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Epidemiology and clinical profile of scabies patients presenting to dermatology OPD, Hayat Abad medical complex, Peshawar

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Abstract---Scabies is a Contiguous skin disease characterized by generalized itching of skin. It is caused by skin infestation with *Sarcoptes scabiei* Var hominis. Patients present with itching and many other cutaneous complications. Objective: - Objective of this study was to find epidemiology and clinical profile of scabies patients presenting to skin OPD, Hayat Abad Medical Complex (HMC), and Peshawar. Methods - This non-interventional, cross-sectional study was carried out in Dermatology OPD of HM, Peshawar from 15 Oct 2022 to 15 January 2023. Permission was taken from Hospital Ethical Committee, HMC, Peshawar. 867 patients of scabies were enrolled. Diagnosis was done on basis of history and clinical examination. Their age, gender,

economic class, personal hygiene, family history of scabies, address, area of body involvement and type of cutaneous presentation were recorded in predesigned performa. Results: - Out of 867 patients 472(54%) were males and 395 (46%) were female. Most cases were in age groups 5-19 years i.e. 338 (39%) with highest ratio of patients from poor socio-economic group 511(59%) and majority 643 (74.2%) having poor personal hygiene. Family history was positive in 737(85%) and we received maximum cases from 15 Dec - 15 January. Conclusion Scabies is Common Skin disease more prevalent in young age with poor socio-economic class having poor personal hygiene and overcrowding in limited space in winter.

Keywords---scabies, epidemiology, contiguous.

Introduction

Scabies is contiguous skin disease characterized by generalized itching of skin. It is caused by infestation of skin with mite *Sarcoptes scabiei* Var *hominis*. The Greek word *Seux* means, flesh and *koptein* meaning to cut. Mite has proteolytic enzymes in mouth by which it cut down human skin and forms burrows. The word *scabiei* is derived from *scabere*, having Latin origin, means to scrape or cut[1].

Scabies was described in literature 2500 years ago[2]. It can affect both genders, all age groups and any socioeconomic class. Different studies showed that scabies affects 300 million people all over world per year[3, 4]. In 2013 the WHO declared, scabies as neglected tropical disease[5]. It is more prevalent in developing countries like Pakistan, India, Bangladesh, Northern Australia [3,6, 7]. In resource poor countries overcrowding, poor nutrition, lack of hygiene, water shortage, low educational status and specific behaviors were factors contributing to increased scabies prevalence[1]. In developed countries scabies outbreaks are reported in cyclical pattern in hospitals and army barracks[7]. In some regions of developing countries scabies is more common than chest infection and diarrhea[8]. Scabies mite needs close contact of at least half hour to enter top layers of epidermis. It moves at speed of 0.5-5mm in a day forming a burrow[9]. When the person has no previous history of scabies clinical features develop in 2-6 weeks while on recurrent exposure symptoms can develop in 24 to 48 hrs[10]. Scabies present with itching specially at night, papules, vesicles and nodules.

Secondary bacterial infections by *Staphylococcus aureus* and *Streptococcus pyogenes* a common complication[4]. In addition to cutaneous infections systemic complications like glomerulonephritis and rheumatic fever can occur[2, 4]. Crusted scabies which is serious and difficult to treat is more prevalent in physically crippled patients and immune compromise patients like HIV[8, 11]. Scabies is diagnosed clinically and by taking scraping from burrows for microscopic examination of mite, eggs and its fecal matter[2]. Dermatoscopy, PCR and serodiagnoses are advanced and sensitive methods of diagnosis[1]. Scabies causes morbidity due to cutaneous complications, financial burden and psychological effects thus adversely affecting quality of life[7]. This study was

conducted to find out socio demographic and clinical features of scabies in patients visiting dermatology OPD at Hayat Abad Medical Complex.

Methods

This non-interventional, cross-sectional Study was carried out in Dermatology OPD of Hayat Abad Medical Complex (HMC), Peshawar from 15 Oct 2022 to 15 January 2023. Permission was taken from Hospital Ethical Committee, HMC, and Peshawar. 867 patients of scabies were enrolled. Diagnosis was done on basis of history and clinical examination. Their age, gender, economic class personal hygiene, family history of scabies, address, area of body involvement and type of cutaneous presentation were recorded in proforma.

