expected outcome: By this study we expect that the patients having high intensity injury if managed operatively will have better outcome as compared to the conservative ones.

Keywords: Fracture Pelvis, Acetabulum, Outcome, Tertiary care

1. INTRODUCTION:

Pelvis ring fractures have increased considerably now a days. Pelvic ring fractures represent 3-8% of all selected injury and have a high mortality rate of around 20%^{1,2}. In Polytrauma patients the occurrence of Pelvis ring fractures is higher which is observed in 20-25%.^{3,4,5} In young individuals it occurs as a consequence of high energy trauma like car and motorcycle accidents or falls from great heights⁶.

Pelvic ring fractures are classified by TILE'S classification⁷. Pelvic fracture can be managed operatively and non-operatively. Operative management may involve fixation of anterior as well as posterior part of pelvic ring⁸. Pelvic surgeries require specialised training of orthopaedic

surgeons.

Results after operative management also may not give good function to the patient. Surgical management of pelvic fractures is not being done in all the health care centres. Conservative management is done by traction, rest, mobilisation and closed manipulation.

Pelvic fractures have been studied less in our centre. There is no local data regarding pelvic fracture management and results obtained. Hence the present study topic has been chosen.

The present study is aimed to study the demographic factors, injury pattern and pelvic fracture management and its outcome in a tertiary care rural health centre in the central India.

Objectives:

- To study the demographic factors of patients of pelvic fractures.
- To identify the mechanism of injury causing fracture and to classify the fracture pelvis as per Tile's classification.
- To note the functional outcome by using Majeed pelvic score^{9,10}
- To assess radiological outcome by using suitable parameters.

2. METHOD :

It is an observational study in which 25 patients presenting with pelvic fracture in Casualty of AVBRH will be admitted in orthopaedic ward. This is a prospective type of study conducted between July 2019 to September 2021. All patients will be stabilised from the severe traumatic life threatening injury and later will be planned for evaluation for extent of injuries. After all basic investigations and radiological assessment will be done to evaluate the injuries. All these cases will be confirmed with pelvic fractures on basis of X-rays and CT scan of pelvis. These extensive pelvic fractures /injuries will be later classified on basis of Tile's classification and later subdivided into proper operative or non-operative treatment groups. All surgically treated patients will undergo internal fixation with plate/screws. And non-operative cases will be managed with traction, rest, mobilisation and closed manipulation. All 25 patients will be assessed on basis of Majeed pelvic score at 3weeks, 3 months and 6 months to analyse the functional outcome of patients managed operatively and conservatively¹⁰.

OBSERVATION AND RESULTS

Included patients data will be analysed and findings tabulated to depict demography, injury pattern, type of fractures, type of management and complication noted at the time of injury or during follow up. The functional results will be graded as per Majeed pelvic score. The data will be analysed using relevant statistical methods.

Expected outcome:

By this study we expect that the patients having high intensity if managed operatively will have better outcome as compared to the conservative ones. The fracture pattern type A as per Tile's classification have excellent outcome if managed properly conservatively also, type B shows good outcome with operative management and type C shows non promising results with operative management also.

3. DISCUSSION

Acetabular fractures are increasing considerably in developing countries as a result of rise in incidence of high energy trauma such as road traffic accidents. Acetabular fracture needs well-

planned treatment protocol for optimal outcome in both conservative and operative management. With the availability technical expertise and better imaging facilities including 3D CT Scan, operative options are available in developing countries also. Results after operative management also may not give good function to the patient as well. Operative management of acetabular fracture is a challenging task and it demands high level of technical skill, better understanding of three dimensional pelvi-acetabular anatomy and team of orthopaedic, general surgeon and anaesthetist and intensive care unit for effective management of fracture itself and concomitant other major abdominal visceral injuries and other complications. We classified pelvic fractures coming in a tertiary care centre and their proper line of treatment. This will provide a local data for pelvic fractures which are increasing in rural areas too. The functional outcome assessed by Majeed score includes pain, work, sitting, standing providing a quality data for choosing treatment plan in a particular fracture pattern. Presence of systemic disorders like hypertension^{11,12,13}, diabetes^{14,15,16} also play a key role in fracture healing and treatment of these underlying entities needs to be addressed properly. Few of the other related studies on bone and joint disorders are available

^{17,18}. Few evidences from Global burden of disease study also reflected on related issues^{19,20}.

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