



Case Report

Update on open reduction and internal fixation of unstable pelvic fractures during pregnancy: case reports[☆]

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ABSTRACT

This article aims to report four cases of unstable pelvic fractures in pregnant women treated by open reduction and internal fixation.

Cases report: The study included four cases of pregnant women with unstable pelvic fractures; their outcomes were analyzed and discussed. Data were obtained from two University Hospitals. The mean age of women was 23 years; most (3/4) were primiparous, with a mean pregnancy age of 23 weeks. Two women had Malgaigne-type fractures and the other two had symphyseal disjunction associated with acetabular fractures. All fractures were treated surgically. One foetus was dead on admission to hospital. The other three developed well, along with their mothers. Good evolution was only possible with careful pre-, peri-, and postoperative care for the mother, as well as foetal assessment by a multidisciplinary team. In complex cases such as those presented in the present study, pre-, peri-, and postoperative care are mandatory, as well as the presence of a multidisciplinary team. The mother's life always takes priority in acute clinical pictures, as it offers the best chance of survival to both mother and child.

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Redução aberta e fixação interna em fraturas da pelve instáveis durante a gestação: relato de casos

R E S U M O

Palavras-chave:
Ossos pélvicos
Fraturas osséas
Gestação

O objetivo deste trabalho é relatar quatro casos de fraturas pélvicas instáveis em mulheres grávidas tratadas com redução aberta e fixação interna.

Relato dos casos: Foram considerados neste estudo quatro casos de mulheres gestantes com fraturas instáveis da pelve, sendo analisados e discutidos os seus desfechos. Os dados foram obtidos em dois hospitais universitários. A idade média das mulheres foi de 23 anos. A maioria delas (3/4) era primípara, com idade gestacional média de 23 semanas. Duas mulheres tiveram fraturas do tipo Malgaigne e as outras duas apresentaram disjunção da sínfise associada a fraturas do acetábulo. Todas as fraturas foram tratadas cirurgicamente. Um feto estava morto no momento da admissão ao hospital. Os outros três evoluíram bem, junto com suas mães. A boa evolução dos quadros só foi possível com o cuidado pré-, peri- e pós-operatório das gestantes e com a avaliação dos fetos por uma equipe multidisciplinar. Em casos complexos como os abordados neste artigo, são imprescindíveis os cuidados pré-, peri- e pós-operatórios, além da presença de uma equipe multidisciplinar. A vida da mãe tem sempre prioridade no quadro agudo, pois oferece a melhor chance de sobrevivência para a mãe e a criança.

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Introduction

Malgaigne described the double vertical fracture of the pelvis in a seminal article of 1855.¹ The fracture had occurred in a 34-year-old pregnant patient, who died in hospital during delivery.

Pelvic fractures are common injuries in a mechanized society, and often occur in younger people. It is a rare type of fracture during pregnancy among developed nations, as such patients are well protected by themselves and by society. The modern literature on pelvic fractures during pregnancy recommends only conservative treatment. We have not found any description of them during pregnancy, except for the surgical treatment of Malgaigne-type fractures.

This article aims to report four cases of unstable pelvic fractures in pregnant women treated by open reduction and internal fixation.

Report of cases

The study considered four cases of pregnant women with unstable pelvic fractures. Cases were retrospectively analyzed from two University Hospital records. Foetal and mothers conditions at the time of admittance, description of lesions of acetabular/pelvis fractures, type of fractures, performed surgery, pre, intra and post-operatively care, and mother and foetus outcomes were analyzed. The inclusion criteria were pregnant women with unstable pelvic fractures. A literature review considering the subject was performed.

Table 1 and Figs. 1-4 present demographic findings on the four patients and their foetus, including foetal and mothers conditions at the time of admittance, description of lesions of acetabular/pelvis fractures/type of fractures, performed

surgery, and mother and foetus outcomes were analyzed. The mean age of the women was 23 years; most of them (3/4) were primiparous with a mean pregnancy age of 23 weeks. Two (2/2) women had Malgaigne-type fractures and the other two (2/2) had symphyseal disjunction associated with acetabular fractures.

Considering the first case, the woman was 17 years old. Patient was run over and joined the emergence of hospital with back pain, pelvis pain and the inability to walk. She referred she was pregnant with ± 25 weeks, first baby. The radiological evaluation showed fracture with small wedging L4 and disjunction with pelvic right side ascension. Foetal ultrasound evaluation proven foetal viability with normal heartbeats. After two days, under general anaesthesia, she was operated with reduction of the disjunction and fixing it with two perpendicular plates. After surgery, she was monitored in orthopaedics and obstetrics clinic. At 37 weeks it was performed a caesarean, and a girl was born with 3140 g and Apgar 10. After follow-up of 15 years, mother and daughter are completely healthy (Harris Hip Score = 100).

In case 2, the woman was 25 years old. After a motorcycle fall, patient arrived unconscious in the hospital. Her family reports pregnancy status. Radiological examination showed disjunction with pelvic symphysis ascension. Obstetric ultrasound diagnosed foetal death with ± 16 weeks of gestation. After a week, with clinical and neurological release, surgery was performed with osteosynthesis with two perpendicular plates to fix the symphysis, and the sacral-iliac fixation was done with a plate and two screws. After two days, the patient was transferred to obstetrics, to voluntarily wait for the elimination of the foetus. The deliberate elimination did not occur, and then it was induced with oxytocin. Five days after curettage was performed. After 15 years of follow up, the patient presents Harris Hip Score of 100.

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