



# International Journal of Orthopaedics Sciences

E-ISSN: 2395-1958  
P-ISSN: 2706-6630  
IJOS 2023; 9(1): 407-410  
© 2023 IJOS  
<https://www.orthopaper.com>  
Received: 16-12-2022  
Accepted: 18-01-2023

**Camara T**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Bah ML**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Sidibé M**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Sylla FM**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Madjirabé H**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Keita K**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

**Lamah L**  
Department of Orthopedics,  
Traumatology the CHU Donka  
Conakry, Guinea

**Corresponding Author:**  
**Camara T**  
Department of Orthopedic,  
Traumatology the CHU  
IGNACE Deen Conakry, Guinea

## Problem of the operative management of elderly people aged 65 and over in the orthopedic-traumatology department of the IGNACE Deen Chu in Conakry

**Camara T, Bah ML, Sidibé M, Sylla FM, Madjirabé H, Keita K and Lamah L**

**DOI:** <https://doi.org/10.22271/ortho.2023.v9.i1f.3324>

### Abstract

**Introduction:** Aging is the set of gradual, irreversible physiological and psychological processes of progressive change in all the structures and functions of the body. The impact of such a change on a person's quality of life depends mainly on the socio-cultural background. The objective of this study was to report the experience of our service in the care of people aged 65 and over.

**Patients and methods:** This descriptive prospective study lasted three years, from January 2018 to December 2020. It focused on patients aged 65 and over who were received, operated on and followed.

**Results:** We hospitalized 102 older people, i.e. a frequency of 8.98% of all hospitalizations. There were 44 men and 58 women with a sex ratio of 0.76 and an average age of  $74.04 \pm 7.79$  years. The fractures of the trochanteric massif were the most found pathology at 39.21%, and the domestic accident was the most evoked aetiology is 56.80%. The patients were previously semi-autonomous, 77.50%. Dynamic hip screws (DHS) were the most used implant in 30.39%. According to the postoperative Parker score, 43.60% of the patients walked without a cane.

**Conclusion:** The elderly are at risk of complications due to their fragility and comorbidities related to physiological changes. The best therapeutic option is surgery, allowing early mobilization and lifting of these patients.

**Keywords:** Problems, care, older people

### Introduction

Ageing is the set of gradual, irreversible physiological and psychological processes of gradual change in all structures and functions of the body. The impact of such a change on a person's quality of life depends mainly on the socio-cultural background [1].

The problems related to the ageing of people in Orthopedics-Traumatology are multiple, characterized by the patient's general condition, numerous comorbidities, poly medication, and bone and skin fragility. This phenomenon creates a vicious circle [2].

This makes elderly subjects a group at risk of complications and morbidities with significant socio-economic impact. Their operative management requires collaboration between the surgeon and the anaesthetist, who must take into account the fragility of this category of people to minimize per and postoperative complications [3].

The innovation of anaesthetic and surgical techniques over the past ten years has improved the quality of operative care for the elderly [4].

Orthopedic and traumatological pathologies represent the second cause of hospitalization in our service.

Fractures of the upper extremity of the femur hold a special place among all the pathologies most encountered in the elderly subject in orthopaedics. They are the complication of osteoporosis; they occur after a low-energy trauma involving these patients' vital and functional prognosis [5].

The consequences of these pathologies are not negligible; about 20% of operated patients will present postoperative complications with a socio-economic challenge in low-income countries [6, 7].

The objective of this work was to report the experience of our service in the surgical care of the elderly.

**Patients and Methods**

This was a descriptive-type prospective study lasting three years, from January 2018 to December 2020. It focused on elderly patients, hospitalized, operated on and followed up in our department. For this, we studied quantitative (age) and qualitative (sex, preoperative diagnosis, previous autonomy, etiologies, type of osteosynthesis material used, complication and postoperative Parker score) variables. We targeted and studied all patients aged 65 and over with musculoskeletal system pathologies.

