Geriatric in Patient Profile at the Department of Internal Medicine at Niamey National Hospital, Niger

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Abstract:

Background: The ageing population in developing countries has brought a demographic and an epidemiological transition, with the impact of chronic diseases resulting from life style changes on the health status of the population. **Objective:** To describ a profile geriatrics patient, specifically to identify epidemiologic, clinical, etiologic and outcome of this group at the department of internal medicine to NNH **Patients and method**: Medical records of all geriatric patients aged ≥65 years admitted at the department of NNH Between January 2012 and December 2015 were retrieved and reviewed retrospectively. **Results:** A total of 6074 admissions at the internal medicine department of NNH over three years were reported and 1130 (18, 6%) were geriatrics patients, the average age was 75, 95 years and more than half were men (50,7%). 80 % of patients were in the young old group (65-74 years), 13% in the old group (75-84 years) and 7% in the oldest old group (≥85 years). High blood pressure was the frequent comorbidity (12, 3%) and the most symptoms caused hospitalization were stroke (17, 6%), fevers (16, 5%) and worst health (13, 1%). Frequent illnesses were cardiovascular diseases (38.4%), infections, (19.2%) and endocrine diseases (11%). The average length of hospital stays was 8, 7 days. The mortality rate was 18, 2% and the worst outcomes factors were female sex, frail elderly group in 75 to 84 years and high blood pressure. **Conclusion:** Chronic diseases were responsible of morbidity and mortality for the majority elderly's patient.

Keywords: Geriatric, epidemiologic, clinic, etiologic, Niger

Introduction

The world demography is experiencing an ageing population with development of chronic diseases. [1] According to projection, the whole geriatric population (aged ≥ 60 years) worldwide will rise from 605 million in the year 2002 to1.2 billion in 2025. [2] Also, the demography of elderly persons in sub-Sahara African (SSA) may double between 2000 and 2030. [1] In Niger, country of SSA which has a high rate of growth demography in the world (3,3%), high proportion of young person (59, 2%) [3] consequences of increase fecundity and mortality decrease, the projection of elderly person (aged≥ 60 years) will rise from 504.800 in the year 2005 to 975.000 in 2025. [4] The demographic transition is slowly followed by epidemiological one, despite the prevalence of infectious diseases. We are now witnessing a double burden of disease for the developing world: the unfinished infectious diseases and the emerging of chronic diseases resulting from lifestyle changes in developing countries with poverty persistence. [5, 6] the inexistence of healthcare system and special support for ageing persons constitute a great challenge in Niger. The main aim was to describe a profile of geriatrics patient specifically to identify epidemiologic, clinical, etiologic and outcome of this group at the department of internal medicine to NNH.

Materials and method

The department of internal medicine of NNH is a tertiary health institution based in Niamey, capital of Niger. It serves as a referral department for the seven cities (Dosso, Tillaberry, Maradi, Zinder, Agadez, Tahoua and Diffa) and its neighbors and various adults (aged ≥15 years) medical specialties are admitted. It has 76 beds split equally between men and women. From January 2012 to May 2015 Patients were picked up from the medical register and reviewed. The head of nurse was trained to use the register in which it's mentioned: identity, comorbidities, reasons of admission, etiologic, times spent evolution and treatment.

Results :

A total of 1130 out of 6074 geriatric patients were hospitalized during the study period. The ages of the patients ranged from 65 years to 101 years with the average age of 75, 9 years. The young old group ageing (65-74 years) were the most frequent (80%), then old old group ageing (75-84 years) with 13% and the oldest old group ageing (≥85 years) with 7%. There were 573 males and 557 females with a male to female ratio of 1: 1.02. Most of the geriatric patients (42, 1%), came from Niamey the capital of country and the others were from Tillabery (15, 8%), Dosso (5, 1%), Maradi (0, 17%), Zinder (0, 08%), Tahoua (0,08%), Agadez (0,08%) and Diffa (0,08/). The major geriatric comorbidities were High blood pressure

