



PRELIMINARY OBSERVATIONS ON *SARCOPTES SCABIEI* INFECTION IN HADHRAMOUT GOVERNORATE (YEMEN)

Baswaid Saeed Haj

Faculty of Science - Mukalla – Hadhramout University of Science & Technology, P. O. Box 60010
Email : drbaswaidsh@hotmail.com or hfsc_2005@yahoo.com

ABSTRACT :

These preliminary observations on the *Sarcoptes Scabies* infection, based on six years (1999–2004) registration data, at Ibn Sina Hospital at Mukalla city, illustrate the distribution spectrum of this dermal disease, mainly in Hadhramout and occasionally in other governorates of Yemen. The percentage of this infection among males is 71.13% (138 positive/194 cases diagnosed), and among females is 28.87% (56/194). This infection is concentrated in Mukalla and more in neighbour areas like; Fowah and Brum. It is also widely spreaded in other regions of Hadhramout, some registered cases in patients who came from other governorates of Yemen.

Although this infection is, probably, widely distributed in Yemen, it is not included in the declared diseases of Public Health in Yemen, and no studies were carried on it previously.

Data are discussed, and the author recommends further studies in suspected regions of Yemen to evaluate the real prevalence of this contagious disease and, subsequently, plan a strategy to either minimize its endemnicity or to eradicate it.

INTRODUCTION:

The Athropodan mite, *Sarcoptes scabiei*, is essentially, the causative agent of the pruritic rash (mite itch) in Human. This microscopic, cosmopolite parasite, lives in cutaneous burrorws, where the fertilised female deposits eggs^[1,2].

This disease is not countered among the declared public health diseases^[3,4], and literature, reveals no previous studies about this contagious disease in Yemen. Our preliminary statement of this infection is the first study in Yemen, mainly in Hadhramout governorate and generally in other governorates of Yemen. This

is also a spotlight on its distribution through some regions of Yemen, to orient further investigations about the real prevalence of this dermal public health problem.

THE SURVEY DATA:

Data on prevalence of scabies are collected from the registry cases of infected patients (males and females), who consulted the dermatology Department in Ibn Sina Hospital, Mukalla/Hadhramout (Yemen), during the period from 1999 to 2004 (six years). The diagnosis of all these cases is confirmed by skin scrabing techniques, resulting in the

demonstration of mites, eggs, or scybala (fecal pellets)^[2]. Because the mites are located under the skin, the scrabings must be made from the infected area.

RESULTS:

Data confirms that scabies contagious disease is present in many regions of Hadhramout governorate. Figure (1), illustrates the positive cases (in percentage versus sex) diagnosed at the department of dermatology in “Ibn Sina Hospital“, during six years. This arthropodan parasite affects males and females but in favor of males. Figure (2), indicates the infection versus age, high percentage of infection is occur in patients aged 10-30 years (100 cases = 51.56%). It is also to be noted that babies aged of 45 days, 2 months and 11 months are also contacted the disease. More over, persons from the same families get the disease ((Halla/Ibn Sina Sector/Hdhathim and Wadi

Amed, two each)). Four patients aged 80/80/80/82 (one female and three males) respectively come from; Fowah, Maifa’a, Alraidah Alshargia and Mukalla city respectively.

The spectrum of the distribution of this disease covered most of the rural regions of Hadhramout. Additionally, its presence in patients came from other governorates of Yemen (Table 1).

The author, ensure that the percentage of patients is not does not reflect the real incidence in the region, because other patients consult other private health-care centers or try to treat the itch by traditional manners.

These preliminary observations on Scabies incidence, mainly in Hadhramout, are spotlights on the importance of this public health problem and its high distribution. Consequently, more investigations must be carried on about its prevalence in the whole country.

