Pattern of cutaneous allergy in the dermatology department of TUTH (2005-2007)

Pokhrel DB[a], Joshi. DD[b] and Bohara MS[b]

Abstract

Introduction Allergy is a common serious public health problem and is one of the maior causes of morbidity among the patients attending in the department of dermatology. Most people consider allergies merely as being irritating and do not take them seriously, but many of the allergies can have long-term, and some even have fatal health consequences. In Nepal, allergic diseases are expected to affect around 20 percent of its population and thus are among the maior causes of ill health. The investigations of allergic patients are limited and include skin test and challenge procedures (e.g. food allergy tests) and other laboratory investigations.

Objectives To study the socio-demographic status and find out the types of allergy among the patients attending in the dermatology department of TUTH Maharajguni, Kathmandu.

Methods This study was carried out among all the cases of skin allergies registered at dermatology department of TUTH within the two-year (2005-2007) period. These cases either presented there with allergic problems or were refereed by the doctors for the same from other hospitals. It was a retrospective study. The specific socio-demographic information was retrieved from the register and filled in the designed format. The study variables was compiled and compared to show the trends of distribution of skin allergy in population. The data was tabulated and analyzed to assess their incidence in different population variables by using standard statistical tools.

Results A total of 2207 skin allergy cases were found to be registered in the year 2005 to 2007. Skin allergies were most commonly seen from may to September (rainy season). The prevalence was found to be highest in the month of august and September while the least number of allergy cases were recorded in the month of December making less than 5 percent of the total study population. Twenty to 29 years of age group had the highest prevalence of skin allergy. Out of the total 2207 skin allergy cases studied 48.26 percent were male and 51.74 percent were female. The common cutaneous allergies observed were urticaria (28.23%), polymorphic light eruption (28.09%) and allergic contact dermatitis (21.39%).

Conclusion From this study it can be concluded that skin allergies are more common in rainy season and urticaria, polymorphic light eruption and contact dermatiits are the most common allergic disorders that is observed in the outpatient department of dermatology at TUTH.

Key words Allergy, Disorder, Urticaria, Polymorphic light eruption.

Introduction

Allergy is a common global public health problem causing the morbidity load of around 15-20 percent among the patients attending in the skin OPD. Although maiority of such allergies are of milder type and so the patient give them less importance, some may have long-term morbidity effect, and some may even be fatal. As there is a worldwide increasing trend in the prevalence of allergies, there is also a rise in incidence of allergies in Nepal and range from allergic rhinitis affecting upper respiratory tract,

Corresponding Author: Dr. Dinesh Binod Pokhrel, **Email:** dbpokh@healthnet.org.np, **Phone:** 4412404, 4412605, [a]Institute of Medicine, Department of Dermatology, TUTH, Maharajguni, Kathmandu. [b]National Zoonoses and Food Hygiene Research Centre (NZFHRC).

asthma affecting lower respiratory tract, allergic conjunctivitis affecting eye, food allergies affecting gastrointestinal system and urticaria and dermatitis affecting the skin. To cite an example, cold allergies alone have been reported in upto 5 percent of population in Nepal[1, 2].

An allergic reaction is the adverse consequence of a specific immune event such as the interaction between antigen and specific antibody or between antigen and specifically sensitized lymphocytes. Thus allergy is a disease complex of symptoms and signs in which immune reaction appears to play a major role. Atopic disease is a subset of allergic disease, which has genetic influence. The atopic disease is a process mediated by or related to IgE (immediate) hypersensitivity. In the United States, 10 to 20 percent of the populations are reported to suffer from atopic disease. A strong association with family in atopic disease suggests a common genetic basis. The environmental factors such as allergens, diet, climate, infection, geography and pollutants are responsible to influence the development and progression of allergic diseases. Migration leading to exposure of an individual in a new environment is also found to be one of the associated risk factor responsible for the expression of allergic disease. A new district, new house, climate, pollution, damp houses are some of the important risk factors for developing the allergic disease[3,4,5].

