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Common Dermatological Diseases in Saudi Arabia: A Literature Review

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ABSTRACT

Background: over the last two decades, only few dermatology research papers have been published in Saudi Arabia provided the small number of experts -in this field -enlisted in higher education institutions. Hence a compelling need to review the recent publications and define the current prevalence, status and interventions needed.

Objective: To present an overview of the common dermatological diseases, particularly eczema and dermatitis, in Saudi community as well as their effects and ways to mitigate them.

Methods: Review of Randomized Controlled Trials (RCTs) researches conducted and published in Saudi Arabia.

Results: Empirical findings revealed that Acne, Eczema and Psoriasis are the most common dermatological disorders among the Saudi community while Atopic Dermatitis was the most common mostly affecting children. In the meantime, Vitiligo emerged to be the most rampant pigmentary ailment, also viral warts appeared predominant covering up to 12% of the patients in the subject. On the other hand, dermatophytoses occurred commonly among the fungal conditions, while psoriasis arose as the most recurrent papulosquamous condition.

Conclusion: The prevalence of dermatological disorders in Saudi Arabia is rather high with the issue being overlooked and deprioritized in favor of graver pathological conditions despite the significant social, psychological and quality of life impact on the patients. Thus, we recommended that proper education and awareness campaigns on skin diseases should be provided at all academic and social levels as one way of prevention and alleviation of skin diseased in Saudi Arabia.

INTRODUCTION

The kingdom of Saudi Arabia is a state situated in Asia and comprises a population of about twenty-seven million people. Despite the noticeable growth in its infrastructure and industrial sectors, Saudi Arabia remains to be one of the most affected nation on skin diseases and dermatological conditions in general. Dermatology is habitually perceived as an outpatient facility by the personnel involved in its treatment and control. They mainly tend to overlook and pay little devotion in the way they handle their patients. These conditions vary in various aspects such as the medical exhibition, severity and the general epidemiology [(1)]. This suggests that they are deadly illnesses which are usually abrupt in their early stages and very much troubling to the patients. Being one of the leading countries stricken by Dermatological disorders, Saudi Arabia lacks the top expertise to offer proper description to their patients, thus a major contributor to the disorders' spreading [(2)]. Argues that skin conditions are usually allied with cheap analytical

and therapeutic measures and inadequate briefness, these disorders continue to be one of the primary conditions that lead to ill health and disabilities in the general public. Statistics of dermatological conditions, from reliable researchers, mainly in the upcoming nations suggests that they are relatively common, fluctuating in the range of 25% to 81%, where most of them are as a result of contagions such as scabies, pyodermas, and Superficial Mycoses [(3)]. The sequences of these type of disorders, among other factors remain to be determined by the kind of the community development and the level of quality of the provided attention. Every involved party, ranging from the public, medical, scholarly and the administrative bodies should therefore work and join their efforts to enhance the prime cautiousness and diminish the liability of these disorders in the

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nation through proper and improved health policies. Additionally dermatological disorders usually determines reflective impact and outlook on an individual's quality of life. A person's day to day life and his or her interactions can be meaningfully lessened resulting to social avoidance, depressing attitudes and nervousness. According to a study conducted by **Alghamdi KM and Alshammari SA** [(4)], one of the most crucial factors, particularly in dermatological disorders involve stigmatization as a result of perceptible and also secreted skin scores, which are only pertinent in individual interactions. More and more, therapeutic researches emphasis on these complications and remedies should not only treat the skin grazes, but also to improve on the quality of life.

Insights on the current status of dermatological conditions in Saudi Arabia

On this particular century, dermatological disorders should at no possible way overlooked or be considered as inconsequential for the conventional public or people in Saudi Arabia. To achieve this, nursing and intensive care strategies in the scope and nature of the referrals to patients suffering from these disorders is critical in forecasting and anticipating the imminent expansion and improvement of the required services. Evaluating and weighing the aspects surrounding these diseases, knowledge and the necessary measure, towards the frequency of such ailments that are a brutal menace to the general public would be duly and efficiently planned for, thus making comprehensive ratifications and recommendations on the health platform [(5)]. Through this, the required resources would be adequately and timely directed towards the needs of the public in Saudi Arabia. It is, therefore, paramount to massively pay attention to the upgrading and improvement of the cumulative dermatological illnesses [(6)].

