

Epidemiological and Clinical Profile of Acne Vulgaris in Some Private Hospitals in Kinshasa

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Abstract

Introduction: Acne vulgaris is a chronic inflammatory pathology of the pilosebaceous follicle, preferentially affecting adolescents, and also adults. On average, one acne sufferer in two seeks medical attention. This study aims to describe the epidemiological and clinical features of acne in our environment.

Methodology: Retrospective, multicenter study of patients treated for acne in private hospitals in Kinshasa: Clinique Bondeko (n=58), Centre Hospitalier Akram (n=210), and Centre Hospitalier Alliance (n=60). It covered a 12-month period, from January 01, 2021, to December 31, 2021. 328 patients constituted the sample for this study.

Result: 2208 patients were skin for various dermatoses, including 328 for acne during the study period giving a prevalence of 15%. Females were most affected (62%). Age ranged from 10-54 years, mean age was 23.9 years, with the 20-29 age group being the most affected. Mixed acne was the most common variant. The cheeks (78%) and forehead (65%) were the areas of the face most affected, and the most common aggravating factor was the use of irritating cosmetic products in 32% of cases.

Conclusion: Acne vulgaris accounted for 15% of all dermatoses seen during the study period in our environment, most predominant in females and in the third decades of life. Intervention for people with acne should include addressing use of irritant cosmetics.

Keywords: Acne vulgaris, Pilosebaceous unit, Irritant Cosmetics, Kinshasa

Profil épidémiologique et clinique de l'acné vulgaire dans les hôpitaux privés de Kinshasa

Abstrait

Introduction : L'acné vulgaire est une pathologie inflammatoire chronique du follicule pilo-sébacé, touchant préférentiellement les adolescents, mais également les adultes. En moyenne, une personne acnéique sur deux consulte un médecin. Cette étude vise à décrire les caractéristiques épidémiologiques et cliniques de l'acné dans notre environnement.

Méthodologie : Il s'est agi d'une étude rétrospective multicentrique réalisée du 1er janvier 2021 au 31 décembre 2021 dans 3 hôpitaux privés de Kinshasa (Clinique Bondeko, Centre Hospitalier Akram, Centre Hospitalier Alliance). Ont été inclus les patients suivis pour une acné et consentants.

Résultat : Sur 2208 patients atteints de dermatoses diverses, 328 présentaient une acné durant la période d'étude soit une prévalence de 15 %. Les femmes représentaient 62 %. L'âge moyen était de 23,9 ans avec des extrêmes de 10 à 54 ans, la tranche d'âge de 20 à 29 ans étant la plus touchée. L'acné mixte était la variante la plus courante. Les joues (78 %) et le front (65 %) sont les zones du visage les plus touchées, le facteur aggravant « l'utilisation de produits cosmétiques irritants » était rapporté par 32 % des patients.

Conclusion: L'acné vulgaire représentait 15 % des dermatoses observées dans 3 structures privées à Kinshasa. Elle prédominait chez les femmes de la trentaine. L'intervention auprès des personnes souffrant d'acné devrait inclure l'utilisation de produits cosmétiques irritants.

Mots clés: Acné vulgaire, unité pilosébacée, cosmétique irritant, Kinshasa

Introduction

Skin diseases are difficult to hide because they are easy to access, and therefore exposed to the view and judgment of others. Some of them, although not presenting a vital risk, are unsightly and often make life difficult for patients who are affected. Among this type of disease is acne vulgaris, which is an inflammatory dermatosis of the pilosebaceous unit/follicles.

Acne vulgaris is a chronic inflammatory pathology of the pilosebaceous follicle/unit, preferentially affecting adolescents, and also adults (1,2). The prevalence of acne is 80% in most countries of the world in this age group. Moderate to severe acne accounts for 20% of all acne cases (3). It represents one of the most frequent reasons for consultation in dermatology. Its prognostic factors for severity are hyperseborrhea, tobacco, extension to the back, stress, and the presence of familial acne (3).

Acne vulgaris is more severe if associated with the following factors: age 17 years and above, a family history of acne, Oily or seborrheic skin, as assessed by the patient or physician, premenstrual flare-up, and significant stress (4).

Very little data exists on acne vulgaris in the Democratic Republic of Congo in general and in particular in Kinshasa, the capital of the Democratic Republic of Congo. Epidemiological data show that on average, individuals with acne consult a doctor one out of two times. This work aims to describe the epidemiological and clinical aspects of acne in Kinshasa.

Methodology

This is a retrospective, descriptive, cross-sectional, multicenter study. Data was obtained from the medical records of patients seen and diagnosed with acne in the dermatology departments of the following hospitals in Kinshasa: Clinique Bondeko, Centre Hospitalier Akram, and Centre Hospitalier Alliance. It covered a 12-month period, from January 01, 2021, to December 31, 2021.

Patients present at hospitals near their homes and where they have access to medical insurance for those who have a job that affords them this opportunity. Not all public or private hospitals have dermatology

services in Kinshasa. Kinshasa does not have more than 20 dermatologists for a population of 12,000,000, and the whole country does not have more than 25 dermatologists for 102,000,000 inhabitants. We chose those from private hospitals where we have access as a dermatologist consultant.

Inclusion and non-inclusion criteria

Data from the medical records of individuals with a diagnosis of acne vulgaris were included in this study and were subjected to a literature review in search of variables of interest. Data from medical records with a diagnosis of acne but lacking all variables of interest and with a diagnosis other than acne vulgaris were excluded.

