

# Is Surgery a Good Choice for Patients over 100 Years with Hip Fracture?

Bogdan Deleanu<sup>1,2</sup>, Radu Prejbeanu<sup>1,2</sup>, Dinu Vermesan<sup>1,2</sup>, Lucian Honcea<sup>1\*</sup>, Cristina Nuta<sup>3</sup>, Vlad Predescu<sup>4</sup>

<sup>1</sup>Orthopedics and Traumatology Clinic, Emergency Clinical County Hospital, Timisoara, Romania

<sup>2</sup>Victor Babes University of Medicine and Pharmacy, Timisoara, Romania

<sup>3</sup>Orthopedics Functional Recovery Compartment, Emergency Clinical County Hospital, Timisoara, Romania

<sup>4</sup>St. Pantelimon Emergency Hospital, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Email: \*[lucianhoncea@gmail.com](mailto:lucianhoncea@gmail.com)

Received 24 June 2015; accepted 18 August 2015; published 21 August 2015

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## Abstract

**Introduction:** Elderly patients represent a difficult category of surgical candidates for orthopedic surgery because they have multiple associated diseases and a high degree of osteoporosis. **Presentation of Case:** We present the case of a 103 years old woman with a pertrochanteric hip fracture treated successfully using a 135° dynamic hip screw. **Discussion:** There are many discussions about this kind of patients regarding postoperative complications, duration of hospitalization, stage of recovery and the patient's status at discharge. **Conclusion:** We conclude that surgery may benefit patients who are over 100 year-old.

## Keywords

Osteoporosis, Age, Rehabilitation, Complications

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## 1. Introduction

Hip fractures are very common in the elderly due to osteoporosis and multiple associated diseases. These fractures increase the risk of morbidity and mortality in this group of persons. A very important thing is the ASA classification which shows an evaluation of the patient's preoperative physical status [1]. There is an important correlation between ASA class and morbidity. We report a case of a pertrochanteric fracture in a patient very elderly.

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\*Corresponding author.

## 2. Case Presentation

We are about to discuss the case of a 103 years old female patient who presented to our Emergency Department with a severe pain in the left hip and inability to walk. The patient has multiple cardiac diseases like hypertension III degree, ischemic heart disease and osteoporosis, diabetes and no history of surgery. We concluded that according to ASA classification this patient is in ASA class III. A pelvic radiograph showed pertrochanteric fracture on left hip Evans II classification (**Figure 1**). She underwent open reduction and internal fixation of the left hip with a 135° dynamic hip screw (**Figure 2**).

Postoperatively she stayed 14 days in the hospital and the hip pain significantly improved. Second day postoperative was initiated a recovery plan, including placing on bedside. Partial weight bearing on the left was initiated on the third day postoperative and maintained for the first 6 weeks. At 45 days the radiographs showed no loss of fixation and the patient walked with walker support and the HHS (Harris Hip Score) was 66. At 4 months the radiographs showed union of the left hip fracture and the patient walked with a cane and the HHS was 74. The HHS (Harris Hip Score) was 78 at one year, growth potential in the coming months, which we consider a good score for patient age.



**Figure 1.** Preoperative radiograph.



**Figure 2.** Postoperative radiograph.

### 3. Discussion

Ridge *et al.* [2] demonstrated in a cohort study on 100 patients that there is no significant difference in tolerating the hip fracture surgery between population over 90 years and younger population. Some studies revealed that surgery followed by rehabilitation is recommended in patients over 90 years with hip fracture [3] [4].

Many studies have concentrated on factors that lead to postoperative complications and factors that affecting recovery of elderly patients after hip fracture [5] [6].

Duration of hospitalization is higher in older patients than in younger patients after hip fracture surgery [5]. Due to multiple diseases associated the patients over 90 years have a good chance to die during hospitalization [3]-[7].

The most important thing after hip fractures surgery is the patient's stage of recovery. In this stage of recovery some patients were able to walk without aid and were independents, some went with support (with a cane or a walker) and a small percentage of them were bedridden [8]. Ishida *et al.* [9] revealed that 45% of patients 90 years and older were able to walk without aid.

The patient's status at discharge, after surgery and rehabilitation treatment is also important. The patients over 90 years have significant chances to have a decrease in their basic activities of daily living status, because some patients never recover the pre-injury functional level [5] [10]. Arinzon *et al.* [11] suggested that average length of stay for rehabilitation was significantly higher in elderly patients.

### 4. Conclusion

In our opinion at this age we required surgical treatment if the patient walked before fall to avoid many complications like: thromboembolism, decompensation of pre-existing diseases, bedsores, urinary tract infection and pneumonia.

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