

# Dermatomyositis: Epidemio-Clinical Profile, Therapeutic and Evolutive Aspects in Côte d'Ivoire

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## Abstract

**Introduction:** Dermatomyositis is a rare pathology with severe prognosis. Its prevalence varies from one part of the earth to another and its clinical aspects are multiple. In Western countries, they have been the subject of several studies. However few studies have been devoted to this disease in sub-Saharan Africa. We initiated this work to contribute to a better knowledge of dermatomyositis in our work context. **Material and Methods:** This is a retrospective, descriptive and analytical study carried out in the Dermatology Department of the University Hospital Center of Treichville from January 2006 to December 2015. All Patients with dermatomyositis have been taken into account in the study. **Results:** The hospital prevalence of dermatomyositis in our work was 1.38%. The age of our patients ranged from 11 to 79 years with an average of 41 years. The sex ratio was 0.48. The delay before the first consultation ranged from 1 week to 1 year 9 months with an average of 5 months. Cutaneous manifestations were the first signs observed including post-inflammatory hyperpigmentation and erythro-edema. Muscular manifestations were dominated by muscular pain (81.08%). muscular enzymes were consistently elevated in biological examinations. The duration of hospitalization was 3 weeks in average. Oral corticotherapy (94.59%) was the most used therapy. A clinical improvement was observed on average 4 months after treatment. The death rate was 16.22%. **Conclusion:** Dermatomyositis is infrequent in Côte d'Ivoire. It involves mostly young woman. The cutaneous manifestations are often the first signs observed, hence the importance of the dermatologist in its screening and early management.

## Keywords

Dermatomyositis, Corticotherapy, Côte d'Ivoire

## 1. Introduction

Dermatomyositis is a collagen tissue disease that is characterized by a double muscular and cutaneous involvement [1]. Its course is chronic with numerous complications. It is a rare disease with severe prognosis. It is the third collagen tissue disease after lupus erythematosus and scleroderma. The prevalence of this condition varies from one part of the earth to another [2]. The clinical aspects are numerous in the literature. At the Therapeutical level, their management uses currently first-line corticosteroid therapy [3]. Few studies have been devoted to this disease in sub-Saharan Africa. It was therefore appropriate for us to conduct this study at the department of Dermatology-Venerology of the University Hospital Centre of Treichville in order to describe the epidemiological and clinical characteristics and to indicate the therapeutic and evolutive aspects of this disease in black African, in Cote d'Ivoire.

## 2. Material and Methods

This is a retrospective descriptive and analytical study carried out in the Dermatology Department of the University Hospital Center of Treichville over a 10-year period from January 2006 to December 2015. Have been taken into account and included in the study, all patients hospitalized for dermatomyositis whose diagnosis was retained on the criteria of Bohan and Peter using clinical signs such as cutaneous and muscular involvement and biological signs especially the muscular enzyme. The study was approved by the ethic committee of the hospital. Data from the study were collected on a survey card that included socio-demographic characteristics and clinical data such as circumstances of discovery; cutaneous and muscular involvement, post-inflammatory disorders, others extra-cutaneous manifestations, biological disorders, therapeutic and evolutive aspects. The data was entered and analysed using Microsoft® Excel® 2010 software version 14.0.4760.1000. As for the analysis of the data, it was made using the software Epi Info 6.4d.

### Limitations of the study

This is a retrospective study that does not allow us to have all the variables in all patients. In the files some cutaneous lesions were not well described, biological examinations could not be carried out in some patients and the follow-up was difficult sometimes because patients did not always respect their Appointment.

## 3. Results

### 3.1. At the Epidemiological Level

We accounted 37 cases of dermatomyositis on 2674 hospitalized patients during this period with a hospital prevalence of 1.38%. The age of our patients ranged from 11 to 79 years with an average of 41 years. There was a female predominance with a sex ratio of 0.48.

### 3.2. At the Clinical Level

The delay before the first consultation ranged from 1 week to 1 year 9 months with an average of 5 months. The circumstances of discovery of the disease were cutaneous (62.16%), muscular (18.91%), articular (10.81%) or after a long-term fever (13.51%). The cutaneous signs were dominated by post-inflammatory hyperpigmentation and erythro-oedema (Table 1). The muscular manifestations were mainly represented by muscular pain (Table 2). Other extra-cutaneous signs were dominated by general condition impairment (86.47%) and fever (48.65%). Some pathologies were associated with dermatomyositis such as vitiligo (2 cases), viral hepatitis B (2 cases), diabetes (3 cases) and hypertyroidie (1 case).