Global incidence of major allergic disorder is estimated to be around 10 percent among general population. This problem has increased over the last three decades in many countries. Treatment of these problems cause enormous economic burden to the patient's family and country by their reduced working capacity and over expenditure. In India, 18.32 percent of its population is reported to suffer from allergic disorder[6].

Allergies are not at all taken seriously enough in Nepal. They have really been neglected. Even in the medical profession, it is rare to find doctors who super specialize in these subjects. There is a lot of wrong information floating around about the causes and treatment of allergies. In this regard, one should understand if neglected some of the allergies can be troubleshooting hampering their day to day performance capacity and may even be fatal at some time.

In developing countries including Nepal, the problem is that the concept of quality of life does not exist and so mild to moderate allergic conditions of the skin are not at all taken seriously and have been mostly neglected. The symptoms of skin allergies are usually just left to subside on their own. In majority of the allergic conditions, it is very cost effective to treat them at an early stage before they assume problematic dimensions. It is estimated that 27 workdays for adults and 57 schooldays for children are lost in Nepal every year due to allergies and around five million Nepalese suffer from some form of allergy or another. At present, there is no health policy regarding the effective management or prevention of allergic conditions in the country in spite of an increasing trend in the allergy-related ailments. Fatalities from allergic ailments are going up in the developing countries. Because of better policies and facilities to mange these conditions at its earlier stage, such fatalities are less frequent in the developed world[1].

The exact information on the incidence of cutaneous allergic conditions is not available in Nepal, which is very important to formulate a national policy for the management of this problem. This study has tried to find out the socio-demographic status and common types of allergies prevalent in the general population.

Objectives

- To study the socio-demographic status of allergic patients
- To find out the prevalence of different types of allergies among them.

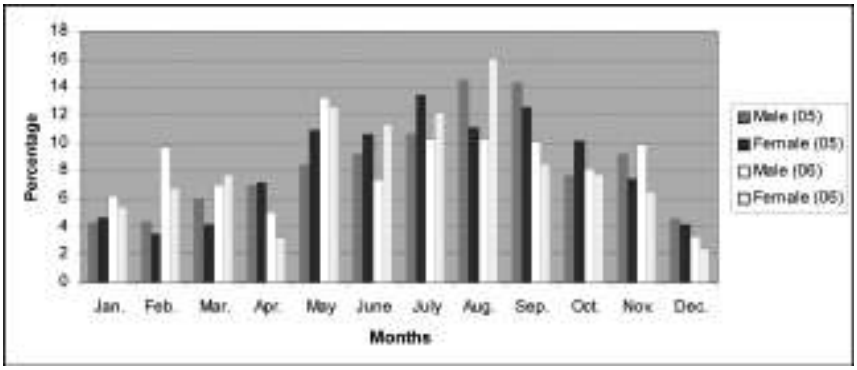
Methods and Material

All patients registered as allergic patients in the dermatology department of TU Teaching Hospital including those referred by doctors from other hospitals, within the two years period (2005-2007) were included for the study

The socio-demographic information was collected from each allergic patient recorded in the OPD register (2005 to 2007) of the dermatology Department of TUTH through the designed format.

It was a retrospective study. The consent for the study was taken from the hospital authority. The demographic information such as age, sex, address, ethnic, types of allergy was retrieved from the register and filled in the designed format. The study variables was compiled and compared to show the trends of distribution of skin allergy in population. The data was tabulated and analyzed by using appropriate statistical tools.

Results



Graph No. 1: Month-wise distribution of skin allergy among male and female

A total of 2207 skin allergy cases were found to be registered in the year 2005 to 2007. Skin allergies were most commonly seen from May to September (rainy season). The prevalence was found to be highest in the month of August and September while the least number of allergy cases were recorded in the month of December making less than 5 percent of total study population. Out of 1148 skin allergy cases recorded in the year 2005, 47.56 percent were male and 52.44 percent female. The highest number of male cases (14.47 percent) was observed in August and the highest number of female (12.62 percent) in the month of September also showing the increase prevalence of skin allergies in the rainy season.

