

Pattern of skin diseases among preschool and primary school children in Dermatology Damietta Hospital

Thesis

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Abstract

Objective: To determine the pattern of skin diseases among preschool and primary school children in Damietta Hospital for Dermatology and Venerology. The influence of socioeconomic status and hygiene behavior was assessed.

Methods: This is a descriptive cross-sectional study conducted on pediatric patients attending the outpatient clinics of Damietta Hospital for Dermatology and Venerology in the period from January, 2009 to December, 2009. The diagnoses were based on clinical dermatological examination, laboratory investigations and biopsy specimen only if necessary. Skin diseases data from a total of 4000 pediatric patients of both sexes (52.4% females & 47.6% male) with ages ranging from newborn to 12 years were analyzed according to age, sex, etc. The patients were grouped into three categories: infants (0-2 years), preschool children (>2-6 years old) and school children (>6-12 years old).

Results: Thirteen percent (13.5%) of the patients had two diagnoses and one percent (1.3%) of the patient had three diagnoses. The most frequent infectious skin disease was impetigo (13.67%), followed by chicken pox (9.12%), tinea capitis (7.67%), furunculosis (6.34%), tinea corporis (4.60%), pediculosis capitis (3.70%), wart (2.95%), scabies (2.82%), pityriasis versicolor (2.15%) and candidiasis (1.37%). The most frequent non-infectious skin disease was papular urticaria (17.25%), followed by atopic dermatitis (5.22%), miliaria rubra (4.55%), napkin dermatitis (4.07%), contact dermatitis (3.75%), pityriasis alba (2.82%), cradle cap (1.85%), pityriasis rosea (1.65%), alopecia areata (1.35%) and urticaria (1.15%).

Conclusion: Infectious skin diseases represent a large proportion of the analyzed cases, probably reflecting the low socioeconomic level of the patients in this study. Of the infectious skin diseases impetigo was the most frequent and followed by chicken pox and tinea capitis. Of the non-infectious skin diseases, papular urticaria was the most frequent. The results of this study suggest recommendations to decrease frequency of skin diseases in this community.

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List of Abbreviations

(AD)	Atopic dermatitis
(AIDS)	Acquired immunodeficiency syndrome.
(ACE inhibitors)	Angiotensin-converting enzyme inhibitors
(AMP)	Anti-microbial Peptide
(B.blocker)	Beta blockers.
(CAMPS)	Central Agency for Public Mobilization and Statistics
(CMV)	Cytomegalovirus.
(1, 25(OH) D)	1, 25-dihydroxyvitamin D
(EBV)	Epstein bar virus.
(hCAP18)	Human cathelicidin (precursor)
(HHV)	Human Herps Virus.
(HZ)	Herpes zoster
(HIV)	Human immunodeficiency virus.
(HLA)	Human leucocytic antigen.
(IgG)	Immunoglobulin G.
(IgE)	Immunoglobulin E.
(IR)	Infrared.
(LL-37)	Human cathelicidin (processed)
(MRSA)	Methicillin-resistant Staphylococcus aureus.
(PV)	Pityriasis versicolor.
(UV)	Ultra violet.
UVA	Ultra violet A.
(UVB)	Ultra violet B.
(VDR)	Vitamin D receptor

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Introduction&Aim of the work

The skin is the largest organ in the body. It is not a simple inert barrier but it has a lot of functions as sensation, thermoregulation, defensive functions against infections and infestations, as well as protective properties against irritant, allergens and UV radiation. Many diseases can affect the skin including congenital, infectious, autoimmune, neoplastic and others. They range in severity; some are mild and easy treated; others are sever or chronic (*Ryan, 1991*).

Chronic suffering rather than mortality is the characteristic of most skin diseases. In addition to physical symptoms, perhaps the most significant effect of the skin diseases is on the psychological well being (*Ryan, 1991*).

Epidemiology refers to the study of the distribution and causes of disease in human population (*William and Strachan, 1997*). Epidemiology, as applied to dermatology , explores how many people suffer from skin disease in given community (*William, 1998*).

A major reason for targeting skin diseases in the developing world is that the majority are transmissible and therefore potentially preventable and controllable (*Gibbs, 1996*).

Although it is believed that the prevalence of dermatoses among children of developing countries is very high, there have been few epidemiologic reports on this matter, which makes difficult the planning of health program (*Dos-Santos et al., 2004*).

Aim of the work:

The aim of this work is to study the pattern of skin diseases among preschool and primary school children coming for dermatological care as well as factors influencing the frequency of skin diseases. This would be useful in planning of the health care and taking preventive measures to decrease the prevalence of skin diseases in children in Damietta.

Geography and Demography of Damietta

A-Location:

Damietta governorate overlooks the Mediterranean Sea coast in the North of Delta region, along the sides of Damietta branch of the River Nile. It is a peninsula embraced by the Mediterranean Sea in the North, and El Manzalla Lake in the East. It is bordered in the Eastern South and in the West by Dakahleyia. Damietta lies at the mouth of Damietta Tributary in the Mediterranean. This merge of the Nile fresh water with the Mediterranean salt water is one of the miracles of the Great Creator. This unique location left its marks in the history and population of the governorate. Idiosyncrasy of the place also had its impact on the character of man who knew the value of work. The governorate of Damietta includes four administrative sections called markaz which are Damietta, Farscor, Kafer Sad and Al Zarka. Damietta City is the governorate's capital (<http://www.eip.gov.eg/Periodicals/WasfMisr/2008/DamiettGovernorat/dom.>).