### 3.3. The Paraclinical Aspects

At the Biological level, the rate of muscle enzymes including lactic-dehydrogenase (LDH) and Creatin phosphokinase (CPK) were high respectively in 78.38% and 54.05% of cases. The immunological examinations could not be carried out in the majority of the patients because of the financial difficulties. The antibodies anti Jo1, anti -SM and anti-U1-RNP were positive respectively in 2; 6 and 5 patients. The electromyogram performed in 70.27% of cases showed a myogenic pattern in favor of the diagnosis. The electrocardiogram showed left ventricular hypertrophy in 10 patients, sinus tachycardia in 6 patients and coronary syndrome in 6 other patients. The chest scanner showed interstitial syndrome in 3 cases, pulmonary fibrosis in 2 cases and fluid pleural effusion in 4 patients. Oeso-gastroduodenal fibroscopy revealed 2 malignant tumors of the stomach.

**Table 1.** Distribution according to cutaneous lesions.

Signs	Effective	Proportion
Post-inflammatory hyperpigmentation	34	91.89%
L'erythro-oedema	31	83.78%
Pruritus	11	29.73%
poikiloderma	10	27.03%
Gottron's papule	08	21.62%
Sign of the manicure	4	10.81%
Alopecia	2	5.40%

**Table 2.** Distribution according to muscle signs.

Signs	Effective	Proportion
Muscular pain	30	81.08%
Muscular deficiency	19	51.35%
Muscle cramps	6	16.22%
Muscle atrophy	5	13.51%

### 3.4. At the Therapeutic and Evolutive Aspects

The duration of hospitalization was 3 weeks on average. Oral corticosteroids were administered to almost all patients (94.59%). In 16.22% of cases corticosteroids were associated with methotrexate and in 37.84% with hydroxychloroquine. Physical therapy was prescribed in 12 patients. The minimum duration of follow-up was 2 months and the maximum duration was 2 years. Clinical improvement was observed 2 months after initiation of treatment in 18.92% of cases and 4 months after initiation of treatment in 70.27% of cases. Side effects observed during treatment were diabetes (3 cases) and hypertension (2 cases). 64.86% of patients had infectious complications. The death rate was 16.22%.

## 4. Discussion

Only 37 cases of dermatomyositis were reported in 10 years with a hospital prevalence of 1.38%. It is therefore a rare pathology in Côte d'Ivoire. Our patients were mostly young women with an average age of 41 years. Our results agree with some studies in sub-Saharan Africa [4] [5]. The average time of diagnosis was 5 months. It could be explained by the therapeutic itinerary of patients in Africa who are very often engaged in traditional therapy and self-medication [6]. Clinically, the signs of this disease are sometimes polymorphic, but cutaneous involvement is usually the first manifestation showing off as post-inflammatory hyperpigmentation and erytho-oedema, hence the importance of the dermatologist in the early detection of this disease [7]. Muscular deficiency was also a persistent sign, but we did not observe diffuse cutaneous calcinosis reported by some authors [8] [9]. Dermatomyositis is a connective tissue disease that can be associated with other pathologies such as neoplasia [10]. Some radiological examinations are therefore necessary including fibroscopy which allowed us to diagnose 2 stomach cancers in our patients. Biological examinations have revealed the increase of the rate of muscular enzymes as key elements in the diagnosis of this condition [11]. At the Therapeutical level, monotherapy with oral corticosteroids was instituted in 93.75% of our patients. It lead to a clinical improvement 4 months after treatment on average. To minimize the adverse effects of this long-term corticosteroid therapy, some authors recommend combining immunosuppressive with synthetic antimalarials [12]. We used this combination method in 6.25% of our patients. The death rate after one year of follow up was 6.25%. In the literature, death rates is very variable ranging from 5% to 70% [13]. Late management, visceral involvement, iatrogenic complications and the association with a neoplasia are factors of poor prognosis for this disease [14].

## 5. Conclusion

Dermatomyositis is a rare disease in Cote d'ivoire. It involves mostly the young adult with a slight feminine predominance. It is a serious pathology of severe prognosis even if the corticotherapy makes it possible to control the disease. The cutaneous manifestations are the first signs of this affection, hence the impor-

tance of the dermatologist in his screening and his early management.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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