Results

We took 867 patients of scabies, among them 472 (54%) were males and 395 (46%) were females. Regarding age wise distribution patients were divided into four groups. In first group from 0 to 4 years, 156 (18%) patients were recorded. In second age group of 5 to 19, 338 (39%) and in third group of 20 to 45 years, 269 (31%) patients were received. In fourth group of more than 45 years of age 104 (12%) cases presented as shown in figure 1.

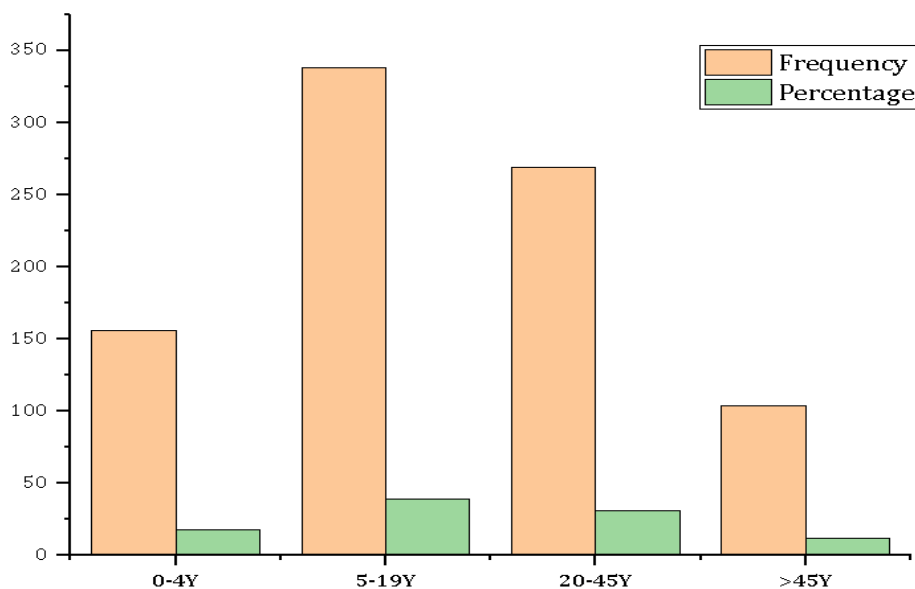


Figure 1: Age wise distribution of scabies

In our study, patients abdomens were most commonly involved site in 539 (61%) patients followed by hands in 373 (43%), genitalia in 321 (37%), intertriginous areas in 130 (15%) and other areas in 165 (19%) as shown in figure 2.

