



## **Pulmonary Tuberculosis and Intercostal Zona Complicating Abusive Corticosteroid Therapy: About a Case**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. Author IY designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors BWS and JAN managed the analyses of the study. Authors BOZ, MOL, COO and JOB managed the literature searches. All authors read and approved the final manuscript.*

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**Case Report**

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### **ABSTRACT**

The present case study describe the pulmonary tuberculosis and intercostal zona complicating abusive corticosteroid therapy. Corticosteroids have changed the history and prognosis of most inflammatory diseases by the effectiveness and speed of their action. Far from being a universal

panacea, the abusive and long-term use of these powerful anti-inflammatory agents with immunosuppressive effect, exposes to severe complications, some of which, namely opportunistic infections, are serious. A case showed 59-year-old patient with a history of long-term systemic corticosteroid therapy based on dexamethasone established for an acute orchiepididymitis and with no notion of tuberculous contagion found, who had consulted at the Gloria Medical Union Clinic for chronic cough, vespero-nocturnal fever and painful rashes. The clinical examination found bilateral pulmonary condensation, a vesicular band rash lesion, metameric from front to back and hyperesthetic resting on an erythematous background, located in the lower third disengaging on the right hemithorax on an erythematous background, surmounted by embedded vesicles under the skin and grouped in clusters in places without going beyond the left contralateral hemithorax to the midline. Compliance with the indications and close monitoring of patients on corticosteroid therapy will, as far as possible, avoid them.

**Keywords:** Pulmonary tuberculosis; corticosteroid therapy; rashes; hemithorax.

## 1. INTRODUCTION

Corticosteroids have changed the history and prognosis of most inflammatory diseases by the effectiveness and speed of their action [1]. Far from being a universal panacea, the misuse and long-term use of these powerful anti-inflammatory agents with immunosuppressive effect, exposes to severe complications, some of which, namely opportunistic infections, are serious [2]. We report a case of pulmonary tuberculosis associated with intercostal zona complicating improperly initiated corticosteroid therapy for acute orchiepididymitis.

## 2. PRESENTATION OF THE CASE

This was a 59-year-old patient with a history of long-term systemic corticosteroid therapy based on dexamethasone established for an acute orchiepididymitis and with no notion of

tuberculous contagion found, who had consulted at the Gloria Medical Union Clinic for chronic cough, vespero-nocturnal fever and painful rashes.

The onset of symptoms would go back about 3 weeks, 2 weeks after corticosteroid therapy, marked by the gradual onset of a productive cough bringing back yellowish sputum, not haemoptotic, without chest pain or dyspnea. This table, evolving in a context of vespero-nocturnal fever, night sweats without chills, physical asthenia, non-selective anorexia and progressive weight loss, had not motivated any consultation. In front of the persistence of the symptomatology and the appearance two weeks later of a right basithoracic pain to the type of burn, intense, radiating in hemi-belt towards the back and followed by a homolateral vesicular rash, the patient decided to consult at the Gloria Medical Union Clinic for better care.



**Fig. 1. Before treatment**



**Fig. 2. Under treatment**



**Fig. 3. After treatment**

The clinical examination found bilateral pulmonary condensation, banded vesicular lesions, metameric from front to back and hyperesthetic based on an erythematous background, located in the lower third of the right hemithorax without exceeding the midline (Fig. 1). Biology found normal NFS. The retroviral serology was negative and the fasting blood sugar normal. The chest x-ray was not taken due to lack of means. However, the Ziehl-Nelsen staining for Acid-Alcohol-resistant Bacilli (BAAR) in sputum was reviewed positively. We therefore retained the diagnosis of right intercostal zona associated with pulmonary tuberculosis in the field of drug-induced immunosuppression. The evolution was favorable with anti-tuberculosis drugs (2RHZE + 4RH), Acyclovir cp 800 mg (1cp5 / day for 10 days) and Tramadol (100 mgx2 / day) (Figs. 2-3).

### 3. DISCUSSION

Systemic corticosteroid therapy has been used therapeutically for 60 years and has disrupted the prognosis of most inflammatory diseases. Because of its efficacy and rapidity of action, it often remains the first-line treatment for most of these diseases [2]. However, their prolonged and abusive use can induce sometimes serious complications [3,4]. The type and time of onset of complications are very varied. Fardet L et al. [3] described lipodystrophy occurring after 3 months. While Bennis K et al. [4] reported hirsutism, stretch marks and ecchymotic purpura occurring after 1 to 6 months of corticosteroid therapy. Our patient was put on strong corticosteroid therapy for acute orchiepididymitis and 3 weeks later developed pulmonary tuberculosis associated with intercostal zona.

Orchiepididymitis is frequently accompanied by testicular pain, indicating an analgesic and / or anti-inflammatory treatment. However, only non-steroidal anti-inflammatory drugs (NSAIDs) are included in the recommendations [5]. Having found no evidence supporting any corticosteroid therapy in the management of orchiepididymitis, we believe that these complications could have been avoided. In addition, the imputability of post-corticosteroid immunosuppression not being immunologically established in our patient, the possibility of tuberculosis and / or zona without particular terrain remains possible since several cases are described in the literature. Wembulua BS et al. [6] described a case of tuberculosis occurring in an immunocompetent patient and

Fatima-Zahra Agharbi [7] objectified two cases of zona without prior immunosuppression.

The prevention of complications related to corticosteroid therapy is based on monitoring and strict compliance with their indications. These include various inflammatory and autoimmune diseases [2].

### 4. CONCLUSION

Corticosteroid therapy has undoubtedly been one of the major advances in medical therapy in the last century. However, it exposes to complications which can be severe. Compliance with the indications and close monitoring of patients on corticosteroid therapy will, as far as possible, avoid them.

### CONSENT

As per international standard or university standard, patient's consent has been collected and preserved by the authors.

### ETHICAL APPROVAL

As per international standard, written ethical approval has been collected and preserved by the author(s).

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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