Clinically, the initial lesions were represented by fractures of the trochanteric massif, diaphyseal fractures of the femur, fractures of the femoral neck, open fractures of the leg, gangrene of the foot, fractures of the humeral paddle and hip osteoarthritis.

All patients performed an X-ray according to the affected limb to type the lesions.

On the therapeutic level, all the patients were seen in pre-anaesthetic consultation, which allowed us to divide them according to the American Society of Anesthesiologists

(ASA) score into three groups (ASA 1; ASA 2 and ASA 3). Spinal anaesthesia was performed in more than half of the patients, followed by general anaesthesia and epidural. Indications for osteosynthesis, amputation and arthroplasty have been performed for certain fractures, cases of gangrene and fractures of the femoral neck. Trimming associated with detoxification was reserved for open fractures.

We encountered complications related to anaesthesia and those related to surgery. Intraoperatively, complications were dominated by arterial hypotension, hypothermia, hypoxia and haemorrhages. Hypotension was treated by fluid replacement and administration of a vasoconstrictor (ephedrine), and haemorrhage was treated by blood transfusion and placement of a tourniquet. In cases of hypothermia, patients were rewarmed and oxygenated in hypoxia. Postoperatively, anaemia was the most frequent complication, followed by cognitive disorders. Anaemia was managed by transfusion of whole blood or packed cells. We have recorded 8 cases of death.

The patients were reviewed and assessed according to the Parker score [8] after an average follow-up of 8 months and the extremes of 5 to 12 months.

**Table 1:** Mobility score of Parker [8]

Walking Ability	No Difficulty	Alone with an assistive device	With help from another person	Not at all
Able to walk inside house	3	2	1	0
Able to walk outside house	3	2	1	0
Able go to shopping, to a restaurant or to visit family	3	2	1	0

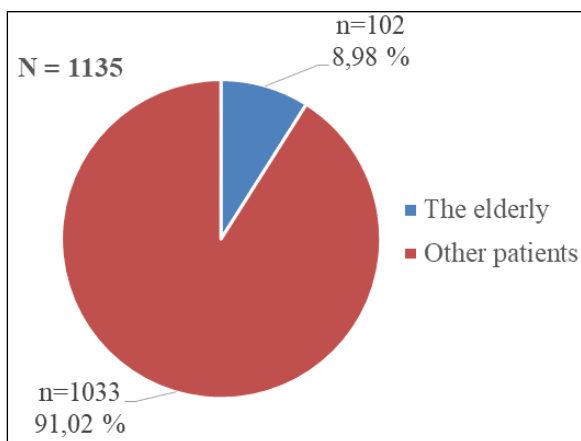
**Data sources:** Service registers, individual patient records, and survey forms.

The variables were calculated, and the results were presented as a percentage.

From an ethical point of view, the files were treated anonymously, and patient confidentiality was respected with the ethics committee's approval.

**Results**

Of 1135 hospitalized patients, 102 were older, i.e. a hospital frequency of 8.98%.



**Fig 1:** Frequency of elderly versus other patients

The age group of 65-74 years was the most affected, with an average age of 74.04±7.79 years and extremes of 65 and 101 years. The female predominance was 56.86% and a sex ratio of 0.76.

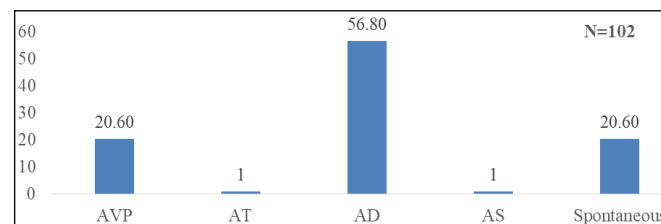
The fractures of the trochanteric massif were the most found pathology in 39.21%, followed by fractures of the diaphysis

and the femoral neck in 15.68% and 14.70%, respectively.