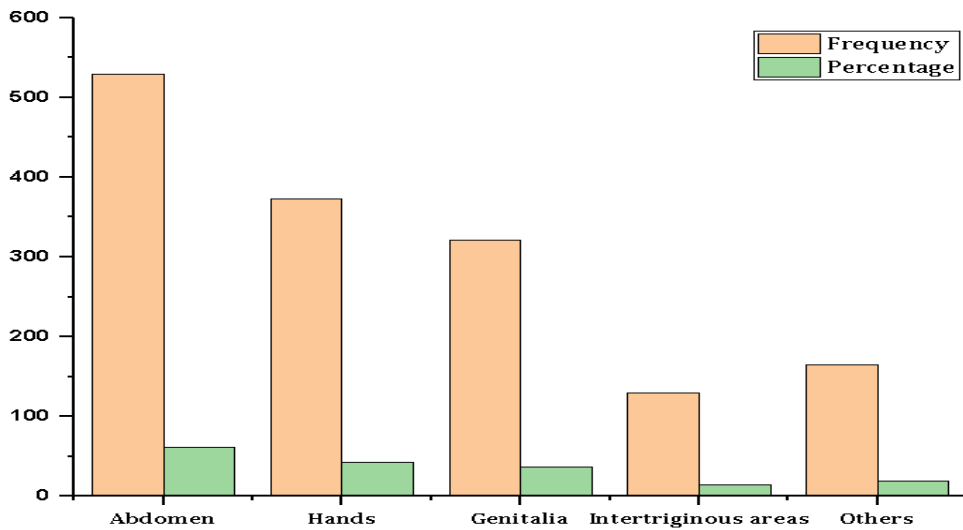


Figure 2: Different areas of body involvements

Among 867 patients family history was positive in 737 (85 %) and negative in 130 (15 %) patients. Regarding socio economic status 511 (59%) belonged to poor class, 330 (38.1%) to middle-class and 26 (3%) to upper socio economic class. In 867 patients, 643 (74.3 %) were having poor personal hygiene, 208 (24%) having fair and 16 (1.8 %) good hygiene as shown in figure 3.

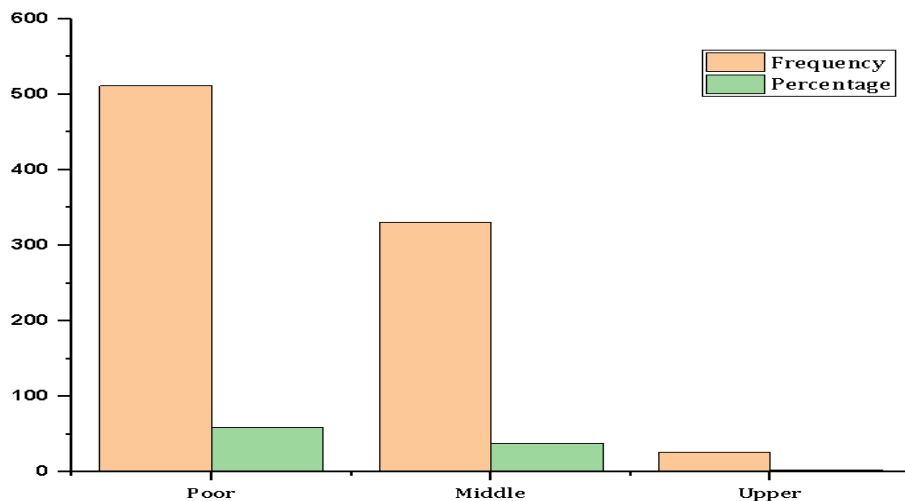


Figure 3: Socio economic class wise distribution of scabies in patients

In division wise distribution of patients highest number of patients received from Peshawar division i.e. 286 (33%) followed by Khyber division 156(18%),Charsadda 78(9%), Nowshera 69 (8%) and 277 (32 %) from rest of Khyber Pakhtunkhwa. The highest number of patients 399 (46%) was received from 15 Dec 2022 to 15 Jan 2023 followed by 295 (34%) from 15 Nov 2022 to 15 Dec 2022 and 173 (20%) from 15 Oct to 15 Nov 2022.

In scabies related cutaneous complications;secondary bacterial infections were the most common recorded in 624 (72%) patients. In secondary bacterial infectionsfrunclosis was the most common in 624 (72%) patients followed by Impetigo in 320 (37%),ecthyma 50 (8%) and abscesses in 25 (4%) of patients. Nodular scabies was present in 329 (8%), secondary eczema in 138 (16 %), prurigo nodularis in 13 (1.5 %) and crusted scabies in 9 (1%) of patients as shown in figure 4. Excoriated papules 737 (85%) with excoriation marks in 529 (61%)was the commonest presentation.