In most situations, the general occurrence of numerous skin conditions varies by physical and the environmental aspects, as it is, in a specific way, connected to the ethnic, ecological and social-economic dynamics of a given population. From various research done in the Asian countries, the frequency of skin diseases such as eczema and dermatitis are exemplary high, with others such as fungal contagions as the common skin condition at around 40%. Consequently, some dermatological conditions are catalyzed by seasonal disparities. Variations of weather conditions such as temperature, moistness, and wind emanate from varying seasons, where critically low temperature and humidity poses injurious consequences on the epidermal barrier. Apart from the atmospheric factors, social-demographic characteristics also aid in the spreading of these ailments. Occasionally, there has been a breakthrough that suggests that some of the skin diseases come with age [(7)]. Acne vulgaris for instant affects young people, mostly the youth; napkin dermatitis certainly affects the infants as the elderly population cope with atopic dermatitis. Various researchers also have pointed relations between low social, economic level and the augmented probability of the incidences of the skin diseases. The fact that people living in low-conditions are likely to have low living standards, thus lacking the general access to personal hygienic care [(8)]. Living in low standards may also come along with other attributes such as being overcrowded in a certain locale or homes, collective sharing of personal things such as beddings and clothes and also the accumulation of trashes, therefore, building decent breeding homes for rodents and bugs that may be critical in spreading skin diseases [(5)].

Methods of analyzing common dermatological conditions in Saudi Arabia

Despite the fact that extensive and more comprehensive researches on dermatological diseases have not been able to be conducted in Saudi Arabia, at least there have been reliable ones, mostly done from various and key hospitals, schools , rural and urban areas. This study, therefore, applies scrutiny and analysis of some of the already collected statistics in its pursuit to examine the common dermatologic conditions [(6)]. Although various research articles and case studies examining the skin conditions in Saudi Arabia are not consistent, they somehow have close similarities in their findings.

Revising a case study [(9)]. conducted for 12 months between years 2012 and 2013, a team of specialist collected information on the attendance of the dermatology from the Outpatient Department (OPD) and the Emergency Room (ER) among other skin ailments sectors in Saudi Arabia, with a core aim of seeking views on the skin problems. In that study, every demographic statistic was documented and all the skin conditions grouped into several categories, on the International Classification of

Diseases (ICD).Consequently, diagnoses were conducted specifically through comprehensive consultations with medical experts on the grounds of medical presentations, laboratory outcomes and in some situations, histopathological results. In this excises, patients with genetic ailments were excluded which was followed by manual data extermination.

In another study [10], a sample of a certain number of student in a certain medical institution and from the different year of study levels; through an appropriate selection so as to ensure a balanced representation of all students at every level. The students were instructed on the main aim of the exercise and inscribed informed consensus was properly noted for involvement. This was followed by a pre-tested self-administered and organized questionnaire for the purpose of data collection. The general credibility of this survey was well done by professionals in the dermatological platform through proper and critical analyzing of the questionnaire. Before the questionnaire in the subject was dispersed in its ultimate form, it was first subjected to an experimental trial on ten students. Then the consistency of the survey was evaluated through the means of Cronbach's Alpha which reflected 0.82, suggesting excellent internal reliability. General questions on the manifestation of any skin ailments by the involved student within a span of one year were queried.

Consequently, queries about how regularly these students wash their faces, apply facial purgative products, how regularly they conduct general bathing, especially head and body in weekly basis, how much or frequency of applying cleaning chemicals, such as shampoo, on their hair, per week, application of sun-protection creams, conditioners or makeups, how regularly they change clothes or share them with others, and finally, their swiftness in seeking dermatologist assistance for skin illnesses [11]. All these were asked to inquire the degree of skin diseases and the assessment of people's efforts on the enhancement of the care of their skin. Likewise, the standard of living was evaluated on the bases of daily water consumption, the type of food eaten, how oily or fatty they are, weekly consumption of fruits and green vegetation, refreshments activities and smoking practices.

Every answer for the inquiry intended to inquire about skin care quality as well as lifestyle practices was rated between 0-14. 0-7 for inquiries indicated deprived skin condition where 8-14 indicated good skin condition. Scores between 0-5 suggested deprived lifestyle practices and 6-10 indicated good lifestyle practices.

