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SEASONAL VARIATION OF SCABIES IN TRIBAL POPULATION OF SAMNAPUR, MADHYA PRADESH, INDIA

Community Medicine

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ABSTRACT

Background: - Scabies is caused by burrowing and release of toxic or antigenic substances by the female mite ***sarcoptes scabei*,** most important factor that determines spread is the extent and duration of physical contact with an affected individual .The children and sexual partner of an affected individual are most at risk

Objective:- To find out seasonal variation of scabies in tribal population of samnapur

Method: - This was a retrospective clinical study conducted at PHC samnapur in a period of two years from 1st January 2011 to 31st December 2012. All patients were evaluated for the signs and symptoms of scabies and then the cases were evaluated for the following- age and sex wise distribution, seasonal variation, and response to the treatment.

Result: - In our study we have found that the prevalence of scabies in tribal population was 11.8 %(855/7220) in 2011 and 11.7% (657/5593) in 2012.the incidence was more in children between 6 to 14 years of age. There were 57% Male and 43 % Female in the year 2011 and 60.5% Male and 39.5% Female in the year 2012. In January-February incidence was 17.8% in 2011 and 25.8% in 2012, in July- august incidence was 28.7 % in 2011 and 20.1% in 2012, in September-October the incidence was 16.4 %(2011), 22.7 %(2012) and in remaining months incidence was low.

KEYWORDS

Background: -

Scabies is a relatively common infestation that can affect individuals of any age and socioeconomic status. The worldwide prevalence is estimated to be 100 million people, with wide variation in prevalence among individual geographic regions [1,2]. A systematic review of population-based studies from various regions of the world (excluding North America) found prevalence estimates ranging from 0.2 to 71 percent, with the highest prevalence in the Pacific region and Latin America [3]. Scabies is particularly common in resource-limited regions. Crowded conditions increase risk for scabies infestation [4]. Epidemics can occur in institutional settings, such as long-term care facilities and prisons [5].Scabies is not a notifiable disease in most countries. Thus, the reported rates of the disease in large populations are usually inaccurate and based on estimations. Scabies is usually reported only when large outbreaks occur. Scabies is a neglected parasitic disease that is a major public health problem in many resource-poor regions. It causes substantial morbidity from secondary infections and post-infective complications such as acute post-streptococcal glomerulonephritis. Disease control requires treatment of the affected individual and all people they have been in contact with, but is often hampered by inappropriate or delayed diagnosis, poor treatment compliance, and improper use of topical compounds such as permethrin, lindane, or benzyl benzoate. This article describes the epidemiology of scabies in the tribal population of samnapur, Mandla, Madhya Pradesh. The data used in this study are based on the routine and mandatory reporting of every individual case of scabies to the Peripheral health centre Samnapur, dist Mandla (M.P.).

Objective:-

1. To find out seasonal variation of scabies in tribal population of samnapur
2. To find out age, gender variation of the disease and response to the treatment

Method :- This was a retrospective clinical study conducted at PHC samnapur in which previous two years data(1st January 2011 to 31st December 2012) of the patients who were diagnosed to have scabies on the basis of their signs and symptoms of scabies were taken and followed up till they complete the treatment on OPD basis. The main objectives of the study were to find out age, gender and seasonal variation of scabies in tribal population of samnapur and to find out the response to the treatment given at PHC samnapur.

Result: - In our study we have found that the prevalence of scabies in tribal population was 11.8%(855/7220) in 2011 and 11.7% (657/5593) in 2012.the incidence was more in children between 6 to 14 years almost 1/3rd of the total cases in each year as detailed in table 1.

Table 1.Age wise Distribution of cases

AGE	2011 N (%)	2012 N (%)
0-5 yr	208(24.4)	160(27.7)
6-14 yr	283(33)	241(33.2)
> 14 yr	364(42.6)	256(39.1)

There were 57% Male and 43 % Female in the year 2011 and 60.5% Male and 39.5% Female in the year 2012 (Table2). The most common complication of scabies was intense ithing and crusting followed by Impetigo and other secondary bacterial infection (Table3).