Parameters of interest include sociodemographic and epidemiological data (age, sex, region of origin, race, and socio-economic category; and clinical data (history, symptomatology, clinical diagnosis). Acne severity was determined using an acne lesion scoring scale (Echelle de Cotation des Lésions d'Acné, ECLA) and Cardiff Acne Disability Index questionnaire (CADI) validated in French.

Ethical considerations

All information collected in the retained files was kept confidential; only the research team could access it. Security measures regarding confidentiality were guaranteed by: anonymity, limited access to data, collection sheets kept in a secure location, impossibility of identifying subjects when publishing the results of the study.

Data analysis

Data were encoded and entered using Excel software. Analysis was performed using SPSS 19 software. Descriptive statistics enabled us to present the data in the form of frequency distribution tables.

Result

A total of 2208 patients were included, 328 of which had acne vulgaris, giving a prevalence of 15%. The age range was 10 – 54 years, with a mean age of 23.9 years. Sixty-two percent were women and 38% were men giving a male-to-female ratio of 1:1.63. Furthermore, acne occurred more frequently in the third decade of life, in the 20-29 age group. A family history of acne was found in 39.4% of cases. Students

were the social category most affected in 33% of cases.

The most common clinical form was mixed acne. The cheeks (78%) and forehead (65%) were the most common acne sites. The most predominant aggravating factor was the use of cosmetics and irritant products (30.2%). Seborrheic dermatitis (25%) was the most commonly associated skin disorder.

The use of irritating cosmetic products, and topical bleaching agents, was found in 62.5% of cases. A questionnaire integrating the ECLA and CADI grids was administered to participants, acne vulgaris causes mood alteration for 60% of the affected.

The age at the onset of acne was around 10 years for females and 12 years for males. Among adults, 52% reported having had acne since their adolescence, while 48% had acne only after the age of 18.

DISCUSSION

The frequency of acne varies in different settings and study periods. In the present study, data was extracted from the medical records of 328 patients. Adityan (5) in India reported 309 patients from August 2006 to June 2008, and Rajar (6) in Isra (Pakistan) sampled 100 patients over 2 years. A family history of acne was found in 39.4%; Rajar (6) found values higher than ours at 49%. A family history of acne was considered not only as a predisposing factor but also as an aggravating factor.

The female predominance in the present study is in agreement with the results of Yahya (7) in Nigeria and Suh (8) in Korea. We can explain this predominance by hormonal fluctuations due to menstruation, use of contraceptive pills, dysfunction of the ovaries or adrenal glands, as well as stress which can promote the appearance of acne lesions. (9)

The average age of participants was 23.9 years. Variable data were found for Adityan (5) (19.78 years) and Khunger (10) (30.5 years). On the other hand, the most affected age group was 20-29 years, an observation close to that of Ismail (3) 21-25 years but differing from that of Rajar (6) 15-19 years.

In our series, the most common acne sites were the cheek and forehead. Our data are identical to those of Khunger (10) and Adityan (5). Acne is known to

localize more on convex than concave areas of the face. The majority of patients had mixed acne, which contradicts the findings of Khunger (10), who found inflammatory acne to be predominant.

The use of skin-lightening products (hydroquinone, glutathione, steroid, diprosone), particularly in acne patients, is one of the aggravating factors, due to the harmful effects of these products on skin keratinization.

More than half the participants (60%) in the present study stated that acne affected their quality of life, and our data concurred with those reported by Mallon (11) and Cotterill (12). The conspicuous and unsightly nature of acne could justify its negative impact on quality of life since we know that image plays a role in self-esteem. Indeed, acne would cause a profound alteration of the quality of life of patients who suffer from it, with a considerable increase in the risk of depression, nervousness, suicidal ideation, anxiety, and inhibition of social life (13).

The age at the onset of acne was around 10 years for females and 12 years for males. This is probably because acne sets in as puberty approaches, with it arriving early in girls compared to boys (14).

The method of recruiting our participants and the retrospective nature of the study cannot allow us to generalize our results to the population Congolese. It was also impossible to search for factors influencing the occurrence of acne.

In conclusion, we observed that acne vulgaris is a common pathology in this population (15%). The lesions were predominantly on exposed parts of the body, which could have an impact on the psycho-affective state and the quality of life of these patients. Studies on a larger scale with large sample sizes are necessary to investigate the factors impacting the appearance of acne and assess the quality of life of patients in our environment.

Conflict of interest: none

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Table 1: Distribution by Social Demographic Data

Social category	n	%
Unemployed	45	13,7
Pupils	80	24,4
Employees	95	29
Students	108	32,9
Total	328	100

Table 2: Patient distribution by age and gender

Age range (Year)	Sex (n=328)		Total n(%)
	Females n(%)	Males n(%)	
≤09	12	7	19(5,8)
10-19	60	39	99(30,1)
20-29	86	64	150(45,8)
≥30	45	15	60(18,3)
Total	203(61,9)	125(38,1)	328(100)

Table 3: Classification of patients by clinical form of acne.

Types of acne	n	%
Mixed	136	41,5
Inflammatory	124	37,8
Retentional	63	19,2
Conglobata	5	1,5
Fulminant	0	0
Total	328	100

* Mixed (inflammatory and retentional)