

## MILKER'S DERMATITIS

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Twenty five cases suspected to have milker's dermatitis were clinically studied including patch tests with various self-made antigens. Eight cases showed positive patch tests results. Two cases showed calf saliva and one case showed udder shaves as the allergen.

**Key words :** Milker's dermatitis.

Hand eczema occurring in people engaged in milking cows is a well known occupational hazard. Rarely, this dermatitis can spread to involve the whole body leading to erythroderma. The contactant which elicits this type of hypersensitivity reaction has not been studied adequately.

### Materials and Methods

Twenty five cases clinically diagnosed as having milker's dermatitis were selected. A detailed history and clinical examination with regard to their customs and habits during milking the cow were recorded. Patients who were engaged in milking multiple cows and those with significant medical illness or on treatment with corticosteroids and other immunosuppressive therapy were excluded from the study. The patients were patch tested with self-made antigens according to the standard procedure.<sup>1</sup> Milk, calf saliva, oil and ghee were used as such in the test. The hair of cow was used as such after wetting in distilled water. Udder shaves and cow dung were diluted with an equal proportion of distilled water before test. Hay and leaves used as cattle feed were ground up and mixed with an equal quantity of distilled water. Distilled water was used in all cases as control. The results were read at 48 and 72 hours and at the 5th day to note delayed reactions.

### Results

Among the 25 cases, 8 were males and 17 were females. Eighty percent of cases were in the age range of 20-25 years. The youngest patient was a boy of 18 years and the oldest was a 58-year-old woman. All were engaged in milking the cow for several years, but dermatitis was only of recent onset.

Sixty percent of cases showed involvement of the inner side of right forearm and dorsum of right hand in between the thumb and index finger. Eight percent of cases showed involvement of dorsum of right hand in between thumb and index finger and whole of right forearm. Thirty two percent of cases showed involvement of dorsum of left hand and whole of left arm and inner side of right arm and right hand. Dermatitis was seen around lips in 6 cases, forehead in 3 cases and right side of neck in 2 cases concurrent with the hand eczema.

Eight cases showed positive patch tests, 5 cases with undiluted milk, 2 with calf saliva and one with udder shaves.

### Comments

A study of milker's dermatitis has not so far been reported.

Involvement of the inner side of the right forearm and dorsum of the right hand in between the thumb and the index finger were due to the fact that these patients are right handed and during milking, the milk, oil used as a lubricant or the material from the udder including the calf-saliva dribble down through the palm and dorsal

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aspect of the hand to the inner border of forearm. Involvement of the left hand, left forearm and inner side of right arm and right hand may be due to the fact that these people milked the cow using both hands. Spill over of the allergenic material can lead to involvement of the other areas of hand.

Six cases having dermatitis around the lips gave a history of increase of dermatitis around lips in relation to oral intake of milk. Interestingly, these people did not have urticarial rashes on oral intake of milk.

Rarer sites of involvement were forehead and right side of neck, probably due to accidental touching or scratching these areas during milking.

All cases had frequent exacerbations and remissions of the dermatitis related to whether or not they were milking the cow. The calf was being suckled before milking each time. Thus the saliva of the calf could contaminate the udder, if not thoroughly washed before milking. The oil or ghee was also used for milking the cow.

Out of the five cases showing positive patch test to undiluted milk, 3 had dermatitis around lips. So these may be protein contact dermatitis.<sup>3</sup>

Udder shaves includes epithelial debris and hair from the udder. One case who showed positive patch test with udder shaves did not show positive result to hair alone, calf saliva alone or milk alone. Thus, it may be due to other materials in the udder such as epithelial debris or some external contaminants.

Thus, it seems that milker's dermatitis is caused by multiple factors such as milk, epithelial debris or other contaminants of udder and possibly calf saliva.

Although 25 cases were patch tested only 8 cases gave a positive result, showing that there is more to be understood and studied about milker's dermatitis.

#### References

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