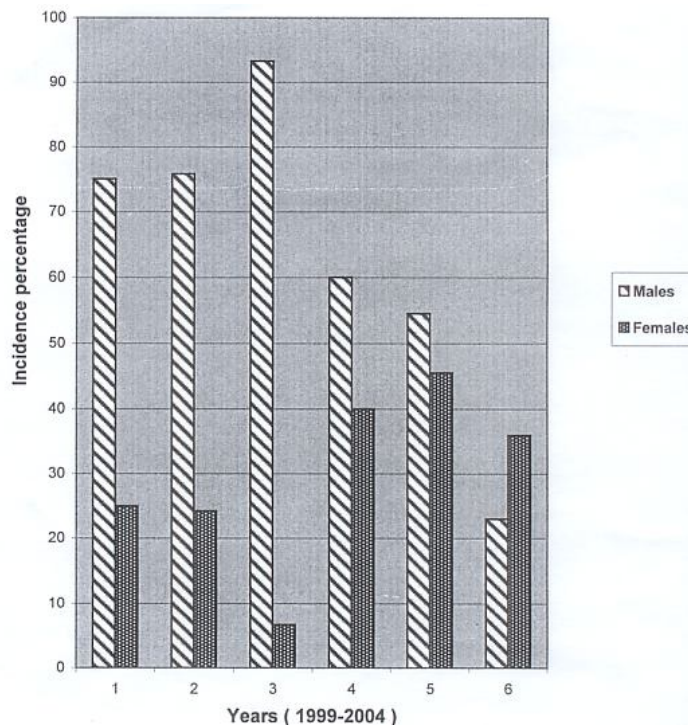


Fig. (1): Scabies prevalence in Hadhramout (6 years)

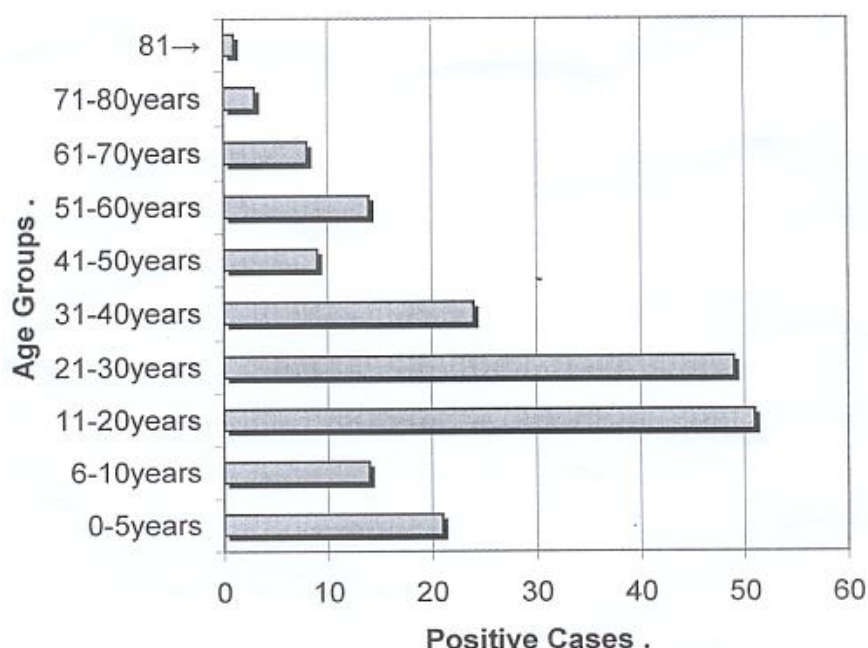


Fig. (2): Scabies prevalence versus age groups

Table (1) : Scabies infection cases of patients who came from other regions of Yemen.

Region Name	Positive Cases	Males	Females
Sana'a	2	2	-
Taiz	2	2	-
Thamar	2	2	-
Ibb	8	8	-
Al-Hodeidah	2	2	-
Abyan	3	3	-
Shabwah	10	9	1
Almahrah	2	2	-
TOTAL	31	30	1

DISCUSSION :

Among the Sarcoptidae family, the human itch mite, *Sarcoptes scabiei* var. *hominis* (Linnaeus, 1758) has been known, over 2, 500 years as the causative agent of scabies infection^[5]. This obligate, highly contagious^[6], ubiquitous and debilitating dermatoses^[7] is widely spread all over the world^[8], where each year around 300 million cases of scabies are noted worldwide, specially in less developed countries,

and from 6% to 27% of the population suffers from the disease^[9-11].

