Implmentation of an orthogeriatric program. Results of the first two years.

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Introduction: According with data from the Health Plan for Catalonia-2011, a total of 8,975 hospitalizations were related with hip fractures in patients 65 or older during 2010. Average stay of these patients is 11.4 days. Incidence of hip fracture is twice in women that of men and increases with age. In patients 75 to 84 years old, incidence is five times higher than patients 65 to 74.

A geriatric patient is defined as 65 or older, with multiple pathologies (> two chronic disease or in a terminal condition) with polypharmacy, with or without physical or mental limitations.

Hip fractures impact on both physical and cognitive function (more than half of the patients with cognitive impairment develop delirium).

Objectius:

1- To jointly design with the Traumatology Department of the Joan 23 Tarragona Hospital (acute-care hospital), an integrated action program in patients 70 or older with hip fracture with the aim of:

- To improve functional evolution of patients

- To reduce the length of stay in the acute-care hospital

- To initiate care to geriatric patients from the first day at the acute-care hospital and continue it until discharge from our social-health center.

- Multidisciplinary approach in the physical, mental and social fields

- To assess what the best health and social resources are at discharge from our center.

2- Implementation of the orthogeriatric program partir from September the first 2013

3- Avaluation of the program at two years of operation.

Methods: The orthogeriatrics Unit is composed of two physicians, one nurse and a social worker. At admission in the acute-care hospital, a first evaluation is performed with an integrated geriatric assessment: physical (Barthel score previous to admission), cognitive (Pfeiffer score) and social.
Daily follow-up of the patient, jointly with the Traumatology staff members and active prevention of the delirium, constipation, urinary tract infection (UTI) and pressure ulcers (PU).

Admission at social-health center at day five from surgery. The same day of admission, the physician-rehabilitator designs the strategy and evaluate the need of including occupational and psychologic aspects in the convalescence.

In February 2014 the pharmacist joins the team, undertaking the task of controlling the medication in accordance with the STOPP_STARR criteria.

**Results:**

1- First year of the ortogeriatric Unit (Sept 2013 to Sept 2014)

Total number of patients: 100

Mean age 84 years, range (71-99)

Gender: Female: 85 (85%); Male: 15 (15%)

Fifteen patients were diagnosed with delirium, out of 74 patients at risk (15% of the total of patients, 20% of the patients at risk).

Thirteen patients were diagnosed with constipation, out of 64 patients at risk (13% of the total, 20% of the patients at risk).

One patient was diagnosed with PU, out of 91 patients at risk.

The most frequent complication was anemia, which was observed in 11 patients (11%) and UTI in 3 patients (3%).

Four patients (4%) died during the process.

Destination on discharge: 57 patients (57%) were discharged to home and 7 (7%) to Nursing Care Facilities.

2- Second year of the ortogeriatric Unit (set 2014- set 2015)

Total number of patients: 142

Mean age 84 years range (71-98)

Gender: Female: 114 (80%); Male: 28 (20%)

Seventeen patients were diagnosed with delirium, out of 125 patients at risk (12% of the total of patients, 14% of the patients at risk).

Thirty patients were diagnosed with constipation, out of 134 patients at risk (21% of the total, 22% of the patients at risk).

Three patients were diagnosed with PU, out of 135 patients at risk (2.1%).

The most frequent complication was UTI which was observed in 24 patients (17%) and anemia in 10 patients (7%).
Two patients (2.8%) died during the process.

Destination on discharge: 74 patients (52%) were discharged to home and 11 (7.7%) to Elderly-Care Home.

From the pharmaological review according with the STOPP-STARR criteria, a high number of patients under regular treatment with benzodiazepines should be highlighted.

**Conclusions:** With the implementation of the orthogeriatry Unit:

1. In patients with high risk, a low incidence of postoperative complications (delirium, constipation, PU) has been observed.

2. Mean length of stay at acute-care hospital has decreased (from the 11.4 days expected according with the General Health Plan to a mean of 5 days).

3. Functional performance of the patients improved allowing a high percentage of patients achieving a discharge to home.

4. The percentage of deaths during the process decreased between the first and the second year.

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**Keywords:** orthogeriatric; hip fractures; social and healthcare; multidisciplinary; convalescence