

Epidemiological, Clinical and Evolutionary Profile of Toxidermias in the Dermatology-Venereology Department of the Army Training Hospital/University Hospital Center (HIA/CHU) of Cotonou, Benin

N. Agbessi¹, F. Akpadjan², C. Koudoukpo¹, B. Dégboé², C. d'Almeida², F. Atadokpèdè², H. Adégbidi², F. do Anglo-Padonou²

¹Department of Dermatology-Venereology, Faculty of Medicine of Parakou, University of Parakou, Benin, ²Department of Dermatology-Venereology, Faculty of Health Sciences of Cotonou, University of Abomey Calavi, Benin

ABSTRACT

Introduction: Toxidermias are mucocutaneous complications secondary to the enteral, intravenous, subcutaneous, or intramuscular administration of drugs. They have a high semiological variability. The objective of this study was to determine the epidemiological, clinical, and evolutionary characteristics of toxidermias in a hospital population in Cotonou. **Patients and Methods:** This was a cross-sectional study with a descriptive, retrospective aim, which took place from January 1, 2012, to June 30, 2017, in the Dermatology-Venereology Department of the Army Training Hospital/University Hospital Centre (HIA/CHU) of Cotonou, Benin. **Results:** A total of 45 cases of toxidermias were diagnosed, representing a frequency of 0.62%. A female predominance with a sex ratio = 1.2 was noted. The average age was 36.2 ± 19.4 years. Antibiotics whose sulfonamides were the most implicated drugs in the occurrence of toxidermias. Hyperpigmented macules were found in 46.66% of patients. Fixed pigmented erythema was diagnosed in 35.5% of patients and was the most frequent toxidermy, 62.22% of our patients were cured, and 33.33% were lost to follow-up. **Conclusion:** Drug-induced skin reactions are not negligible and fixed pigmented erythema is the predominant clinical form of this disease in Cotonou.

Key words: Benin, clinical, epidemiology, evolution, toxidermy

INTRODUCTION

Adverse reactions are frequent complications of drug therapies. Skin reactions represent a significant proportion of these adverse reactions. Almost half of all drug reactions (about 45%) occur on the skin.^[1] Toxidermias are mucocutaneous complications secondary to the enteral, intravenous, subcutaneous, or intramuscular administration of drugs.^[2] They have a high semiological variability and most clinical pictures are not specific to the drug.^[3] Some toxidermias are emergencies requiring treatment in specialized hospital units.^[4] To know the frequency of these different

clinical pictures, a study was initiated, the aim of which was to determine the epidemiological, clinical, and evolutionary characteristics of drug toxidermias at the Dermatology-Venereology Department of the Army Training Hospital/University Hospital Center (HIA/CHU) of Cotonou, Benin.

PATIENTS AND METHODS

This was a descriptive retrospective study. The study period was from January 1, 2012, to June 30, 2017, a period of 5 years 6 months. It took place in the Dermatology-Venereology Department of the Army Training Hospital/

Address for Correspondence:

N. Agbessi, Department of Dermatology-Venereology, Faculty of Medicine of Parakou, University of Parakou, Benin.
E-mail: aurore_ln@yahoo.fr

© 2018 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

University Hospital Centre (HIA/CHU) in Cotonou, Benin. All patients who were consulted during this period and who were diagnosed with toxidermy were included in the study. Incomplete files were excluded from the count. The registers made it possible to identify cases of toxidermias and the analysis was based on a sheet designed for this purpose. The data were processed by Epi-info 3.5.1 and Excel.

RESULTS

The results of this study are as follows:

A total of 45 cases of toxidermias found in 7261 patients, that is, a prevalence of 0.62%, with a female prevalence and a sex ratio (M/F) of 0.8. The average age was 36.2 ± 19.4 years with extremes ranging from 1 year to 83 years. In our study population, civil servants were the most affected with a percentage of 42.2% followed by pupils and students 17.8%. Pruritus was present in 34 patients; it was associated with pain in 2 patients. The time to onset of symptoms was more than 14 days in 37.8% of patients. Antibiotics are the most implicated drugs in the occurrence of toxidermias (sulfonamides 16 times, penicillins 3 times, and cyclins 2 times), followed by paracetamol (7 times), NSAIDs (4 times), nonsteroidal anti-inflammatory drugs (4), synthetic antimalarial drugs (3), nystatin, zyloric, nevirapine, insulin, carbamazepine, and herceptin (antimitotic) were suspected once. There was polymedication in 4 patients, 3 patients could not specify the drugs taken before the symptomatology. Only one type of lesion was present in 19 patients, including 14 cases of hyperpigmented macules, 2 cases of scales, and 3 cases of exanthema. The trunk (17) is the most affected seat followed by the face (13) and upper limbs (13). Fixed pigmented erythema was the most frequent toxidermy in our series (18), including two bullous, followed by maculopapular exanthema (7) and Stevens-Johnson syndrome (6), followed by erythroderma (4), lyell syndrome (4), acute generalized exanthematous pustulosis (2), cheilitis (1), eczema (1), and urticaria (1). The treatment was done on an outpatient basis in 40 of our patients, 5 of whom were hospitalized. 15 of our patients were lost to follow-up, 28 of our patients were cured, 1 deceased, and 1 referred. Two of the clinical pictures were complicated by superinfection, but successfully treated.

