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Epidemiological and Clinical Aspects of Hospitalized Patients with Chronic Rheumatic Disease at Cocody University Hospital in Abidjan

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Abstract

Objective: To study the epidemiological and diagnostic features of chronic rheumatic disease (CRD) in a black population in sub-Saharan Africa. **Patients and Methods:** Retrospective descriptive study over eight years (January 2005 to December 2012) of patients seen for CRD in rheumatology hospitalization at the CHU de Cocody in Abidjan, Côte d'Ivoire. **Results:** Of 3147 hospitalized patients, 92 had CRD, a frequency of 2.9%. The mean age of patients was 43.50 ± 15.6 years (extremes: 10 to 79 years). The sex ratio was 0.08 (7 men and 85 women). The socio-economic level was low in 44 patients (47.8%), medium in 44 patients (47.8%), and high in 4 patients (4.4%). The reasons for consultation were polyarthritis (64.1%), polyarthralgia (30.4%), and oligoarthritis (5.4%). The mean duration of symptomatology was 19 months (range: 3 to 20 years). The mean length of hospital stay was 14.2 ± 7.7 days (range: 2 to 36 days). The CRD observed were: rheumatoid arthritis (59.8%), systemic lupus erythematosus (23.9%), mixed connective tissue disease (6.5%), undifferentiated connective tissue disease (3.3%), polymyositis (3.3%), systemic scleroderma (2.2%), and systemic vasculitis (1%). **Conclusion:** CRD is not uncommon in rheumatology hospitals in Abidjan. Diagnostic delays are long, and rheumatoid arthritis and systemic lupus erythematosus are the most frequently encountered conditions.

Keywords

Chronic Rheumatic Disease, Rheumatoid Arthritis, Lupus, Abidjan

1. Introduction

Chronic rheumatic disease is a group of diseases characterized by abnormal and persistent activation of the immune system, leading to impaired multi-organ function [1] [2] [3]. These diseases are less common than degenerative pathologies, but nonetheless occupy a significant place in rheumatological practice [1] [2] [3] [4] [5]. In sub-Saharan Africa, the overall frequency of CRD varies widely from country to country, ranging from 90 cases in 6.5 years in Congo-Brazzaville, for example, to 802 cases in 14 years in Burkina Faso [1]-[6]. However, epidemiological data seem to be lacking on this subject in rheumatology in Abidjan, Côte d'Ivoire. The aim of this study was to investigate the epidemiological and diagnostic profile of CRD in rheumatology inpatients at the Cocody University hospital in Abidjan, Côte d'Ivoire.

2. Patients and Methods

This was a retrospective descriptive study over an eight-year period, from January 2005 to December 2012, of patients with CRD. These were black patients from Sub-Saharan Africa seen in the rheumatology departments of the Cocody University Hospital in Abidjan, Côte d'Ivoire. We included all patients with a diagnosis of CRD during the recruitment period. All unexploitable patient records were excluded from the study. We drew up a data collection form to collect the data. The diagnosis of CRD was based on the most recent classification criteria at the time of diagnosis. In patients who did not have all the elements required for classification according to international criteria (e.g. unavailability of autoantibodies), the diagnosis was made simply on the basis of clinical, biological and radiological presumption.

The epidemiological characteristics studied were: age, gender, and socio-economic level assessed according to monthly income, which depended on the patients' occupation. The latter was classified as low (unemployed, housewives, pupils, students, drivers, seamstresses), medium (middle management and similar, shopkeepers, military and paramilitary, pensioners, health workers, secretaries, primary and secondary school teachers), or high (senior management and similar, higher education teachers and engineers). The diagnostic aspects studied were duration of symptomatologic evolution, articular signs having motivated the consultation, antecedents, retained diagnosis, extra-articular signs. Data were analyzed using EPI-INFO software version 7. From an ethical point of view, confidentiality and anonymity were respected.

3. Results

Of 3147 patients hospitalized for rheumatological disease during the study pe-

riod, 92 had CRD, a frequency of 2.9%. The mean age of the study population was 43.50 ± 15.6 years, with extremes ranging from 10 to 79 years. The 40 - 60 age group was the most represented (36 patients or 39.1%). The sex ratio was 0.08 (7 men and 85 women). The socio-economic level was low in 47.8% of cases (44 patients), medium in 47.8% (44 patients), and high in 4.4% (4 patients).

The mean duration of symptomatology was 19 months (range 3 days to 20 years). The course was acute (≤1 month) in 6.5% of cases (6 patients), sub-acute (1 < evolution time < 3 months) in 17.4% (16 patients), and chronic (≥3 months) in 76.1% (70 patients). The average hospital stay was 14.2 ± 7.7 days (extremes from two to 36 days; less than a week for 14 patients (15.2%), between one and two weeks for 34 (37%), and more than two weeks for 44 (47.8%). Table 1 shows the patient's history, reasons for consultation and diagnoses.