Table 2.Gender wise Distribution of cases

Gender	2011 N (%)	2012 N (%)
Male	467(57)	398(60.5)
Female	388(43)	259(39.5)

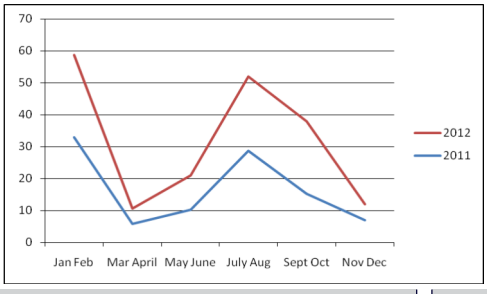
Table 3 .Complication observed during the study period

Complications	Percentage
Intense itching	38
Crusting	25
Impetigo and other secondary bacterial infections	20
None	17

Seasonal distribution of scabies in tribal population of Samnapur Dist-Mandla

In January-February incidence was 17.8% in 2011 and 25.8% in 2012, in July- august incidence was 28.7 % in 2011 and 20.1% in 2012, in September-October the incidence was 16.4 %(2011), 22.7 %(2012) and in remaining months incidence was low.(Graph 1)

Graph 1



Response to the treatment:-
81% patients responded to the treatment out of which 42% patients showed complete response with single dose of ivermectin and 20% permethrin lotion and rest were referred to dermatologist for expert opinion and 19% patients did not come for any follow up.

Discussion:-
Scabies occurs more commonly in fall and winter months in these countries as we have found that number of cases were more in the month of July-august(28.7%) and January -February(17.8%) .Prevalence rates for scabies in developing nations are higher than those in industrialized countries.

Of 200 dermatology outpatients in Sirte, Libya, with scabies, the following distribution was found[12]:

- Females - 59%
- Children - 37.5%
- Military personnel - 18%

A survey of children in a welfare home in Pulau Pinang, Malaysia found that the infestation rate for scabies was highest among children aged 10-12 years.[11]The disease was more commonly evident in boys (50%) than in girls (16%). The overall prevalence rate for scabies was 31%. in a 2009 retrospective study of 30,078 children in India, scabies was found to be the second most common skin disease in all age groups of children and the third most common skin disease in infants.[13]

In our study we have found the overall prevalence rate of scabies was 11.8%, the disease was more in male (57%) as compare to female (43%).In our study almost 2/3rd cases were seen in children less than 14 years of age and rest were adults. in a 2009 retrospective study of 30,078 children in India, scabies was found to be the second most common skin disease in all age groups of children and the third most common skin disease in infants.[13]

In parts of Bangladesh, the number of children with scabies exceeds the number with diarrheal and respiratory diseases combined.[13]

Persistent symptoms in scabies may last up to 2-4 weeks after treatment. Anxiety or a hypersensitivity state may prolong symptoms even after the mites have been destroyed.[14]Residual pruritus may require antihistamines or a short course of topical or oral steroids. If symptoms last longer than 2-4 weeks, treat the patient with another dose of scabicides.[6,8,7]

Morbidity/mortality
Complications of scabies are rare and generally result from vigorous rubbing and scratching. Disruption of the skin barrier puts the patient at risk for secondary bacterial invasion, primarily by*Streptococcus pyogenesStaphylococcus aureus*.[15,16]Superinfection with*S pyogenes* can precipitate acutepoststreptococcal glomerulonephritis, chronic renal failure, and even rheumatic fever.

Common pyodermas includeimpetigocellulitis, which in rare cases causesepsis.[17] The staphylococci or streptococci in the lesions can also lead to pyelonephritis, abscesses, pyogenic pneumonia, sepsis, and death.

A retrospective, matched-cohort study by Chung et al comparing more than 5000 patients with scabies with more than 25,000 randomly selected subjects found an association between scabies and increased risk of chronic kidney disease. It was determined that the likelihood of being diagnosed with chronic kidney disease during the study's 5-year follow-up period was 1.4 times greater in males with scabies than in those without it, and that it was 1.27 times greater in females with scabies than in females without it.[18]

Complications can also result if a scabies infestation exacerbates underlying eczema, psoriasis, transient acantholytic dermatosis (Grover disease), or another preexisting dermatosis. Even with appropriate treatment, scabies can leave in its wake residual eczematous dermatitis and/or postscabietic pruritus, which can be debilitating and recalcitrant.[19]

In remote Aboriginal communities in Australia, where scabies is endemic, extremely high levels of renal failure and rheumatic heart disease appear to be related to repeated scabies infestations and secondary streptococcal infections.

Crusted scabies carries a higher mortality rate than the classic form of the disease, because of the frequency of secondary bacterial infections resulting in sepsis. Patients with crusted scabies often contribute to widespread infestation in long-term care facilities, and delays in diagnosis contribute to the spread[20].

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