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'JASAD BHASM' A ZINC SALT SUPPLEMENT IN ACRODERMATITIS ENTEROPATHICA
(Case report)

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Summary

Two cases of acrodermatitis enteropathica a rare familial disease occuring in infants and young children responding to 'Jasad Bhasm' an indigenous zinc salt supplement have been presented. These are the first two cases reported from this part of the country. 'Jasad Bhasm' an indigenous zinc salt supplement has been found to be of use in this intractable disorder.

Acrodermatitis enteropathica is a rare familial disease occuring in infants and young children. Symptoms are known to appear after weaning. The disease is characterised by (1) vesiculo-bullous or pustular lesions around the orifices and over the distal parts of the extremities which may be associated with stomatitis, blepheritis, proctitis and dystrophy of nails, (2) chronic diarrhoea and (3) partial or complete alopecia[1].

Clinical picture of acrodermatitis enteropathica varies and so also the response to treatment. Starting from diiodoquin many therapeutic agents have been tried in the treatment of this disease. Recently Moynahan[2] has demonstrated remissions in acrodermatitis enteropathica with zinc salt supplements. Zinc salts in the form of 'Jasad Bhasm' have been in use in ayurvedic system for many years. Jasad Bhasm has been tried in acrodermatitis enteropathica also with encouraging results.

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Case Reports

Case 1

A four month old Hindu male child was referred to the department of Dermato-Venereology, S. M. S. Medical College and Hospital, Jaipur from District Hospital, Tonk with the complaints of recurrent vesiculo-bullous eruptions over the face and distal portions of the extremities of 3 months' duration. He also had diarrhoea off and on.

At the age of 1 month he started having vesicles around anus which gradually spread to the gluteal region. This was followed by asymmetrically distributed vesiculo bullous eruptions around the mouth, knees, ankles, wrists and fingers. He used to be often restless but otherwise well. Patient was clinically diagnosed as a case of acrodermatitis enteropathica and was put on diiodoquin therapy. He responded very well to this treatment but discontinuation resulted in a severe relapse.

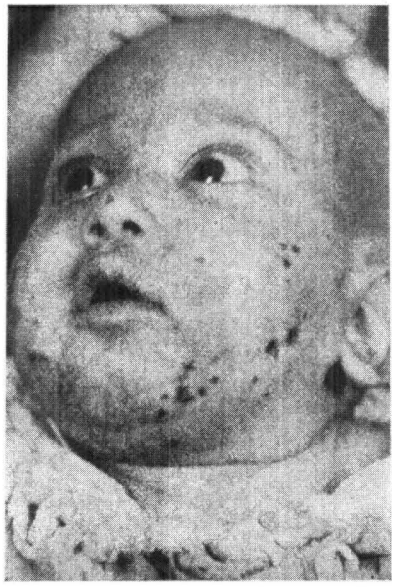

Fig. 1 Before treatment

He was then hospitalised. On examination he had crusted erythematous papulo squamous psoriasiform lesions varying size and shape showing well defined margins. They were present in the gluteal region, around anus, knees, ankles, elbows, wrists and scalp.

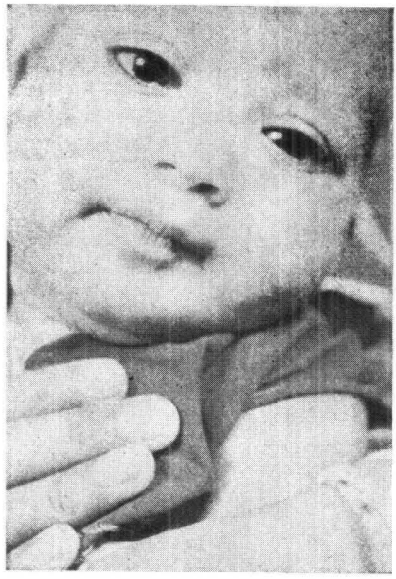

Fig. 2 After treatment

There were a few satellite lesions also around the lesions.

Routine investigations did not reveal any abnormality. Blood counts were within normal limits. Blood sugar serum aikaline phosphatase levels were normal. Stool culture was negative for candida. Scrapings from the cutaneous lesions were also negative for candida. Serum zinc levels could not be done. Patient responded favourably to diiodoquin therapy initially but relapses occured on discontinuation of treatment He was then given oral zinc in the form of 'Jasad Bhasm' three times a day to start with. The drug was gradually withdrawn. He responded to the drug and had no relapse.

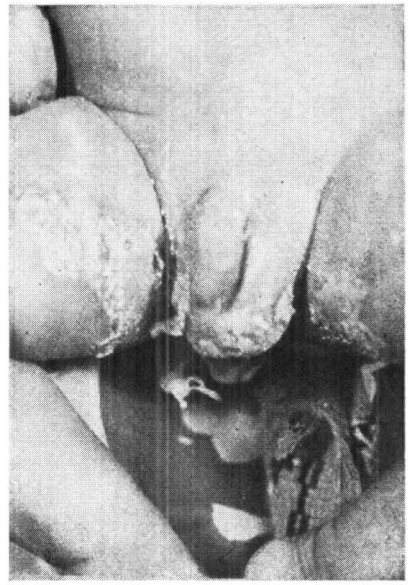

Fig. 3 Before treatment.

