

Musculoskeletal disorders in the elderly in rheumatology practice in Burkina Faso

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Abstract

Objective: To study the frequency of musculoskeletal (MSK) disorders in the elderly in Ouagadougou, Burkina Faso.

Patients and methods: A retrospective study was conducted from February 2006 to March 2011 in the University Hospital Yalgado Ouédraogo in Burkina Faso. All patients aged over 65 years seen at the Department of Rheumatology were included.

Results: Four hundred and twenty-four patients (11.85%) aged over 65 years were identified among the total of 4084. The mean age was 70.15 ± 23.26 years with a range of 65-95 (mode: 70 years, median 69 years). There were 336 (69.4%) women and 148 men (30.6%). Rheumatic diseases were dominated by osteoarthritis (OA) and degenerative disease: low back pain / sciatica: 117 (24.17%) cases, OA of the knee: 111 (22.93%), tendinitis of the shoulder: 52 (10.74%), several OA (6%). Polymyalgia rheumatica was diagnosed in 15 (3%) patients. Only two cases of Rheumatoid Arthritis (RA) and one case of ankylosing spondylitis were noted. Osteoporosis was reported in three patients. Fifty-five (11.36%) had diabetes mellitus (type 2), 221 (45.66%) had hypertension and 15 (3%) heart disease.

Conclusion: The elderly have an important place in rheumatology practice in Ouagadougou. Osteoarthritis and degenerative MSK disorders are common and osteoporosis, chondrocalcinosis and RA rare. Polymyalgia rheumatica was the most common inflammatory disorder. Comorbidities were dominated by hypertension and diabetes mellitus.

Keywords: Musculoskeletal diseases, Elderly, Osteoarthritis, Low back pain

Introduction

In the next forty years, the population of people aged over 60 years is expected to triple worldwide including Africa¹. The increase will inevitably come with its burden of musculoskeletal (MSK)

disorders. Rheumatic diseases of the elderly are well documented in developed countries and include brachialgia (29%), osteoarthritis and osteoporosis (17%), rheumatoid arthritis (8%), ankles/ foot pain (8%), knee pain (6%), hip pain (5%), shoulder pain (5%), hand/wrist pain (3%) and elbow pain (3%)². Women typically report problems more than men, regardless of the MSK condition². Few studies have addressed this issue in sub Sahara Africa. However, it has been projected that the aging of the population will be the largest and fastest in this part of the world¹. The aim of this work was to study the frequency and characteristics of MSK disorders in the elderly in the setting of rheumatology practice in a sub-Saharan country.

Materials and Methods

This was a retrospective study of case record files conducted from February 2006 to March 2011 in rheumatology consultation (Internal Medicine Department) at the University Hospital Yalgado Ouedraogo in Ouagadougou, capital city of Burkina Faso. Ouagadougou is the only city in the country that has a specialized rheumatology service. In 2006 the general population of Burkina Faso was estimated to be 14,017,262 including 473, 611 people aged 65 years or above; 53.2% of whom were women and 46.8% men³. The "elderly", met the definition given by the World Health Organization (WHO) ie 65 years and above.

All (inpatients and outpatients) aged over 65 years seen at the Internal Medicine Department for rheumatologic disease during the study period were included. Case records were retrieved and the following data extracted: age, gender, disease duration before the consultation, medical history, and MSK diagnosis. The diagnosis of mechanical and degenerative diseases was clinico-radiological. The diagnosis of inflammatory and infectious diseases was clinico-biological and radiological. Rheumatoid Arthritis (RA), ankylosing spondylitis and polymyalgia rheumatica fulfilled the appropriate diagnostic criteria⁴⁻⁶.

Blood count, erythrocyte sedimentation rate, C reactive protein, serum transaminases, and creatinine were measured in all patients and rheumatoid factor, anti-citrullinated peptide antibodies, antinuclear antibodies including, DNA and Extractable Nuclear Antigen (SSa, SSb, Sm, RNP, Scl70, centromer, Jo1) antibodies in cases of suspected RA or connective tissue disease. Radiographs of affected joints were performed in all patients and bone densitometry in ten. Joint aspirates were subjected to cytobacteriological examination and a search for microcrystals using polarized microscopy.

Results

There were 484 patients (11.85%) aged 65 years and over among 4084 patients seen in the clinic; 148 were men (30.6%) and 336 women (69.4%) (M/F 0.4). The mean age was 70.1 ± 4.8 years. Figure 1 shows the distribution of patients by age and sex. The average disease duration was 376.45 weeks (7.8 years) with range of 1 to 2600 weeks and a median of 48 weeks.