**Table 2:** Distribution of patients according to initial lesions

Initial lesions	Number	(%)
<b>Fracture of the trochanteric massif</b>	<b>40</b>	<b>39,21</b>
Diaphyseal fracture of the femur	16	15,68
Femoral neck fracture	15	14,70
Open fracture of both bones of the leg	9	8,82
Gangrene (dry and wet) of foot	9	8,82
Humeral paddle fracture	7	6,86
Coxarthrosis	6	5,88

Domestic accident was the most encountered aetiology in 56.80%.



AVP= Road accident, AT= Work accident, AD= Domestic accident AS= Sports accident.

**Fig 2:** Distribution of lesions according to aetiology

According to the ASA score, 60 patients had an ASA score of 2 (58.80%), 30 others had an ASA score of 1 (29.40%) and finally, 12 had an ASA score of 3 (11.80%).

According to prior autonomy, 77.50% of patients were semi-autonomous, 19.60% were autonomous and 2.90% were non-autonomous.

Therapeutically, spinal anaesthesia was used in 84.30% of patients, followed by general anaesthesia and epidural in 11.80% and 3.90%, respectively.

**Table 3:** Distribution of patients according to the type of implants

Type of implant	Number	(%)
130° Plate blade	1	0,98
Screw	1	0,98
H TP	2	1,96
Screwed plate	8	7,84
External Fixators	6	5,88
Intramedullary nail	8	7,84
DHS	31	30,39
95° Plate blade	9	8,82
BHP	4	3,92
Guy lines	1	0,98
Intermediate Prothesis (Moore)	22	21,56

Arterial hypotension was the most found intraoperative complication in 35.29%, followed by hypothermia and hypoxia in 28.43% and 15.68%, respectively.

**Table 4:** Distribution of patients according to intraoperative complications

Complications	Number	(%)
<b>Related to anaesthesia</b>		
Hypotension	36	35,29
Hypothermia	29	28,43
Hypoxia	16	15,68
Transfusion accident	4	3,92
Vomiting	4	3,92
Nausea	5	4,90
Diarrhea	7	6,86
Cardiac arrest	2	1,96
<b>Related to surgery</b>		
Hémorrhage	19	18,80

Postoperatively, anaemia was the most frequent complication in 18.16%, followed by cognitive disorders in 13.72%. We have recorded 8 cases of death.

**Table 5:** Distribution of patients according to postoperative complications

Complications	Number	(%)
<b>Anaemia</b>	<b>19</b>	<b>18,16</b>
Pressure ulcers (heel and buttocks)	2	1,96
Constipation	1	0,98
Dysuria	1	0,98
Sepsis	1	0,98
Sexual impotence	1	0,98
Cognitive disorders	14	13,72
Surgical site infection	3	2,94
Dismantling of implant	2	1,96
Death	8	7,84

According to the postoperative Parker score <sup>[8]</sup>, 43.60% of the patients walked without a cane, 35.20% used a cane, 19.10% walked with a walker, and 2.10% were in a wheelchair.

## Discussion

During our study, we collected 102 cases of hospitalization of the elderly out of a total of 1135 cases of all hospitalizations, i.e. a frequency of 8.98%.

In our series, the 65-74-year-old group was the most affected, i.e. 56.90%, with an average age of 74.04 years and extremes of 65 and 101 years. Since these slices are made up of older people, they are the least active layer. The female sex was the most affected, 56.86% of cases, with a sex ratio of 0.76%.

Our study recorded 40 cases of trochanteric fractures, i.e. 39.21%, followed by diaphyseal fractures of the femur and

fractures of the femoral neck, i.e. 15.68% and 14.70%. Ralphy MF *et al.* <sup>[9]</sup> 2018 found 30 cases of petrochanteric fractures. This confirms most of the statistics published so far: the fracture of the trochanteric massif is, above all, a pathology of older women. The occurrence of osteoporosis, the prominent and superficial situation of the trochanteric region of women, estrogen deficiency, the absence of protection during a fall and senile muscular atrophy would explain this high frequency of fractures of the trochanteric massif in women.