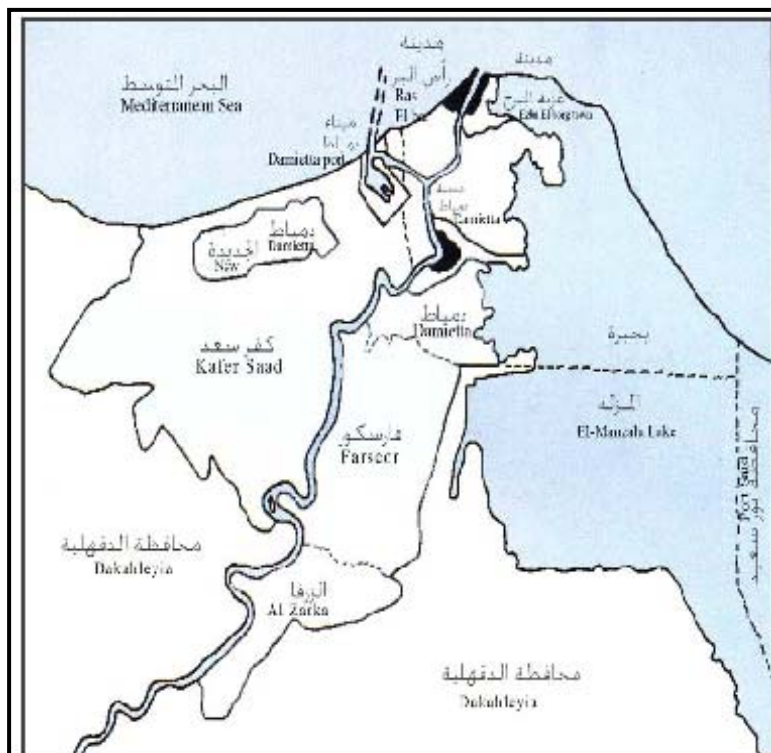


Figure (1): Map of Damietta ([http:// www.eip.gov.eg/Periodicals/WasfMisr](http://www.eip.gov.eg/Periodicals/WasfMisr)).

B-Description of Damietta:

The governorate covers an area of 910.3 km², representing 0.1% of the Republic's area, and encompasses 4 marakz, 10 cities, 47 rural units and 85 villages. According to the preliminary results of 2006 census, population is about 1.1 million people; 38.4% of them live in urban areas and 61.6% in rural areas. The population natural growth rate is 21.6 per thousand.

Climate:

Damietta lies follow within the Mediterranean costal climatic region. Weather station Damietta is at about 31.42°N 31.80°E. Height about 2m / 6 feet above sea level. This area is about 111km (69 miles) from north to south and about 95km (59 miles) from east to west (*<http://www.Worldclimate.Com>, DAMIETTA, EGYPT Weather History and Climate Data.htm, 1987*).

Winter:

It is somewhat rainy and temperate because of its presence near to the Mediterranean with an average of 22⁰C and low of 10⁰C, with rain falls more heavily on the north with an average precipitation of 106.6mm³per year with a maximum during December and January.

Spring:

It is unsteady with less degree than winter with AL-khamaseen sand storms with an average temperature ranges from a high of 26⁰C and a low of 13⁰C and rain is less than winter with an average of 10 mm per month with a maximum during Mars.

Summer:

It is hot humid with absence of rain and clear sky. The average of temperature ranges 32⁰C and a low of 19⁰C. The humidity ranges from 80% to more than 90% during summer.

Autumn:

It is unsteady with less degree than winter with temperature to be more than spring with an average of temperature ranges from a high of 30⁰C and a low of 15⁰C and rains fall in October and November with an average of 11mm³ per month with a maximum during November (<http://www.Worldclimate.Com>, **DAMIETTA, EGYPT Weather History and Climate Data.htm, 1987**).

Population:

The governorate of Damietta includes four administrative sections called markaz which are Damietta, Farscor, Kafer Saad and Al Zarka. According to preliminary results of 2008 census, population is about 1.1million people; 419.5/ thousand urban, and 672.8 in rural areas. The birth rate is 27.7 live birth/thousand persons. The mortality rate is 6.1 dead person/thousand. The population natural growth rate is 21.6 per thousand persons (**Damietta Governorate, CAPMAS "According to Census Preliminary Results", 2006**).

Urban areas:

Females constitute 48.8% of urban areas. The average of family members is 3.8 person in urban areas.

Rural areas:

Females constitute 48.9% of rural areas. The average of family members is 3.9 person in rural areas (**Damietta Governorate, CAPMAS "According to Census Preliminary Results", 2006**).

Construction and Building:

The total number of constructed housing units is 1881 housing unit. The government sector is 94 housing unit and the private sector is 1787 housing unit. The number of new cities is one city; New Damietta city, the number of productive factories is 170 factories, and the number of housing units (youth housing) is 6114 unit and the number of cities and villages with endorsed urban