The diagnostic categories are shown in Table 1. Mechanical and degenerative disease ranked first in rheumatic diseases, found in 401 patients (82.8%). Spinal tuberculosis (Pott's disease) was diagnosed in four patients. Polymyalgia rheumatica (27 cases, 5.54%) was the main inflammatory arthritis; the average age of patients was 70 years; it was seen in only women. No clinical evidence of giant cell arteritis was found. Only two cases of Rheumatoid Arthritis (RA) and one of

ankylosing spondylitis were noted.

The metabolic pathology was dominated by gout (6 cases) and chondrocalcinosis (4 cases). Two cases of multiple myeloma and one of bone metastasis constituted malignancy disease; the average age was 67.0 ± 2.8 years for multiple myeloma and 73 years for bone metastases. Table 2 shows the distribution of patients with a diagnosis of OA and tendinitis. Other diagnoses included 12 cases of diffuse pain, 4 cases of algodystrophy, 13 females with non specific arthralgia and 3 cases of osteoporosis. Three hundred and eighty-seven patients (79.9%) had co-morbidities (Table 3).

Figure 1: Distribution of patients by age and gender

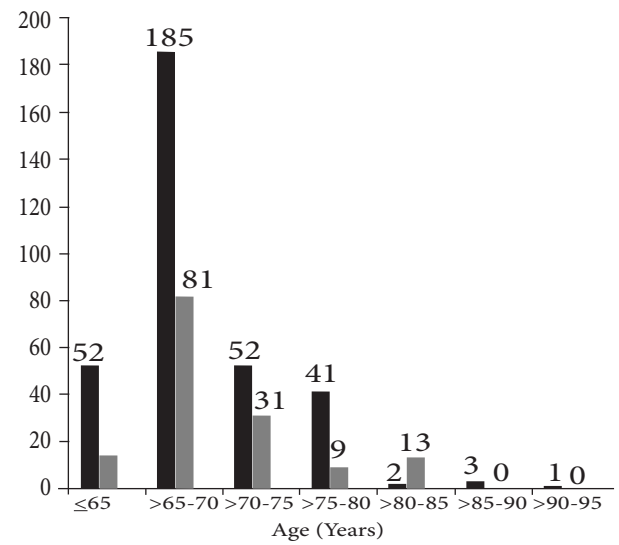


Table 1 : Distribution of patients according to the different disorders

	No.	(%)	Average age	Standard deviation	Sex-ratio M/F
Mechanical and degenerative pathologies	401	82.8	69.9	3.9	0.8
Infectious diseases	6	1.2	69	4.1	0.2
Chronic inflammatory arthritis	30	6.2	69.4	2.1	0.03
Metabolic diseases	10	2	67.8	3.9	2.3
Malignancies	3	0.6	69	1.4	0.5
Soft tissue rheumatism	19	3.9	70.8	4.1	0.05
Unclassified arthropathies	13	2.6	65	0	0/13
Total	484	100	70.1	4.8	0.44

Table 2: Distribution of patients according to OA and tendinitis

	No.	(%)	Average age	Standard deviation	Sex-ratio (M/F)
Neck pain	15	3.1	71	5.4	0.1
Cervico-brachial neuralgia	4	0.8	66	1.1	3
Cervical spinal stenosis	6	1.2	73.5	5.5	5
Back pain	15	3.1	79.7	4.7	15/0
Low back pain	83	17.1	71.3	4.7	0.5
Sciatica	34	7	67.9	3	0.9
Lumbar spinal stenosis	20	4.1	68.5	1.5	0/20
Forestier's disease	2	0.4	75	1.4	1
Shoulder OA	4	0.8	69.5	5.7	3
Fingers OA	2	0.4	70	7.1	1
Hip OA	8	1.7	71.4	5	0.6
Knee OA	111	22.9	70.3	4.6	0.4
Several OA	29	6	73.8	3.6	0.2
Shoulder tendinitis	50	10.3	67.6	3.3	0.1
Tunnel syndrome carpal	15	3.1	68.7	4.8	0/12
Bursitis/Ténosynovitis	3	0.6	67	1.4	1

