

Monolateral External Fixation for the Treatment of Hip Fractures

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In our department, most of these fractures are treated with internal fixation. However, in some percentage there is the need to use a monolateral external fixator, in order to minimize complications that would lead to greater mortality. This percentage includes life-threatening conditions as severe trauma patients, elderly patients with poor anaesthetic conditions, etc.

This understanding lead to the investigation and development of a monolateral external fixation system with the purpose of:

- 1- Shortening the anaesthetic time
- 2- External fixation under local anaesthesia
- 3- Shortening the surgical time
- 4- Early mobilization of the patient

This study was developed at the Hospital Municipal "Dr. Eduardo Wilde", Avellaneda-Buenos Aires-Argentina, witch includes a Trauma Investigation Centre where we investigated and developed a monolateral external fixation system for fracture treatment, including hip fractures.

Based on the results of these studies, we classify the surgical indications as absolute and relative:

- A- Absolute: open fractures of the proximal femur, severe trauma patients, poor anaesthetic conditions
- B- Relative: comminute fractures, delay or lack of osteosynthesis hardware

Since 1992 we treated a total of 52 hip fractures with monolateral external fixation: 21 female (40,4%), and 31 male (59,6%).

The average age for females was 78 years old (60-96), and 61 for males (40- 82).

Regarding the surgical indications:

- I. 12 cases (24%) unable general anaesthesia
- II. 33 cases (64%) delay of hardware
- III. 6 cases (12%) comminute fracture

10 cases had local anaesthesia; 14 cases had general anaesthesia, and 27 cases had anaesthetic blockage.

Regarding the post-operative, we have a protocol that includes bed active movement during the first 24 hours, sitting at the bedside at 48 hours, getting out of bed with crutches at 72 hours and walking with 30% load by the end of the first month. Full load after fixator removal.

The minimal external fixation time was 66 days, the maximal of 154 days (96,8 average).

Example: 78 years old patient, closed right hip fracture, with coronary heart disease, witch unable a general anaesthesia

He was submitted to monolateral external fixation, under local anaesthesia.



Lateral side of external fixator



Radiological final results



Clinical final results



Of our experience, with no discredit for the methods of internal fixation, we believe that external fixation is a valid alternative to manage these kinds of fractures, whenever the medical problems of the patient don't allow a major surgery.