

## Dermatological Aspects of a Humanitarian Mission

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### Abstract

**Background:** Patients with dermatological pathologies represent an important population, especially in developing countries. The cosmetological aspects are important.

**Objective:** To determine the incidence and epidemiology of skin diseases during a humanitarian mission.

**Methods:** 679 patients who presented to our general medical consultations were examined. Patient data was registered to be analyzed retrospectively. The rare and difficult cases were systematically discussed during the consultation. The patient charts were correlated by the corresponding photos.

**Results:** The ethnic origin of the patients was different. The majority of our patients were younger than 50 years old. The dermatological problems represented a major motivation to consult, namely itching and skin lesions. The incidence was higher when secondary findings and complaints were also considered. Besides scabies, mycosis and tropical pathologies, the problems of scarring represented a major cosmetological demand.

**Conclusion:** Our work demonstrated a high incidence of dermatological pathologies showing the importance of public health issues, screening and an important need of cosmetological treatments. Due to migration, climatic changes and humanitarian missions, the manifestation and occurrence of the dermatological pathologies may be different. Health care providers need a thorough knowledge of community acquired and tropical pathologies.

**Keywords:** Humanitarian mission, Public health, Skin, Cosmetology

The influencing factors like climatic and social differences were considered.

### Introduction

The dermatological problems are frequent in the Western societies, representing up to 12.4% of family medicine visits and an important economic burden, especially when lost work days are considered [1,2].

The variety of available cosmetological treatments is important.

In developing and tropical countries the incidence may be higher while access to dermatological diagnostic and therapeutic facilities is reduced or missing, cosmetological treatments and surgery are available only for a small segment of the society. In these countries up to 59% of the patients may have dermatological problems with a value even higher when thorough examination can be achieved by dermatology specialists [3]. The associated mortality in these areas may be as high as of meningitis, hepatitis B or rheumatic heart disease [4].

The authors report about a population that had no former dermatological care in a developing country.

Their study was affected during a humanitarian mission in Uganda during late 2013.

They report the incidence, epidemiology and presentation of these pathologies.

### Methods

The study was ethically approved and conducted on patients requesting medical care during a humanitarian mission organized by the African-Hungarian Union in 2013.

### Construction of the team

The medical team was composed of 2 family doctors, one of them specialized in infectology as well and 1 head and neck surgeon.

Former experience in humanitarian work, training in tropical diseases, knowledge of at least one foreign language used in the area, valid vaccinations, appropriate physical and psychological status were the requirements to be selected.

They were accompanied by a coordinator whose duty was the organization of the consultations, travel, security and contact with the local authorities. Local public health doctors, general practitioners and nurses were involved, their cooperation considered to be important during follow-up as well.

### Examined population

The 679 patients were living in the Hoima area, Uganda by the lake Albert. An ethnic heterogeneity was observed with the presence of refugees from conflict areas.

All of the presenting patients were examined. When English was not spoken by them, local helpers translated.

The age, sex and medical history were systematically taken and regardless of the presenting pathologies, the skin was examined. All of the difficult and rare cases were discussed. The photographic documentation was systematic.

The obtained data, findings, diagnosis and recommended treatments were noted on medical charts to be analyzed at the end of the mission with a second control using the photographic images.

### Results

Due to adapted translation when necessary, there were no problems in communication. The limited access to electricity, drinking water, canalization and health care, cohabitation of several generations in crowded households were common in the area representing important epidemiological factors together with the tropical climate and pathogens [5]. The known and declared HIV infections were present in 24 cases (3.53%), lower than the national average but testing was not available during the consultations [6]. Alcoholism and smoking were not present, only 1 smoking patient was detected. The community acquired dermatological diseases, mostly scabies was more frequent amongst the refugees coming from the neighboring crisis areas [7,8]. Due to the poverty many people had no shoes, representing a possible way of being infected by worms (GNI per capita: 440 USD) [5,9-11]. Altogether, 679 patients were examined, representing 404 females (mean age 33.29 years) and 275 males (mean age 20.34 years) as shown by decades [Figure 1]. The life expectancy was 58.7 years [5]. The young mean age of our patients may explain the low incidence of skin tumors, only one lesion responding to the criteria of melanoma was seen [12,13]. None of them had previous access to dermatological care. Dermatological problems, different masses /dominated by thyroid nodules, hernias, salivary tumors, pathologies of the lymph nodes and others/, abdominal pain and musculoskeletal problems represented the most frequent motivations to consult [Table 1]. Without those of the genital parts and the skin of the external ear canal, dermatological cases represented 12.7% (86 patients) of the main complaints, 56 (8.3%) of them by skin related itching, mostly due to scabies with or without secondary bacterial infection and other skin lesions in 30 cases (4.4%). Their overall incidence was up to 18.2% (124 patients) when secondary complaints and findings were considered. In several cases, an association of multiple skin pathologies was observed. Scabies was present in 76 cases (11.2%), usually several members of the same family were included. The troubles of scarring, hypertrophic scars and keloid touched 29 (4.27%) of all patients, 24 (3.53%) looking for surgical solutions, regardless of the localization and the causes, namely 17 (2.5%) trauma or disease related, 8 (1.17%) due to traditional healing methods and only 4 (0.6%) as complication of former surgery. Mycosis was diagnosed in 37 cases (5.4%). In 17 patients (2.5%) allergy, larva migrans, trauma, burn, varicella, viral papilloma, leprosy, leishmania, tumor and trophic disorders were detected [Table 2].