Similarly out of the total 1059 skin allergy cases recorded in the year 2006, 519 (49.01 percent) were male and 540 (50.99 percent) female. The highest number of male 69 (13.29%) was recorded in May and female 87(16.11%) in August in this year. The lowest number was observed in December 17 (3.28%) male and 13 (2.41%) female.

Table 1: Month and sex wise distribution of skin allergy cases

Months	Male	%	Female	%	Total Number	Percentage
January	55	5.16	56	4.9	111	5.03
February	74	6.95	56	4.9	130	5.89
March	69	6.48	67	5.87	136	6.16
April	64	6.01	60	5.25	124	5.62
May	115	10.8	134	11.73	249	11.28
June	88	8.26	125	10.95	213	9.65
July	111	10.42	147	12.87	258	11.69
August	132	12.39	154	13.49	286	12.96
September	130	12.21	122	10.68	252	11.42
October	84	7.89	103	9.02	187	8.47
November	101	9.48	80	7.01	181	8.2
December	42	3.94	38	3.33	80	3.62
Total	1065	100	1142	100	2207	100

Out of the total 2207 skin allergy cases registered in the year 2005 and 2006.1065 (48.26%) were male and 1142 (51.74%) were female. The highest numbers of allergy cases were recorded in the month of August with 132 (12.39%) male and in 154 female. The lowest number 80 (3.62%) of skin allergy cases were observed in December with 42 (3.94%) male and 38 (3.33%) female. Similarly the month wise distribution of skin allergy observed during these two year period are: 55 males and 56 female in January, 74 (6.95%) male and 56 (4.9%) female in February, 69 (6.48%) male and 67(5.87%) female in March, 64 (6.01%) male and 60 (5.25%) female in April, 115 (10.8%) male and 134 (11.73%) female in May, 88 (8.26%) male and 125 (10.95%) female in June 111 (10.42%) male and 147 (12.87%) female in July, 130 (12.21%) male and 122 (10.68%) female in September, 187 (8.47%) of them 84 (9.89%) male and 103 (9.02%) female in October and 181 (8.2%) of them 101 (9.4%) male and 80 (7.01%) female in November, which is presented in table no. 1 and graph no. 1.

Table No 2: Distribution of skin allergies according to their clinical types

Clinical Types	Total no. of cases	Percentage
Urticaria	623	28.23
Polymorphic light eruption	620	28.09
Allergy contact dermatitis	472	21.39
Lichen simples chronicus	253	11.46
Irritant contact dermatitis	208	9.42
Steroid induced dermatitis	21	0.95
Fixed drug eruption	10	0.45
Total	**2207**	**100**

Majority of the allergic cases manifested as urticaria 623 (28.23%), polymorphic light eruption 620 (28.09%) allergic contact dermatitis 472 (21.39%) and a significant number of allergic cases manifested as lichen simplex chronicus 11.46 percent and irritant contact dermatitis 9.42 percent but very few cases were recorded as steroid induced dermatitis 0.95 percent and fixed drug eruption 0.45 percent (Table no.2)

Table 3: Age and sex wise distribution of skin allergy

Age Groups(years)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
0-9	56	5.26	54	4.73	110	4.98
10-19	225	21.13	220	19.26	445	20.16
20-29	318	29.86	357	31.26	675	30.58
30-39	214	20.09	234	20.49	448	20.3
40-49	116	10.89	139	12.17	255	11.55
50-59	67	6.29	61	5.34	128	5.8
60 Above	69	6.48	77	6.74	146	6.62
Total	1065	100	1142	100	2207	100

There were slightly more female patients 1142 (51. 74%) recorded with skin allergies than male 1065 (48.26%) in the year 2005 and 2006.