Domestic accidents constituted 56.80% of the causes of fracture of the upper extremity of the femur in the elderly. This frequency of falls could be explained by the fragility of these patients, who present serious challenges related to visual disorders and side effects due to taking certain medications such as (anti-hypertensives, sedatives, and antidepressants).

We evaluated the general preoperative condition of our patients by the ASA score. Sixty patients had an ASAII score of 58.80%, 30 patients of 29.40% ASA I and 12 patients had an ASAIII score of 11.80%. This could be explained by the ASA score reflecting the patient's pre-anaesthetic state. The higher the score, the greater the anaesthetic risk.

We recorded 79 semi-autonomous patients, i.e. 77.50%; 20 autonomous patients or 19.60% and three non-autonomous patients or 2.90%. This pre-fracture loss of autonomy could be explained by the fragility of this age group caused by comorbidities.

In our study, the therapeutic attitude was resolutely surgical for our patients. We considered the type of fracture according to the different classifications, the previous autonomy of the patients and the terrain.

The patients were operated on under spinal anaesthesia in 86 cases, i.e. 84.30%. This could be explained by the fact that spinal anaesthesia allows a rapid return of respiratory autonomy. It also helps to avoid extubation accidents and postoperative mental confusion and promotes good analgesia. Several types of implants were used during the surgical interventions. The DHS occupied the first place with 31 cases, followed by the intermediate prostheses (22 cases) and the blade plates 95° (nine cases). The intermediate prosthesis allows early support and reduces decubitus time.

We collected 39 cases of hypotension, or 35.29%, 29 cases of hypothermia or 28.43%, and 19 cases of haemorrhage or 18.80%. These results could be justified by the effect of spinal anaesthesia, which leads to arteriovenous vasodilation and distension of the captive blood storage sector in dependent areas. Hypothermia is increased by intraoperative hemodynamic variations related to anaesthesia and the ambient temperature of the operating room. Bleeding is linked to taking certain medications, such as anticoagulants and antiplatelet agents that promote blood loss intraoperatively.

We recorded 19 cases of anaemia, or 18.16% of patients who presented anaemia as the postoperative complication, followed by cognitive disorders in 14 cases or 13.72%. Specific chronic inflammatory pathologies and iron deficiency could explain the frequency of anaemia.

The functional result of our patients was evaluated according to the PARKER score <sup>[8]</sup>, 41 patients walked unaided, i.e. 43.60%, 33 patients walked with a cane, i.e. 35.20%, 18 patients walked with a walker, i.e. 19.10%, and two wheelchair patients, i.e. 2.10%. These results could be justified because we taught our patients to walk before the operation for those who were not autonomous.

On the evolutionary level, 47.50% good improvement in the care of the elderly in our service has been observed, with some difficulties encountered in practice. Mortality is still

high because we are dealing with an elderly population. In our series, we recorded eight deaths, including five women and three men with an average age of 80 years within a month. These deaths are due to hypovolemic shock (Six cases), septic shock (one case), and cardiogenic shock (one case). Boureau F *et al.* [10] in France reported six cases of death, one death immediately postoperatively by pulmonary embolism and five deaths between the second and sixth month. The number of deaths linked to hypovolemia shock in our study could be explained by several factors, including the decompensation of tares; delay in treatment; the lack of qualified personnel in the treatment of erythropoietin combined with iron, which makes it possible to reduce or avoid massive transfusion and transfusion accidents preoperatively, but also pre and postoperatively.

The limitations and difficulties of this study were:

- Difficulty obtaining informed consent from patients or their parents.
- Difficulty obtaining anaesthetic products.
- Problems related to the pre-anaesthetic consultation.
- Problem with equipment in operating rooms.
- The absence of a geriatrician in our structure.

Those who constitute a problem in the care of the elderly in our context.