In Yemen this disease is neglected from the declared infectious diseases ones, either in Hadhramout^[4] or in other parts of Yemen^[3]. This ectoparasitoses do not attract much clinical attention^[7], and although it is not a life threatening condition, yet it may be considered important from the public health point of view, because it is found globally, and it cause severe itching which is extremely distressing, and some

cases may be complicated by post streptococcal glomerulo-nephritis^[6].

The scabietic patients consult the dermatologist in case of high itching, vexing disorder or psychologic skin, otherwise, they try to treat the infection by traditional manners, that will not reflect the exact incidence in such regions.

This Ectoparasitic infection which can be sporadic, endemic or epidemic^[7,12], may affect a large proportion of population in Yemen, because the facilities of socio-economic contacts of people from different regions of the country, as well as, climatic and hygienic conditions offer such facilities.

Okoronkwo, 2003, states the strong association between scabies and personal hygiene, overcrowding^[13,14] and low socio-economic status. Others also observed scabies mostly in people of lower social classes^[15-17], and for this reasons the majority of scabietic patients in Hadhramout came from rural regions.

In the actual study people of any age can suffer from scabies, this is also agreed with infection occurs in different parts of the world^(16,13,18,19). Our results also agreed with the fact that people aged more than 45 years showed less susceptibility^[18], and also support the highest incidence occur in the age group between 15-45^[20](between 10-40 in our study).

In our study men suffer from scabies more than women which contradict with studies done in Turkey^[20], and India^[9], but also differs from others conducted in Egypt^[6,17,21], South Africa^[22], Cambodia^[13] and Denmark^[18].

Finally, all attributing factors to scabies infection, either social or hygienic or climatic must be investigated in Yemen to obtain a correct basic information to plan a strategy against this public health problem. The

incidence of this dermal infection can be reduced by improving the socio-economic and socio-cultural status of the communities^[7], and the promotion of hygienic concepts^[11], as well as, promoting more efficient health service and continuous surveillance.

REFERENCES :

- 1-Rodhan F. and Perez C. Précis d'entomologie médicale et vétérinaire. Maloine S.A. Editeur, Paris, (1985), pp: 458
- 2-Garcia L.S. and Bruckner D.A. Diagnostic Medical parasitology. Elsevier Science Publishing Co. Inc., New York,(1988), pp:500.
- 3-Central statistical Organisation. Statistical Year Book 2001. Ministry of planning and development, Republic Of Yemen, (2002) pp: 509.
- 4-Central Stastical Organisation (Hadhramout Bureau). Hadhramout in figures 2002. Issue No. 13 Al-Mukalla, (2003), pp:25
- 5-O.Chosidow. Scabies and Pediculosis. Lancet, 355: 819-826 (2000).
- 6-G. H. Morsy. Incidence of larval and adult mites (*Sarcoptes scabiei*) stages in scabietic patients from three regions of Qalyobia governorate. Egypt. J. Hospital. Med., Vol.; 2: 18-22(2001).
- 7-H. Ciftci, S. Karaca, O. Dogru, Z.Cetinkaya and M.Kulac. Prevalence of Pediculosis and Scabies in preschool nursery children of Afyon, Turkey. Korean J. Parasitol., V.44 (1): 95-98 (2006).
- 8-E. Epstein. Scabies ten years later. Arch. Dermatol., 93:60-61 (1966).
- 9-B.C. Srivastava, R. Chandra and V.K. Srivastava. Epidemiological study of scabies and community control. J.Communit.Dis.,12 : 134-138 (1980).
- 10-M. Orkin. Scabies what's new? Curr. Probl. Dermatol., 22 : 105-111 (1995).