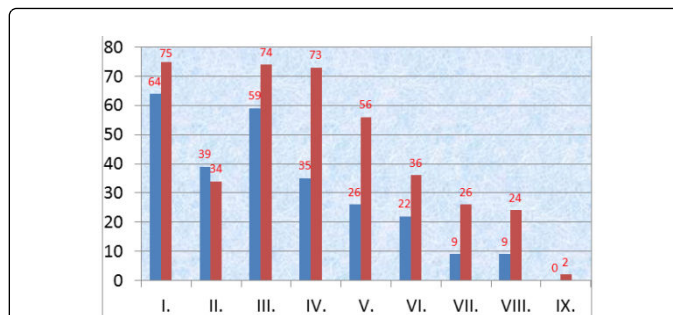


Figure 1: Age and sex distribution by decades.

Males: blue; Females: red; In arabic: years; In roman: decades

Masses	91 (13.4%)
Dermatological problems	116 (12.7%)
Abdominal pain	78 (11.4%)
Musculoskeletal pain	62 (9.1%)
Cough	49 (7.2%)
Headache	40 (5.8%)
Genital problems	38 (5.5%)
Rhinological problems	36 (5.3%)

Table 1: Distribution of the most important main complaints.

Scabies	76 (11.2%)
Mycosis	37 (5.4%)
Scarring disorders	29 (4.27%)
Others	17 (2.5%)

Table 2: Distribution of the most important skin problems.

### Discussion

The efficacy of a humanitarian mission is based on a careful selection of the participants and their teamwork. A good cooperation with local colleagues and authorities must be organized to achieve an optimal performance and a better follow-up of the patients. Due to linguistic and cultural differences the role of translators is important [7]. To make correct diagnosis, knowledge of the locally occurring pathologies is a must; it may protect the team members from infections as well. The communication amongst the participants is necessary when seeing rare and difficult cases. The diagnosis of skin manifestations caused by tropical and tropically occurring diseases like leprosy, larva migrans, tuberculosis, AIDS, Loa loa, leishmania, yaws and others is challenging. Mycosis and tumors may have unusual forms. Their incidence may be very high due to factors related to the pathogens, climate, migration and social reasons. In the recent study, even without the secondary findings or including the affections of the genital parts and the skin of the external ear canal they represented the second most important group motivating a consultation. As there was no trained dermatology specialist in the team, real incidence must

have been higher due to a more effective detection of the corresponding lesions. This way even without knowing the exact incidence, pathologies of the skin may be considered as the most frequent ones. The mortality associated to skin diseases and their incidence in developing countries is higher, trained dermatologists are needed [4]. Despite of the lack of therapeutic means the demand for cosmetological treatments is also important, a higher percentage of the involved patients seeks a solution. The incidence and manifestations of the diseases may differ from one region to another due to climatic, environmental and geopolitical reasons [14]. Due to migration and tourism these pathologies must be considered in Western countries. According to the data of Eurostat at the time of the mission, before the recent elevation in migration 7.5 million tourists visited the main Sub-Saharan destinations per year and there were more than 700,000 demands of citizenships in Europe from non-European countries [15]. When availability of the public facilities does not correspond with the demand a cohabitation facilitated elevation in the incidence of community acquired pathologies like scabies can be observed [14]. This means that without improving the public facilities and organizing educational campaigns the incidence cannot be reduced significantly even if a better access to health care could be provided.

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