PREVALENCE AND CORRELATES OF FISSURE FOOT IN A RURAL AREA IN TAMIL NADU

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Fissuring of feet is a common but neglected problem in India. In this paper an attempt has been made to determine the prevalence of fissuring of feet in a rural village in Tamilnadu. In addition the relationship of fissuring to age, sex, occupation, non-use of footwear and weight is determined. Over all prevalence is found to be 48% for age's 15 years and above. The prevalence is found to be higher in females (58.4%) than in males (33.3%) and it is seen more among the housewives (63.7%) and among the farmers (41.9%). Low weight and non-use of footwear are significantly associated with fissuring. 40% of the affected group felt that this is more acute during winter. We conclude that fissuring of feet is a significant problem.

Keywords : Fissuring feet, Prevalence

Introduction

Fissuring or cracking of feet is a common but neglected dermatosis causing significant morbidity. The fissuring may be minimal or severe enough to cause pain and tenderness, thus incapacitating the patient. Extensive search failed to reveal any study undertaken to determine the prevalence of the condition or the factors likely to be associated with the disease.

Materials and Methods

This study was carried out in a village near Coimbatore, having a population of 2707 inhabited by 638 families. The houses are scattered around 5 to 6 streets. A random sample of one street of 80 families was selected. All the persons in the house above 15 years (121 males and 173 females) were inspected and examined for the presence or absence of fissure foot which was graded on a 3 point scale : Superficial painless fissures involving proximal half of foot (grade 1); painful deep fissures in-volving whole of the foot (grade 3), between grade 1 and 3 (grade 2).

Fig.1. fissure foot

In addition, information regarding age, sex, and occupation, use of footwear and weight was recorded. Retrospective information regarding the seasonal variation of the severity of the disease was also collected. The prevalence estimated with 95% confidence limits. Risk factors identified using Z test and X^2 test. Stepwise discriminate analysis was carried out to identify the factors that discriminate between fissure foot and non-fissure foot people. Forward logistic regression analysis was carried out to measure the strength of association of these factors

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to the fissure foot.

Results

Out of 294 people above the age of 15 years examined, fissuring was present in 141 (48%) people. The prevalence ranges from 42% to 54% (95% of confidence limits). The prevalence is found to be more among the females (58.4%) than in males (33.3%) and the difference was statistically significant (P<0.001). In each age group the prevalence among the females was more than males but attains statistical significance only in the age group 25-34 years. Maximum prevalence over all is observed in the age group 55-64 years. The findings are presented in Table I. The prevalence of grade - 1 is more compared to grade -2 and grade - 3 in both sexes. In each grade the prevalence of females is more than that of males and attains statistical significance (P<0.01). From grade 1 to grade - 3 there is a decreasing trend for females.

A significant association between occupation and prevalence of fissure foot is observed (X^2 = 20.41, P<0.001). 64% of the housewives and 42% of the farmers had fissure foot. At the same time 75% of the students did not have fissure foot. The findings are presented in Table II. Around 97% of the people in the village were using footwear. However among those who were having fissure foot, only 94% were using foot wear. The difference is statistically significant X^2 = 7.6 P<0.001 and shows that the non use of foot wear is associated with fissuring.

The mean (SD) of weight for those having fissure foot is 54.8-kg (8.41) and similar value for those who don't have fissure foot is 57.6-kg (9.38). The difference is statistically significant (Z = 2.69 P<0.001) and shows that it is more associated with lower weight. 57% of the people who are having fissure foot felt that there is a seasonal variation in which 40% felt that this is more common in winter and 17% felt that this is more common in summer season. Out of the 5 variables studied (age, sex, occupation, non-use of footwear and weight), the stepwise discriminate analysis identified the 3 variables

(sex, non-use of footwear and weight) discriminate the two groups (presence or absence of fissure foot) correctly with 64% accuracy. Forward logistic regression analysis also gives the same results, an adjusted odds ratio 0.4089 for males and 0.1018 for use of footwear. From this analysis it also appears that for males there is a 60% reduction in risk for getting fissure foot compared to females and for those who are using footwear there is a 90% reduction in risk of getting fissure foot.

Discussion

We are surprised by the fact that fissuring of feet fails to find a place in standard textbooks including the book by IADV&L. This is inspite of each of us seeing many such cases. The market has however recognized the problem and its severity where numerous preparations are available. This article is meant to refocus our attention to our common problems. We are undertaking clinical trials to study the efficacy of different treatment modalities for this condition.

Table I. Prevalence of fissure foot according to age and sex

Age group (Years)	Males No.	%	Females No.	%	Total No.	%
15-24	5	35.7	16	55.2	21	48.8
25-34	5	15.6	26	68.4	31	44.3
35-44	9	31.0	21	53.8	30	44.1
45-54	10	47.6	12	50.0	22	48.9
55-64	7	50.0	19	73.1	26	65.0
>=65	4	36.4	7	41.2	11	39.3
Total	40	33.3	101	58.4	141	48.0

Table II. Prevalence of fissure foot according to occupation

Fissure foot	Farmer No.	%	House Wife No.	%	Students No.	%	Others No.	%	Total No.	%
Present	36	41.9	72	63.7	6	25	27	38	141	48
Absent	50	58.1	41	36.3	18	75	44	62	153	52
Total	86	100	113	100	24	100	71	100	294	100