Table 4: Site wise distribution of skin allergies within and out of valley (N=1418)

Site	Total Number	Percentage
Kathmandu Valley	1164	82.09
Out of Valley	254	17.91
Total	1418	100

Out of the total 2207 cases, only 1418 (64.25%) had recorded their addresses. Majority of them were from valley that was 1164 (82.09%) and 254 (17.91%) from outside valley (table no. 4).

Table 5: Distribution of skin allergy cases by ethnic group

Ethnic Group	Number	Percentage (%)
Bhramin	641	29.04
Chhetri	427	19.35
Janiati	552	25.01
Newar	338	15.31
Madhesi	98	4.44
Dalit	42	1.9
Muslim	9	0.41
Others	100	4.53
Total	2207	100

In this study, Brahmins were found to have highest allergy problem 641(29.04%) followed by Janaiati (which includes Magar, Tamang, Lama, Sherpa, Rai, Limbu, Tharu etc) 19.35 percent, Chhetri, (25.01%), Newar (15.31%) and others around (11%) (table no. 5).

Discussion

Allergy disorder is becoming a great concern for the general practitioners. The burden of allergy disorder is increasing in developing countries. The patients are also becoming more concerned of the problem. It needs prompt identification of the problem and its cause and proper treatment for the relief of symptoms. The best way of managing allergic patients is to identify the causative agents and avoid it. It may not be possible in majority of the cases and hence patient may need proper counseling and continuous treatment for an indefinite period of time[2]. Some times it is very difficult to avoid the antigens. It has been reported that avoidance of maior antigens like milk, seafood, can help the patients[3] if the allergies are related to these agents.

The maior findings of this study were that female patients (1142) outnumbered male (1065) with skin allergy disorder by (51.47 %) vs. (48.26%) and is in consistent with the reports of similar studies. Malla P., 2002[6] found 45 percent of male and 55 percent were female in the study of identification of common allergy by skin prick test among the allergy patients attending private clinics. Bam DS (1994)[4] found that 49.46 were male and 50.50 percent were female.

Bista PR. (1996)[5] carried out study in Common Occular Disease at Geta Eye Hospital, Kailali, and reported the different types of eye diseases recorded in the eye clinics in the years 1993 and 1994. Compared to 1993, there was a 7.3 percent increase of ocular allergy in the total out-patients attendance. More cases were seen during the winter season with the peak in February and through in July. Occular allergy encompasses a group of diseases in which there is a high frequency atopy, ocular itching, stringy discharge and papillary coniuctival reaction[2].

Skin allergy were observed most commonly in the month of August (12.96%) and lowest numbers were reported in December 2005 (3.62%). The maiority of allergic cases belonged to age group 20 to 29 years (30.58%). Bam DS (1994)[4] in "study of allergy problem in Nepal" also have reported female being affected by allergy more than male and highest incidence of it was reported in age group 25–35. In another report of study "Identification of common allergens by skin prick test among the allergy patients attending private clinics" (Malla P, 2002)[6] maiority of such cases (82%) belonged to age group 15 to 45 years.

Out of all those allergic conditions, urticaria was the commonest presentation seen in up to 28.23 percent of these population followed by polymorphic light eruption in 28.09 percent. The study has also revealed that the incidence varies from year to year as shown by the difference between the incidence of the year 2005 and 2006. The allergic cases were reported more in the year 2005 (52.02%) than in the year 2006 (47.95%).

Among the reported cases, majorities of skin allergies were from Kathmandu valley (82.09%) and only 17.9 percent were from other parts of the country. This is most likely because of easy access and affordability to the population of Kathmandu city compared to those from outside.

Among the Ethnic group, majority of skin allergy were found in Brahmin (29.04 percent) and Chhetri (19.35%).

Conclusion

From this study it can be concluded that Urticaria and polymorphic light eruption are among the most common allergic disorders observed in the outpatient department of dermatology at TUTH. The productive age group 20-29 has most frequent allergic disorders. Although females prevalence slightly outnumber males there is no significant prevalence difference in gender. Majority of the allergic cases are observed during the rainy season ranging from May to September and the highest in the month of August.

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