EMPIRICAL FINDINGS

In a study conducted by **Walker C and Papadopoulos L** [2], about 85.5% were citizens of Saudi Arabia and 14.6% from other nationalities. Among them, 76% were grownups above the age of thirteen. 24% were children below this age. From the many diseases established from the study, one type of eczema, Atopic Dermatitis was the most common mostly affecting children. Consequently, Vitiligo emerged to be the most rampant pigmentary ailment. On the viral contagions, viral warts appeared predominant covering up to 12% of the patients in the subject. On the other hand, dermatophytoses occurred commonly among the fungal conditions, while psoriasis arose as the most recurrent papulosquamous condition [2].

In another study, 25% of the students had a fair skin condition, 42% had pale skin, 25% had chocolate, and 8% had dark skin. Acne appeared to be the most predominant skin condition at 67% followed by sun tan at 52%. On the hair skin conditions, the most common appeared to be hair loss at 59% followed by dandruff at 46% [12].

Fungal inspections were recorded in males compared to women. Likewise, Papular and pustular categories of skin condition were found common in males. Pustular patients were recorded at 11%. A high percentage of 85% were found to have a good quality skin care with the rest trailing in a poor quality skin care bracket. Despite exemplary quality skin care, 68% of the students in this gap reported having suffered various skin conditions, compared to 57% in those who were in a deprived skin care category. 85% had exceptional lifestyles practices, with the females leading males at 87% compared to 82%. Among those who had good lifestyles, 69% reported skin ailments compared to 54% of those in deprived lifestyles. Usage of cleaning creams and other products were found to have close links with good skin conditions [12].

ANALYSIS OF THE FINDINGS

The sophisticated rate of eczema about all other diseases in the two studies is unlikely to be by chance as they seem to have almost similar results. They reveal the existence of various skin conditions

amongst the citizens of Saudi Arabia. These diseases are promoted by different influences such as food and general environmental settings among other factors. Due to the consanguineous matrimonies in the ethnically founded society of Saudi Arabia, genetic factors might as well apply, especially the inherent inclinations to allergic infections like atopic dermatitis. Another disorder, Acne which appears to be linked to peoples' apprehension on the issue of their facial looks, particularly in females. Viral warts and fungal contagions have also been common, which among the other main factors, are mostly related to high temperatures and damp climatic conditions. Vast incidences of viral warts among employees in the poultry abattoirs, which are conditioned with a high level of humidity, thus promoting this skin condition through a virus. It would be illogical to claim that these incidences portray the exact dominance given the restrictions of the expertise and hospital studied researches, nevertheless, they reflect a good oversight of the existence of the collective and the most common dermatological conditions in Saudi Arabia. Beyond this diseases, there is a great chance that there are others which end up being unreported such as STDs, which seems to be diseases of shame amongst the public. People often seek for privacy and thus obtain refuge from private hospitals, which in most cases, uphold privacy and a great deal of confidentiality. Likewise, those who suffer from other diseases such as neoplasms seek plastic surgery while those with skin tissue conditions seek help from rheumatology clinic, thus leading to a very trivial number of the patients attending to dermatologists [(13)].

Common dermatological diseases

On top of the most common dermatological diseases enrolled in this study are Acne, Eczema and Psoriasis

1. ACNE

Acne, which is also scientifically recognized as Acne Vulgaris is a skin condition that in most cases implicate the skins' oil glands, especially at the lower segment of the hair follicles [(14)]. The word acne is derived from a Greek name acme, which refers to a spot [(15)].

The oil glands, also known as Sebaceous glands are usually minute and are responsible for producing an oily element named Sebum which the lubrication of the human hair and the skin in general to avoid skin-dryness. Acne is infectious meaning it is not contagious [(16)].

Acne occurs when these glands opt to generate excessive sebum, which proceeds to blend with lifeless skin cells that are clogged within the skin poles. When they mix, they form a pad in the hair cavities which causes their closure from the external part of the skin. This causes it to swell outwards promoting popping of pimples on the skin. Likewise, the clogged skin air cavities may become vulnerable on the top surface of the skin thus leading to blemishes. This vulnerability and blemishes be become advantageous to various bacterial on the human skin, leading to further infections such as papules, cysts, and pustules among others. In most cases, this kind of skin condition reflects on the face chest, neck and shoulders in the human body [(17)].