### Conclusion

The proportion of older people is low compared to all the patients treated in our service. However, they constitute a group at risk of complications due to their fragility and comorbidities related to physiological changes. Surgical treatment remains the best therapeutic option in the event of the pathology of the musculoskeletal system because it allows them to be mobilized and lifted early. Despite the improvement in the quality of operative management compared to previous years, mortality remains high. It is necessary to organize a care chain coordinated by a multidisciplinary team to promote early re-autonomy in the postoperative period.

**Conflict of interest:** None

### References

1. Jaeger C, Cherin P. Les theories du vieillissement. *Médecine et longévité.* 2011;3(4):155-174. <https://doi.org/10.1016/j.mlong.2011.10.001>
2. Valcu CA, Kurth W, Remy B, *et al.* Les particularités de la traumatologie de l'appareil locomoteur chez le sujet gériatrique. *Rev Med Liège.* 2014;69(5-6):372- 376. [https://orbi.uliege.be/bitstream/20140506\\_25](https://orbi.uliege.be/bitstream/20140506_25)
3. Griffiths R, Beech F, Brown A, Dhese J, Foo I, Goodall J. Association of Anaesthetists of Great Britain and Ireland. Peri-operative care of the elderly: Association of Anaesthetists of Great Britain and Ireland. *Anaesthesia.* 2014;69(1):81-98. <https://doi.org/10.1111/anae.12524>
4. Maeda K, Saiki Y. Reconsideration of frailty in relation to surgical indication. *Gen Thorac Cardiovasc Surg.* 2018 Apr;66(4):201-213. Doi: 10.1007/s11748-017-0869-7. Epub 2017 Nov 23. PMID: 29170898.
5. Johnell O, Kanis JA. An estimate of the worldwide prevalence, mortality and disability associated with hip fracture. *Osteoporos Int.* 2004 Nov;15(11):897-902. doi: 10.1007/s00198-004-1627-0. Epub 2004 May 4. PMID: 15490120.
6. Oberlin P, Mouquet MC. Quels risques de décès à un an après une fracture du col? 2016;0948:1-6. <https://www.grio.org/documents/page187/actualites-professionnelles-250-1454612636.pdf>
7. Drees. 2016;0948:1-6. <https://www.grio.org/documents/page187/actualites-professionnelles-250-1454612636.pdf>
8. Tajeu GS, Delzell E, Smith W, Arora T, Curtis JR, Saag KG. Death, debility and destitution following hip fracture. *J Gerontol A Biol. Sci. Med Sci.* 2014 Mar;69(3):346-53. Doi:10.1093/gerona/glt105. Epub 2013 Jul 19. PMID: 23873945; PMCID: PMC3976138.
9. Voeten SC, Nijmeijer WS, Vermeer M, Schipper IB, Hegeman JH. DHFA Taskforce study group. Validation of the Fracture Mobility Score against the Parker Mobility Score in hip fracture patients. *Injury.* 2020 Feb;51(2):395-399. Doi:10.1016/j.injury.2019.10.035. Epub 2019 Oct 17. PMID: 31668574.
10. Ralahy MF, Randimbirinina ZL, Rafidiarison F, *et al.* Intérêts de la vis plaque DHS pour l'ostéosynthèse des fractures per trochantériennes au service de traumatologie du CHU Ampefiloha. *Revue Tropicale de Chirurgie.* 2018;11:1-5. <https://www.researchgate.net/publication/350123889>
11. Boureau F, Benad K, Putman S, Dereudre G, Kern G, Chantelot C. La prothèse totale de genou de première intention dans les fractures articulaire récentes du genou permet-elle le maintien d'une autonomie chez la personne âgée? Étude rétrospective de 21 cas. *Rev Chir Orthop.* 2015;101(8):646-650. <https://doi.org/10.1016/j.rcot.2015.10.006>.

#### How to Cite This Article

T Camara, ML Bah, M Sidibé, FM Sylla, H Madjirabé, K Keita, *et al.* Problem of the operative management of elderly people aged 65 and over in the orthopedic-traumatology department of the IGNACE Deen Chu in Conakry. *International Journal of Orthopaedics Sciences.* 2023;9(1):407-410.

#### Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.