Table 3: Frequency of patients according to comorbidities

	No.	(%)
High Blood Pressure	221	56.8
Heart disease	15	3.8
Arrhythmia atrial fibrillation	1	0.2
Angina	11	2.8
Arrhythmia	1	0.2
Myocardial infarction	1	0.2
Heart failure	1	0.2
Gastroduodenal ulcer	34	8.7
Epigastralgia	25	6.4
Kidney failure	1	0.2
Gout	7	1.8
Diabetes mellitus	69	17.7
Sickle cell disease	13	3.3
Tumours	1	0.2
HIV*	1	0.2
Total	387	100

*HIV : Human Immunodeficiency virus

Discussion

MSK disorders in our elderly patients accounted for 11.85% of 4084 rheumatology patients, proportions similar to a study from the Ivory Coast, which recorded 12.83% (over 60 years) of 2294 rheumatology patients⁷.

Mechanical and degenerative disease accounted for over three quarters of the MSKs in our study. The full range of spinal disorders was encountered and low back pain with and without sciatica dominated with a female majority. A female predominance was noted throughout this series. This finding could be related to a selection

bias in terms of distribution (52% women) of the general population further modified by strong domestic and more labour intensive activity in women in our context³. In studies from the developed world the explanation for the predominance of females with MSK disorders is considered to be multifactorial including biological, psychosocial and obesity factors². A recent Chinese study has shown a higher frequency of intervertebral space narrowing in older women compared to men ($p < 0.0001$)⁹.

The functional consequences of low back pain were not assessed in our study however, low back pain significantly affects the quality of life of older people^{10,11}. Osteoporosis is a common cause of back pain in the aged Caucasian². However malignancy and not osteoporosis was the main cause of compression fracture of the dorsal vertebrae in this series, with only three cases of osteoporosis confirmed by bone densitometry. However the risk of osteoporosis and future fracture increases with age and therefore it is reasonable to predict a future increase in fracture prevalence related to osteoporosis in elderly black Africans.

Osteoarthritis seems, indeed, to be the main cause of pain in the elderly⁸. The knee (22.9%) was by far the commonest location of OA in our patients. Large variations in prevalence are found in the literature according to the criteria used and gender: (54 to 74% in women over 60 years against 4 to 35% for men of the same age)². As the knee is a weight bearing joint, degenerative disorders cause varying degrees of functional impairment which may be improved by the persistence of physical activity and an effective analgesic treatment regime¹².

Osteoarthritis of the hip appears to be rare in comparison with Caucasian series²; this low frequency

appears to be associated with the scarcity of primary hip osteoarthritis¹³. However, in a recent Togolese study, a high hospital frequency (46.1%) of primary hip OA was found¹⁴. Aging also affects tendon structures. Tendinitis was dominated by shoulder tendinitis; old age could be a factor but there is also diabetes mellitus found in 17.7% of the elderly in our series¹⁵.

In addition to the mechanical and degenerative diseases, inflammatory rheumatism seems less frequent². Polymyalgia rheumatica was the most common inflammatory arthritis encountered. This confirms that polymyalgia rheumatica is not so rare in the black African and is likely to increase as the population ages. An increased awareness is required to allow early diagnosis and treatment¹⁶. We did not detect clinical evidence of cranial arteritis in this series (cranial headache, temporal artery pain swelling, jaw claudication). However temporal artery biopsy and/or ultrasound of the temporal arteries might have increased the diagnostic yield among those with polymyalgia rheumatica¹⁷. Only two cases of RA were reported in our series¹⁸. Cardiovascular risks associated with inflammatory rheumatism and the low life expectancy of our general population (50 years) may explain the low incidence of RA in our series^{3,19}.

High Blood Pressure (HBP) was the most common co-morbidity reported in half of the patients. The well established increased risk of cardiovascular disease with chronic inflammatory rheumatism especially Rheumatoid Arthritis (RA) may also extend to osteoarthritis¹⁹. In the elderly the use Non Steroidal-Anti-inflammatory Drugs (NSAIDs) carries a significantly increased risk of hypertensive crisis and stroke, precipitating cardiac failure and bleeding from gastric erosions and peptic ulcers^{20,21}.

Conclusion

The elderly contribute to a significant and increasing workload in rheumatology practice in Ouagadougou. Osteoarthritis and age related degenerative MSK disorders predominate. Polymyalgia rheumatica was the most common inflammatory disorder. Osteoporosis, chondrocalcinosis and RA were rare. Comorbidities were dominated by high blood pressure and diabetes mellitus.

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