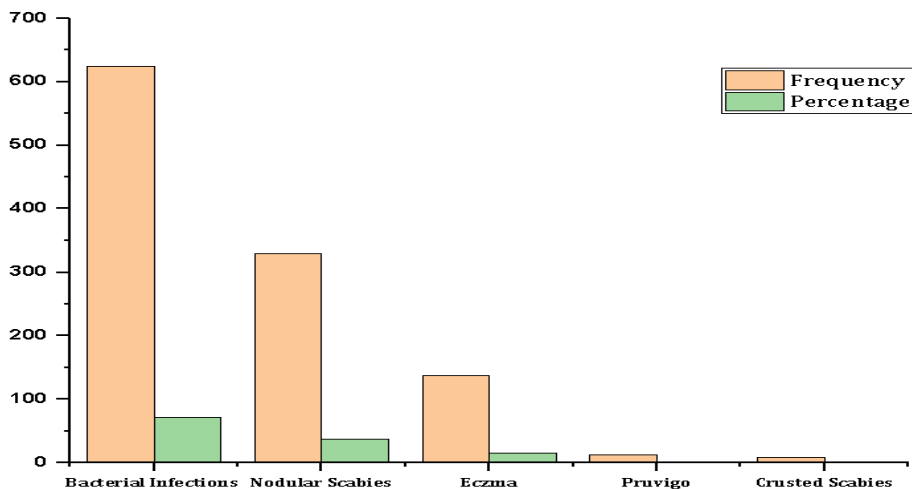


Figure 4: Frequency distribution of secondary cutaneous complications of scabies

Discussion

In this non-interventional cross sectional study conducted from 15 Oct 2022 to 15 Jan 2023, 867 patients of scabies were included. Among 867 patients 472 (54%) were males and 345 were females. These gender wise differences in scabies patients could be explained on specific culture of Khyber Pakhtunkhwa. Increased population of males come to hospital while female are reluctant to come to hospitals. Males have more social exposure relating to increased scabies spread from direct skin contact. This finding in our study is similar to that of Farhana *et al* a due to social and cultural similarities[12].

In our study highest prevalence of scabies was found in 5 to 19 years age group i.e. 39% followed by 20 to 45 years having infestation in 31%. This is due to increased exposure of young patients to get scabies from schools, madrasas and colleges. Age wise distribution of Scabies in our study showed decrease in prevalence with increasing age. This finding in our study is similar to different national [11] and international Studies [13, 14] and could be explained on more skin to skin contact of children and young adults to their fellows in schools as well in sports facilitating scabies spread. In our selected patient highest percentage of patients was from Peshawar division. This division wise distribution of scabies is due to the fact that most of patients coming to Hayat Abad Medical Complex belong to Hayat Abad, Board and Khyber division followed by other areas.

The highest number of patients were received from 15 Dec 2022 to 15 Jan 2023. This showed that scabies is more common in winter. Our finding is similar to that of Rizvi et al who received 540 case in winter as compared to 98 cases in summer [12]. This can be explained on the basis of infrequent bathing due to the limited water resources, sharing of personal belongings and overcrowding due to indoor sleeping. Similar results with highest number of cases in November and December were shown in an Iraqi study [9].

Regarding secondary cutaneous complication bacterial infections were most common in our study affecting (72 %) patients. Fiji trial conducted in 2012- 13 showed that scabies patients are 2.8 times more prone to develop cutaneous infections [13, 14]. A systematic review showed high pre-valance of scabies and impetigo in children proving co-relation of both condition [4]. This finding is because of delay in treatment, close physical contact needed for both mite and bacteria transmission and poor immunity of low socio-economic group [15]. Nodular scabies was second common complication in our study. Delay in treatment in scabies cause strong inflammatory reaction against mite forming nodules and intense itching. In addition, our patients prefer self-medication and use of herbal remedies causing this complication.

In our study most of the patients 737 (85%) had positive family history with majority i.e.511 (59%) belonging to poor socio economic class. The highest ratio 643 (74.2 %) had poor personal hygiene. These factors are interrelated. Scabies is a highly contagious disease and is directly linked to over-crowding of people due to limited space and resources in low socio economic class with majority having poor personal hygiene. These finding in our study are similar to several national[11, 12] and international studies[13, 14, 16]. Nazari et al from Iran showed positive family history in 71.8%, 97% from poor socio economic class and 54.2 % having poor personal hygiene[16].

Conclusion

In conclusion as scabies is more prevent in young age group specially school going children with poor personal hygiene and low socio economic status. In addition to treatment we need public awareness programs at schools and Madrasas level to ensure prompt treatment of patients and their close contacts.

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