- 11-M. O. Okoronkwo. Scabies among children in Police and army Barracks and at Mado village of Jos, Plateau state of Nigeria. *Highland Med. Res.J.,Vol.,1 (4):40-47(2003).*
- 12-M.I.Fatani, K. A. Al-afif and H. Hussain. Pattern of skin diseases among pilgrims during Hajj season in Makhah, Saudi Arabia. *International J. Dermatol., 39(7): 493-496 (2000).*
- 13-D. Landwehr, S. M. Keita, J. M. Pönnighaus and C. Tounkara. Epidemiologic aspects of scabies in Mali, Malawi, and Cambodia., *Int. J. Dermatol., 37:588-590 (1998).*
- 14-NY.Abou Zinada. Scabies in some workers living in crowded area, Jeddah, Saudi Arabia. *J. Egypt. Soc. Parasitol., 30(1):325-328 (2000).*
- 15-A. E. J. Masawe and H. Nsanzumuhire. Scabies and other skin diseases in preschool children in ujamaa village in Tanzania. *Trop. Geogr. Med., 27:288-294 (1975).*
- 16-B. K. H. Nair, A. Joseph and M. Kandamuthan. Epidemic scabies. *Indian J. Med. Res., 65 : 513-518 (1977).*
- 17-H.A.Hassan, W. Ezzat and A. Lebshtein. Scabies as a health problem among primary school children in Cairo. *J. Egypt. Public Health assoc., 54 :65-75 (1979).*
- 18-J.Christophersen. The epidemiology of Scabies in Denmark 1900 to 1975. *Arch. Dermatol., 114:747-750(1978).*
- 19-P.V.Gulati, C. Braganza, K.P. Singh and, V. Borker. Scabies in a semiurban area of India : An epidemiologic study. *International J. dermatol., 16 : 594-598 (1977).*
- 20-Y.Tuzun, A. Kotogyan, E. Cenesizoglu *et al.*, The epidemiology of scabies in Turkey. *Int. J. Dermatol., 19:41-44 (1980).*
- 21-M. Z. Kenawi, T. A. Morsy, K. F. Abdalla, M. E. Nasr and R. A. Awadalla. Clinical and parasitological aspects on human scabies in Qalyobia Governorate, Egypt. *J. Egypt. Soc. Parasitol. 23(1): 247-253 (1993).*
- 22-M. Dogliotti. Scabies : an epidemic in South Africa. *Panminerva Medica, 21:11-16 (1979).*

ملاحظات أولية عن مستويا لإصابة بحلم الجرب الساركوبتي
في محافظة حضرموت (اليمن)
سعيد حاج باسويد

كلية العلوم - المكلا - حضرموت - صندوق البريد 60010
جامعة حضرموت للعلوم والتكنولوجيا - الجمهورية اليمنية

ينتشر حلم الجرب الساركوبتي (حلم الجرب) بوساطة نوع من الحلم يسمى علمياً *Sarcoptes scabiei* var. *hominis* سجلت الحالات من الإصابة بهذا الحلم لفترة ست سنوات في مدينة المكلا (اليمن). وكانت نسبة الإصابة عند موجبي التشخيص 71.13% من الذكور (138 حالة من أصل 194 حالة شخصت موجبة) نظير 28.87% من الإناث. الإصابات متمركزة بشكل كبير في مناطق محافظة حضرموت الريفية .. وهناك حالات وصلت للمحافظة من مناطق أخرى في اليمن.

بالرغم من انتشار هذا المرض في الكثير من مناطق اليمن إلا أنه لا يذكر في سجلات وبائيات الصحة العامة الصادر عن مركز الإحصاء في الجمهورية.. ولا توجد دراسات سابقة مسجلة عن هذا الوباء .

هذه أول دراسة في اليمن عن حلم الجرب .. وفيها تمت مناقشة النتائج .. وتمت التوصية بدراسات أخرى في كافة مناطق اليمن لتحديد نسب الإصابة الحقيقية بهدف وضع إستراتيجية عامة لتقليل حجم الإصابة أو بظموح أكبر اجتثاث هذا الوباء الذي يشكل معضلة صحية.