Various researches have shown that although this kind of dermatological condition may be popular in grownups, it is most common in teenagers who are mostly prone to hormonal fluctuations [(18)]. It is suggested that when acne is as a result of hormonal variations, it is the androgenic hormones in males which naturally grows vigorously in the adolescent ages, and when these hormones combine with various skin microorganism, as well as greasy elements, Acne is conceived.

Factors that leads to skin acne

Apart from the natural hormonal generation in the human body acne can also be caused by the following factors.

a. Genetic factor

Various studies have clarified and proved that acne could be genetically passed from one generation to another. If a certain parent suffered from this skin condition, then chances of their children to get it are high. More likelihood is even higher in situations where both parents have had acne, and in this circumstance, it could be very severe at the tender age. Consequently, if by any means both parents of a given child get acne at their adult years, there is still a probability that the child too might get it [(19)].

b. Pregnancies, periods and polycystic ovary disorder in women

Adult acne usually affects women, a situation which is perceived to be allied to their hormonal levels at their particular conditions.

During pregnancies, a section of women show indications of this skin condition, especially the first three months. Likewise, in their period's moments, some women experience flashes of acne [20]. Weight gain and development of minor lumps inside the ovary also suggests that a woman has acne, another minor factor that leads to acne includes certain ornamental products, medications and also smoking [21].

2. ECZEMA

This is a disorder where coverings or the top layer of the skin become swollen, scratch, sore, fractured and sometimes bumpy. This condition comes along in many categories which include atopic dermatitis, allergic, contact, dyshidrotic, Neurodermatitis, nummular, seborrheic and stasis eczema dermatitis.

Being the common one, atopic dermatitis usually reveals itself in newborns with dehydrated and flacked spots on the skin. These infants are usually uncomfortable due to the high intensities of itchiness. Subsequently, signs and indications of this type of skin condition differ depending on the age of an individual suffering from it [15].Typically it attacks people at the age gap of five years, where almost have the number of these people retaining it into adulthood. However, adult symptoms are completely different from those of small children. These signs grow worse at times and in some other time disappear. In infants and small kids, they may experience, flushes on the scalp and cheeks. Due to irritation children tend to cry a lot and unceasing rubbing and scratching.

In adults, rashes manifest mostly on knees, neck, and elbows among some other parts of the body. This is characterized by a dehydrated and scratchy skin, which can promote some other skin contagions.

Unluckily, no breakthrough has ever been made to detect or diagnose this skin condition; the medics usually prescribe regular examinations so as to make a precise diagnosis. This is contributed by the fact that people who suffer from eczema, experience mixture of indications which in some ways frustrate its detection. Therefore, diagnoses of this ailment are principally grounded on individual's signs and symptoms over some time. However, therapeutic history of the patient is also critical. Additionally, there is no particular cure for this condition. Medication for eczema mainly targets to the main affected point and prevent escalation and widening of the symptoms. To mitigate these condition, dermatologists usually propose strategies based on the age of a person, signs and the health condition of an individual. This ailment perseveres for considerably some time in some people while in others, it persists to be part of their life [22].

Factors that lead to eczema

Although the very specific cause of eczema remains miserly, the most perceive predominant factors that contribute to eczema skin condition are attributed to the genetic and environmental dynamics. Studies conducted has shown that some of the children whose parents has ever had this condition in one way or another end up with it. Just like acne, if the two parents possess eczema, then the higher the probability of a child getting this condition becomes.

On the environmental aspect,other study [23] highlights factors such as detergents, antiseptics, some foods, and vegetable, Allergens, microorganisms, hot temperatures, moistness, stress and hormonal variations as critical in promotion of this condition.

3. PSORIASIS

This is another skin infection that is long-lasting and genetic. It is mainly brought about by the replication of superfluous skin tissues that are roseate and complex in nature, and are enclosed with shiny scales. Most of its symptoms appear on the knees and elbows, which later extend to limbs [24].

This skin condition also emanates from prompt and rapid skin production mechanisms. Naturally, the cells in the skin develop at the deeper part of the skin and gradually spread towards the outer surface, where they finally fall off [25]. When these cells fail to fall off, and their initial production proceeds, there is over-production which eventually tip to the uncontrolled generation of skin cells and finally, it ends into this condition Psoriasis. From the conducted studies Psoriasis is allied to numerous other disorders such as diabetes, heart disease arthritis and the seditious bowel disorder [26].