DISCUSSION

During the period of our study 7261 patients consulted, 45 of whom had toxidermy, or 0.62%, and on average 8 cases per year. The prevalence is variable in the literature; in Marrakech^[5] it was 7 cases per year, 1.08% in Tunis,^[6] and 0.87% in Morocco.^[7] According to Lebrun-Vignes and Valeyrie-Allanore,^[3] toxidermias represent 1% of dermatological consultations in France, in Bangui, it was 3.5%,^[8] and there is a predominance of women with a sex ratio (F/M) equal to 1.25 in our series. This observation was made in Marrakech and Tunis with respective sex ratios

(F/M) of 1.8^[5] and 1.22.^[6] On the other hand, in Bangui and Abidjan the predominance was male with the respective sex ratio (M/F) of 1.10^[8] and 1.2,^[9] in Morocco^[7] the sex ratio was equal to 1. The average age of our study population was 36.18 ± 19.4 years. He was 44 years old in Tunis,^[6] 35.39 ± 3.53 in Morocco,^[7] and 30.9 in Bangui.^[8] From these different figures, we could say that it is more adults who are affected. All professions were affected with officials in the lead with 42.2%, in Bangui, the same observation was made.^[8] This could be explained by the fact that scholars believe they have all the knowledge required to be able to treat themselves.

The time to onset of symptoms after the suspicious medication is very variable in our series, Chaabane *et al.* made the same observation in Tunis ranging from a few minutes to 3 months depending on the type of taxidermy.^[6] The average time to develop the lesion in Ivory Coast and Central Africa was 3 days^[8] and 8.2 days,^[9] respectively. Antibiotics (21 cases or 46.66%) are the most incriminated drugs in the occurrence of toxidermias, but especially sulfonamides (16 cases or 35.55%), our figures are superimposed on those found in Tunis (56 cases or 47.45%)^[6] and Abidjan (48.1%).^[9] Three patients (6.66%) could not specify the drugs taken before the symptomatology in our series, but in Abidjan, it was 22.2%^[9] that the suspect drug could not be found. There was polymedication in 4 of our patients, 36 patients (30.50%) received polymedication in Tunis.^[6] Nine types of toxidermias were identified in our series, including fixed pigmented erythema, which was the most common (40%). Fixed pigmented erythema was also the most frequent diagnosis in Bangui (64.5%), whereas, in Tunis, it was maculopapular exanthema which was frequent (35%) and fixed pigmented erythema came in third place (12.71%). Serious toxidermias accounted for 35.55% in our series, but in Tunis, they were 6.77%. According to Lok,^[10] more than 90% of toxidermias are reported to be benign. 40 of our patients were treated on an outpatient basis, 5 were hospitalized, while, in Tunis, out of 118 cases of toxidermias 29 required hospitalization.^[6] This low hospitalization rate in our series despite the high percentage of severe forms could be explained by the fact that the dermatology department does not have its own hospitalization room. 28 (62.22%) of our patients were cured, in Bangui, the prognosis was good in 99.17% of cases.^[8]

CONCLUSION

Drug toxidermias represent 0.68% of the reasons for consultations in the Dermatology-Venereology Department of the Army Training Hospital/University Hospital Centre (HIA/CHU) in Cotonou, Benin. Officials are the most affected and fixed pigmented erythema was the most common diagnosis. Serious toxidermias accounted for 35.55%, but only 11.11%, were hospitalized.

REFERENCES

1. Nigen S, Duquet C. Les toxidermies ou les réactions cutanées induites par les médicaments. *Qué Pharm* 2007;54:17-24.
2. Barbaud A. Prise en charge globale des toxidermies. *Ann Dermatol Venereol* 2007;134:391-401.
3. Lebrun-Vignes B, Valeyrie-Allanore L. Toxidermies. *Rev Med Interne* 2015;36:256-70.
4. Paquet P, Flagothier C, Piérard-Franchimont C, Jacob E, Damas P, Heymans O, *et al.* Les toxidermies paroxystiques graves. *Rev Med Liege* 2004;59:286-92.
5. Mrini LH, Amal S. Les Toxidermies Médicamenteuses Graves. [Thèse No.69]. Marrakech: Faculté de Médecine et Pharmacie; 2008.
6. Chaabane H, Masmoudi A, Amouri M, Ghorbel S, Boudaya S, Hammami S, *et al.* Profil des toxidermies médicamenteuses: Etude prospective de 118 cas. *Tunis Med* 2013;91:514-20.
7. Elkhabbazi H, Benkirane R, Khadmoaui A, Houda S, Quyou A, Hami H, *et al.* Cutaneous adverse drug reactions in Morocco: A prospective study. *Int J Innov Appl Stud* 2014;7:634-40.
8. Kobangué L, Tounkara TM, Guéréndo P, Douma ND, Abéyé J, Tabo A, *et al.* Toxidermies à Bangui: Aspects épidémiologiques au service de dermatologie-vénéréologie. *Guinée Méd* 2014;83:27-31.
9. Kourouma HS, Kouassi YI, Diabaté A, Sangaré A, Ecra EJ, Kaloga M, *et al.* Profil épidémio-clinique des toxidermies bulleuses chez l'enfant à Abidjan (Côte d'Ivoire). *Bull Soc Pathol Exot* 2014;107:142-5.
10. Lok C, CEDEF. Item 322-UE 10 Iatrogénie. Diagnostic et prévention : Toxidermies médicamenteuses. *Ann Dermatol Venereol* 2015;142:S228-34.

How to cite this article: Agbessi N, Akpadjan F, Koudoukpo C, Dégboé B, d'Almeida C, Atadokpèdè F, Adégbidi H, do Ango-Padonou F. Epidemiological, Clinical and Evolutionary Profile of Toxidermias in the Dermatology-Venereology Department of the Army Training Hospital/University Hospital Center (HIA/CHU) of Cotonou, Benin. *Clinic Res Dermatol* 2018;1(1):1-3.