Rheumatoid arthritis was observed in 55 patients, and was deforming in 32 cases, and radiologically destructive in 30 cases. Immunological tests (rheumatoid factor and/or anti-CCP2) carried out in 50 patients were positive in 35 cases (70%). Systemic lupus was observed in 22 cases, with multiorgans involvement and anti-nuclear antibody positivity (immunological work-up carried out in 15 patients), and the presence of an anti-phospholipid antibody in three cases. Anti-native-DNA antibody was observed in 10 cases and anti-Sm in seven. Polymyositis was observed in three cases, with joint involvement (polyarthralgia),

Table 1. History, reasons for consultation and selected diagnoses.

		Workforce	Percentage
History	HTA	18	19.6
	Diabetes	7	7.6
	Sickle cell disease	5	5.5
	Epigastralgia	26	28.2
	Asthma	3	3.3
	Miscarriages	5	5.5
	Deep vein thrombosis	1	1.1
Reason for consultation	Polyarthralgias	28	30.4
	Polyarthritis	59	64.1
	Oligoarthritis	5	5.4
Diagnosis	Rheumatoid arthritis	55	59.7
	Systemic lupus erythematosus	22	23.9
	Mixed connectivity	6	6.5
	Undifferentiated connectivity	3	3.3
	Polymyosite	3	3.3
	Systemic scleroderma	2	2.2
	Vasculitides	1	1

muscular involvement (deficit with cytolysis) and anti-JO1 antibody positivity (immunological work-up carried out in two people). Systemic scleroderma was observed in two cases, with signs of cutaneous (cutaneous sclerosis and sclerodactyly), digestive and articular involvement (polyarthritis with resorption of the phalangeal tassels) and anti-SCL70 antibody positivity (immunological work-up carried out in one person). Systemic vasculitis was observed in one case, with vascular, renal and dermatological signs and ANCA positivity. Table 2 shows the extra-articular signs of these diseases.

4. Discussion

The number of cases of CRD varies from country to country in sub-Saharan Africa [1]-[6]. Seven hundred and twenty-six cases were reported in 10 years in Senegal, 90 cases in 6.5 years in Congo-Brazzaville, 290 cases in 9 years in Togo, and 339 cases in 18 months in Guinea [3] [4] [5] [6]. In Burkina Faso, there have been 802 cases of CRD in 14 years in Ouagadougou [1] [2]. We report 92 inpatient cases in Abidjan. This result is in line with sub-Saharan data [1]-[6]. However, the frequency of CRDs may be underestimated, mainly because of their diagnostic complexity and the lack of awareness of these diseases among the population and certain health practitioners [1] [2] [5] [6] [7]. In addition, some of our patients were unable to undergo immunological testing for lack of financial means. In our study, patients mainly consulted for polyarthritis or polyarthralgia. The most frequent pathologies were rheumatoid arthritis and systemic lupus erythematosus. Extra-articular damage was frequent, sometimes involving serious

Table 2. Articular signs of disease.

Extra-articular signs of disease	Workforce	Percentage
Weight loss	54	58.7
Prolonged fever	64	69.6
Asthenia	66	71.7
Liver damage	4	4.3
Edema of the lower limbs	18	19.6
Dermatological lesions	32	34.7
Consciousness disorders	2	2.2
Psychiatric disorders	3	3.3
Anemia	6	6.5
Raynaud's syndrome	3	3.3
Nephropathy	8	8.7
Cardiovascular diseases	7	7.6
Pleuropulmonary disorders	10	10.9
Xerophthalmia and xerostomy	2	2.2

visceral damage such as cardiorespiratory, renal and neuropsychiatric involvement. These results are also similar to those reported in the literature from sub-Saharan Africa. These extra-articular signs complicate management and can be life-threatening [7]. Rheumatoid arthritis was predominantly deforming and erosive, which may be explained by the late diagnosis observed in most sub-Saharan African data [1]-[10]. The average diagnostic delay was 19 months in our study, 4 years in Guinea [4], three to 11 years in Senegal [5] [8], three to 9.5 years in Togo [3] [9], 6 years in Niger [10], and between 4 and 7 years in Burkina Faso [5] [6] [7] [11] [12]. A study carried out in Bobo-Dioulasso showed that one of the modifiable causes of CRD-related deaths was the long delay in diagnosis without appropriate treatment of the disease [7]. This could be explained by a lack of awareness of CRD on the part of some health practitioners [7] [12]. Moreover, in our context, the delay in consulting a doctor is common to all illnesses. Patients sometimes only consult a doctor when self-medication fails and disabling symptoms appear. The reasons put forward are most often financial, incriminating the high cost of medical treatment.

5. Conclusion

CRDs are not uncommon in rheumatology hospitals in Abidjan. They mainly affect women between the ages of 40 and 60. Patients are most often seen for polyarthritis or chronic polyarthralgia. Average hospital stay is two weeks. The most common pathologies are rheumatoid arthritis and systemic lupus erythematosus. Extra-articular damage is common, with severe visceral damage such as cardiorespiratory, renal and neuropsychiatric lesions. These CRDs are characterized by long delays in diagnosis, which may explain the advanced visceral and structural damage.

Conflicts of Interest

The authors declare that they have no ties of interest.

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