This condition exist in five different ways,

- Guttate psoriasis which is major in small kids. It mainly leads to minor pink spots, and it usually affects arms and legs.

- Plague psoriasis. This form of Psoriasis is present in approximately 80% of the people suffering from this condition. It is characterized by reddish and sore sports on the skin. It usually strikes the elbows and the knees.
- Inverse psoriasis. The common symptoms in this type of psoriasis are swollen blemishes on the skin which mostly affects the armpits, groin, and genitals as well as breasts.
- Erythrodermic psoriasis. Though it is a rare disorder, this type of psoriasis usually affects almost the whole body. The skin turns to be tanned.
- Pustular psoriasis. This usually affects the grownups. It is usually characterized by whitish blisters and blemished skin. It usually affects hands and legs among some other parts of the body [27].

This condition is however not contagious, thus cannot be passed from one individual to another. Psoriasis is usually diagnosed on two ways. One is corporeal check since the respective symptoms are easy and explicit to notice. The doctor examines the whole body and more specifically, the mostly affected ones. Consequently, information about the possibility of family members having ever diagnosed with this condition is important. The second diagnostic method is biopsy which is usually applied when the symptoms are not very certain. It involves taking minor samples of the skin and running a sequence of tests in the laboratory [27].

Factors that lead to Psoriasis

Just like eczema, there has never been a clear breakthrough of what causes psoriasis. However, the genetic and the immune system features have been held as the main causatives of this ailment [28]. Psoriasis is considered to be an autoimmune disorder where the white blood cells attack the skin cells. As the skin require more cells, the dead cells are replaced by new ones where they are generated speedily hence, becoming forced to the surface of the skin thus accumulating [29].

On the genetic aspect, one generation passes Psoriasis genes to the next hence spreading the disorder. Consequently, psoriasis is sometimes prompted by various external factors such as stress, alcohol and various medicines among others [29].

People who suffer from various skin disorders also grieve extensive range of symptoms which in one way or the other affects them, ranging from minor complications to complex ones.

From the epidemiological findings, it was recovered that atopic dermatitis was more common at 25.3%, with 10.8% especially to children below the age of 13. It was followed by Urticaria at 10.7%. Consequently, contagious disorders took the lead at 25.3% of the total number of diseases recorded. Uncommon but lethal skin illnesses were also recorded but comprised of low percentages of less than 2%. Mucosal disorders also were present at 10.3 and angioedema at 10 %. Among the fungal conditions, viral warts took the lead at 12% followed by Varicella Zoster Virus (VZV) conditions at 5.2% amongst the children.

Acne was at 9.8% among the Vulgaris disorders, especially with the teenagers, where the main causes were found to be diet at 28.5%, acne bacteria at 20% and deprived hygiene at 15%. This concludes that somehow, there is an ignorance perspective about the knowledge about this condition with respect to its foundations. Additionally, the study recorded fungal inspections common with males than women.

CONCLUSION

From the various conducted studies in Saudi Arabia, it is clear that dermatological disorders are a great menace with the issue being overlooked and therefore not addressed satisfactorily. Consequently, it has been found that the lack of collective efforts, both at the local and international levels have significantly contributed in the vast spreading of these diseases. Saudi Arabia, therefore, need to formulate a strategy, at the communal and governance categories and find solutions to these problems. Subsequently, reliable therapies rarely focus on the biological aspects of a given ailment, but mainly on the improvement of the quality of life and also means of mitigation of subordinate psychiatric conditions like dejection or anxiety that emanates from the seriousness of these conditions. Therefore it is usually important to deal with these ailments in proper ways and motivations, so as to wide them out completely. Indications of nervousness and despair should be handled through further evaluation of psychotherapeutic processes. Proper education on skin diseases should be provided at all academic levels as one way of reducing them. Consequently, skin conditions like psoriasis and atopic eczema have deep stimulus on patients' lives. More or less discernible sore or irritating indications disturb persons' collective life,

their daily work and their personal associations. However, very repeatedly the effect of dermatological ailments on the quality of life might be undervalued in contrast to other more life frightening maladies like malignancy or heart infection.

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