(12, 3%), diabetes (5, 6%), High blood pressure-diabetes (1, 6%), cirrhosis (0, 08%) and heart disease (0, 08%). The three most common symptoms' causes of geriatric consultation and three most common geriatric etiologic diseases were respectively: neurologic (19, 6%), fevers (15, 5%) and global worst health (13, 1%) [Table 1] and the cardiovascular diseases (38, 4%), infectious diseases (19, 2%) and endocrine diseases (11%) [Table 2]. The mortality rate was 18, 2% with three worst outcome factors. Figure 1

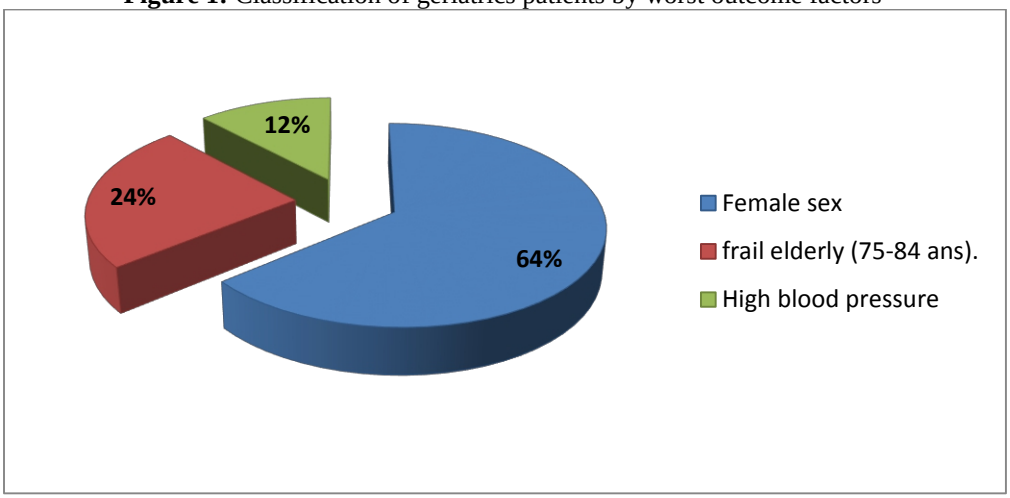
Table 1: distribution of geriatrics patients per reasons of consultations

Reasons of consultation	number (n)	Percentage
Neurologic reasons	**222**	**19,6%**
Stroke	200	17,6%
Tetraplegia	10	0,8%
Coma	4	0,3%
Convulsion	8	0,7%
Fevers	**176**	**15,5%**
Global worst health	**149**	**13,1%**
Breath reasons	**130**	**11,5%**
Cough	99	8,7%
Dyspnea	31	2,7%
Heart failure	**114**	**10,0%**
Hypertension	**75**	**6,6%**
Metabolic reasons	**59**	**5,2%**
Ketosis	18	1,5%
Hyponatremia	22	1,9%
Hypoglycemia	8	0,7%
Feet diabetes	7	0,6%
Kidney disorder	4	0,3%
Digestives reasons	**115**	**10%**
Gastroenteritis acute	71	6,2%
Ascitis	25	2,2%
Hepatomegaly	8	0,7%
Splenomegaly	5	0,4%
Icteric	6	0,5%
Bone joint reasons	**11**	**0,9%**
Poly adenopathy	**9**	**0,7%**

Table 2. Distribution of geriatric patients per diagnosis

Diagnosis	Number(n)	percentages
Cardiovascular diseases	**434**	38,4%
Heart failure	93	8,2%
Stroke ischemic	180	15,9%
Stroke hematoma	20	1,7%
Infectious diseases	**217**	**19,2**%
Respiratory infections	**122**	**10,7**%
Pulmonary tuberculosis	16	1,4%
Extra pulmonary tuberculosis	7	0,6%
Pleuro-pneumonia	99	8,7%
Digestives infections	83	7,3%
HIV	5	0,4%
Skin infections	**7**	**0,6**%
Endocrine Disease	**125**	**11**%
Diabetes	100	8,8%
Malignancies	**55**	**4,8**%
Renal disorder	**17**	**1,5**%

