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Original research article

A study of pelvic fractures in women of childbearing age

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Abstract

Pelvic fractures represent serious harm. Women who are of reproductive age who have had pelvic fractures sometimes wonder if they will be able to have children and if so, what kind of delivery options will be available to them.

Keywords: Pelvic, fracture, features, women, childbearing, age

Introduction

Fractures of the pelvis are a serious injury that can have long-term implications for both function and the economy. There is a possibility of both short-term and long-term impacts on the genitourinary and reproductive systems being caused by associated complications [1, 2, 11]. When it comes to women of childbearing age, pelvic trauma might potentially have far-reaching consequences. These women worry, as one would expect, about the discomfort associated with sexual encounters and the question of whether or not they can have children. They are concerned about how their pelvic fracture may affect the kinds of childbirth options available to them. In addition, there is a growing body of research that reports an increased incidence of posttraumatic stress disorder and a decline in functional outcomes among female trauma patients [3, 4, 8, 16]. The term "pelvic ring disruption" refers to a spectrum of injuries, some of which can be treated without the need for surgery, while others must undergo surgical stabilisation and are considered to be life-threatening. There are also many different procedures for stabilisation, ranging from those that are minimally invasive and percutaneous [5] to those that involve fixation spanning the pubic symphysis [5, 6, 7, 18] and/or the sacroiliac joints [5, 9, 10, 18]. In addition, after sustaining a pelvic fracture, women may experience negative thoughts about themselves, which may appear in lower functional outcome ratings [2, 11, 12, 13, 14, 17]. There is a common misconception, prevalent even among obstetricians, that women who have had pelvic fractures are unable to give birth vaginally [3, 6, 10, 15, 16, 18]. When an obstetrician learns of a woman's history of pelvic fracture, there is a good possibility that she will not even be given the opportunity to have a trial labour [2]. However, the non-operative therapy of these fractures or the surgical treatment with iliac wing fixation, an external fixator, and/or ramus screws should not impact the proportions of the pelvis or the mobility of the symphysis and the sacroiliac joints in most cases. It is possible that there is cause for concern if there is fixation across the pubic symphysis and perhaps the sacroiliac joints. This is because the mobility of the symphysis and sacroiliac joints is critical throughout the delivery process. It is not entirely apparent, however, whether pelvic fractures or the treatments for them do in fact impede with the delivery process.

Aims and Objectives

This study was done in the Department of OBG along with the help of Department of Orthopedics, Kamineni Institute of Medical Sciences, Andhra Pradesh. The study was done from Oct 2014 to Oct 2016.

Inclusion criteria

- Females in child bearing age group.

Exclusion criteria

- Menopause.
- Pre-Menopause.
- Before menarche.
- Pelvic congenital anomalies.

We classified fractures according to the Burgess *et al.* classification (sometimes mentioned in the literature as “Young-Burgess”). We reviewed the medical records for treatment of their pelvic fracture. If

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the patient had surgery, details regarding the surgery and type of fixation used were recorded, including the use of unilateral/bilateral sacroiliac screws, iliac wing fixation, rami screws (unilateral or bilateral), trans symphyseal plating, and/or use of an external fixator.

Results

Table 1: Mean age of the patients

Number	Mean age	Std. deviation
60	31.82 years	2.89 years

Table 2: Surgeries carried out

Anterior pubic plating	04
Ramus screws	
Unilateral	17
Bilateral	02
Sacroiliac screw	
Ubilateral	09
Bilateral	07
Iliac wing fixation	02

Table 3: SF 12 scores and surgical fixation

	Surgery	No surgery	Sig
Physical	3.98	6.03	Not sig
Mental	5.38	7.02	Not sig

Table 4: SF 12 scores in women who had children after pelvic fracture

Children	No Children	Sig
66%	34%	Not sig

Discussion

It is common knowledge that fractures to the pelvis can interfere with genitourinary function. Urinary symptoms were more common, particularly in female patients who had persistent pelvic fracture displacement [2]. During the course of our research, we examined the patterns of fractures but did not record any residual displacement. We discovered that almost half of the women who had pelvic fractures (49%) also had one or more genitourinary problems, and this was not connected to the pattern or stability of the fractures in any way. There is only one article in the body of research that particularly addresses female genitourinary problems following pelvic trauma. This indicates that the area is not well addressed. Copeland and colleagues discovered that women had a significantly higher risk of having multiple urinary complaints out of a total of 57 complaints found in 26 individuals [2]. In her study, the overall rate of urinary complaints was 21%, which was significantly higher than the rate in the control group [2]. There were very few genitourinary injuries recorded in that cohort, and it is possible that subclinical injuries to the soft tissues or extended urine catheterization were the factors that contributed [2]. We did not assess the length of time that our patients were required to utilise urinary catheters or the related soft tissue injury. Overall, one would not predict a 49% rate of urine complaints in the absence of direct genitourinary injuries such as a ruptured bladder or a lacerated vaginal canal; nevertheless, it is possible that this is not adequately evaluated or asked about during the post-injury follow-up. The influence that traumatic experiences have on a person's ability to operate is garnering an increasing amount of attention. Validated outcome measures are utilised in this process. The SF36 was utilised in a study of female patients who had serious lower extremity trauma as well as female patients who had pelvic fractures, and the results were compared to age-standardized norms. Overall, the patients' scores were much lower, and this was true across all dimensions [11]. In our research, we investigated for correlations between fracture type and therapy and any changes in the outcomes. Overall scores did not differ in any way, as far as we could tell. The total SF12 scores, on the other hand, were shown to be greater in women who had children after sustaining a pelvic fracture. This finding was not what anyone expected, especially taking into account the fact that women have a greater risk of posttraumatic stress disorder and that postpartum depression can develop [4, 8, 16]. From the time of the traumatic event to the completion of the forms by the patients, an average of six years passed. It's possible that the longer amount of time that has passed since the traumatic event and the presence of a child both contributed to the superior overall functional outcome score.

Conclusion

Overall, there is a paucity of data and a variety of published opinions regarding childbirth after pelvic

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fractures. Our data suggest the cesarean section rate is more than double standard norms, but vaginal delivery after pelvic fracture, even in those treated with surgical fixation sparing the pubic symphysis, is possible.

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