Figure 1: Classification of geriatrics patients by worst outcome factors



Discussion

Elderly person group is classified per variable group of ageing (>65years for the World Heath Organization (WHO) and many civil servant, > 60 years for private company) [7] but the natural process of ageing starts at 60 years old for most individuals [8], similar definition recommended by the meeting committee of African Union. [9] In this study, we found that more than half of the elderly in-patients were in the 65–74 years' age group. The smallest age group was the ≥ 85 years' age. In the SSA, the demography of old person was unless than 5%. [10] This may be a reflection of the general population trend. Male's number (51%) moderate superior than females

(49%) in this study. In *Onwuchekwa* [6] study, Females outnumber males but the difference was not statistically significant. The dean of our sample was 101 with average life expectancy for men high (76, 44 years) may explain the male outnumber but for all of those studies, the differences were not statistically significant. This study shows that cardiovascular diseases were the most common cause of geriatric morbidity in department of internal medicine, accounting for 38, 4% of geriatric admissions and corresponded to the reasons of consultation (stroke= 17,6%, heart failure=10% and may be unclassical **reasons** under global worst health=13,1%). Other researchers have also reported that cardiovascular diseases are the most common causes of geriatric admissions (43, 7 %) [6], [11] and corresponded to the reasons of consultation (stoke=10, 8%, heart failure= 11, 8%) in *Onwuchekwa.* [6] The smallest sample of our study could explain this difference. The main cause of cardiovascular diseases in our study was hypertension (6, 6%) and diabetes mellitus (8, 8%), witch increase the rate of stroke (17, 6%) and heart failure (10%). In Nigeria, previous hospital and community-based studies have shown that hypertension was the main cause of cardiovascular diseases and type 2 diabetes mellitus was a major cause of admission in the elderly. [12,13] Thus, more attention should be paid to hypertension and diabetes detection associated with control at the community level if the incidence of CVD and its attendant morbidity and mortality events are to be reduced. This may be due to adoption of Western lifestyles in most urban areas in sub Saharan Africa. [14] This can be reduced by lifestyle modifications such as weight reduction, regular exercises, and avoidance of refined carbohydrates. In our study, Infections still form a major reason of hospital admission among the elderly (19, 2%) and respiratory infections were responsible of 10, 7%, constitute by pulmonary tuberculosis (PTB) in 1, 4%, extra pulmonary tuberculosis (EPTB) in 0, 6% and pleuro pneumonia in 8, 7%. In *Onwuchekwa* [6] studies infections were responsible for 18, 8% of geriatrics admissions in which 1, 7% had PTB and 0, 4% had EPTB. This reflects the poor state of our environment, leading to poor housing, over-crowding and malnutrition. [15] Human immunodeficiency virus infection was found in 0, 4% of the elderly admissions and may be a reflection of HIV pandemic in sub-Saharan Africa. [16] Malignancies diseases were found in 4, 8% especially primary liver cell carcinoma and cirrhosis (7) of elderly admission in our study while same diseases were responsible in 3, 7% in *Onwuchekwa.* [6] This may be due to the high prevalence of viral hepatitis.[15] In our study the geriatric patients spent 8, 77 days (0-71 days). Vijaya's research in India, [11] the majority of the geriatric patients spent less than a week. Conditions in which patients had short hospital stays (less than a week) were diabetes emergencies such as hypoglycemia and hyperglycemic non-ketotic coma and other conditions such as pneumonia. These were acute medical emergencies

and the patients recovered as soon as they were stabilized, there by necessitating early dis-charge. The discharge rate in our study was 3, 09%, it is lower than in *Onwuchekwa* [6] study (70, 6%) and in some centers in India [11] respectively 90.4% and 81.6%. The higher mortality rate in our study might be due to reluctance of most patients in Niger to go to the hospital unless they are seriously sick.

Conclusion

The elderly patients constitute a significant proportion medical admission. Chronic diseases, with their various complications, were responsible for the majority, morbidity and mortality events in the elderly. Most of these conditions have well-established relationships to systemic hypertension, there by necessitating its prevention, early detection and prompt treatment.

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