Case 2

Six months old Hindu female child was referred from District Hospital, Ganga Nagar with history of recurrent vesiculo bullous eruptions over the face, scalp, hands and feet of 2 months duration. She was normal upto the age of 4 months. The onset of skin lesions coincided with the time of

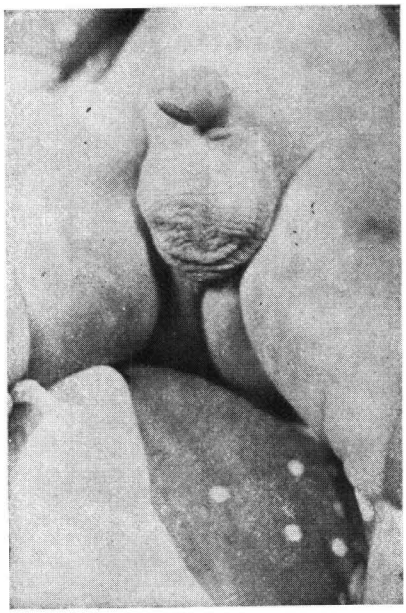

Fig. 4 After treatment.

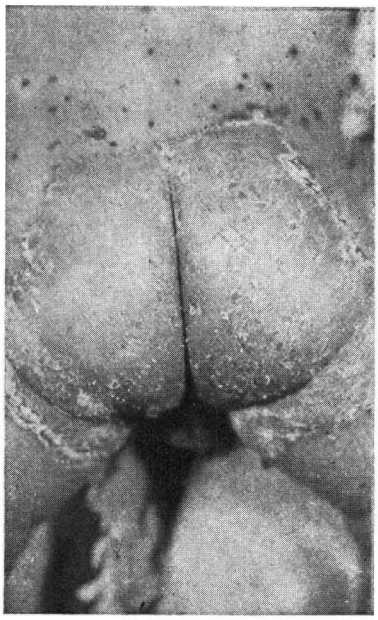

Fig. 5 Before treatment.

weaning. The first lesions were noticed on the distal parts of the body.

Examination revealed multiple papulo vesicular, psoriasi form and crusted lesions all over the body with clusters of lesions around the face, on the scalp and distal portions of the extremities. Laboratory investigations were normal except for mild eosinophilia. Blood sugar and serum alkaline phosphatase levels were normal. Stool culture and skin scrapings were negative for cordida. Serum zinc levels could not be done. Diiodoquin therapy resulted in dramatic improvement in the clinical condition but discontinuation of the drug resulted in severe relapse. 'Jasad Bhasm' an indigenous zinc salt supplement was given three times a day and was withdrawn gradually. Patient improved considerably and no relapse was reported upto one year after discontinuation of therapy.

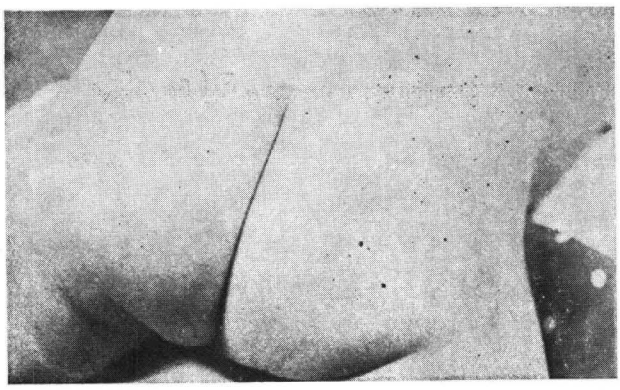

Fig. 6 After treatment.

Discussion

Acrodermatitis enteropathica is generally regarded as a syndrome appearing in early infancy, characterised by skin eruptions, gastro enteritis, alopecia, nail dystrophy, cardidal infections and occasionally growth and mental defects.

The disease is of genetic origin which follows an

autosomal recessive pattern[3]. Donbolt and Closs[4] described this clinical entity for the first time. The original observation was based on the study of two children who they believed had a unique and distinctive disease process. Earlier these cases were reported as atypical epidermolysis bullosa or generalised moniliasis. Dillaha et al in 1953[5] first treated a case of acrodermatitis enteropathica with diiodohydroxyquinoline. Vedder[6] pointed out the familial nature of this disease in 60 to 65% of siblings. Charles et al[1] postulated an etiological role by intestinal parasites and Danbolt[7] suggested a possible abnormal tryptophan metabolism in this disease. He also postulated that xanthoremicacid, a toxic metabolite of tryptophant is suppressed by iodohydroxyquinoline which in turn cause remissions in this disease. Moynahan in 1966[8] suggested the possible role of succinic dehydrogenase and leucine amino petidase enzymes which are reduced in this disease. Cash and Berger in 1969[9] have reported abnormalities in serum unsaturated fatty acid. Beyer in 1966[10] found deficiency of B2A globulin on the basis of immunoelectrophoretic analysis.

Neldner et al in 1975[11] evaluated the therapeutic effect of orally administered zinc in acrodermatitis enteropathica. They were of the opinion that the disease is associated with severe zinc deficiency state and is an inherited defect related to zinc metabolism. Low zinc levels in the disease were thought to be either due to defective absorption of zinc or excessive loss from the gut. It is still not clear whether the beneficial role of diiodohydroxyquinline is an indirect one bringing plasma zinc levels to normal.

Warshawsky et al[12] have described corneal changes in acridermatitis enteropathica in the form of linear, superficial and peripheral corneal opacities. It was not clear whether such changes are due to the primary disease or due to treatment.

No specific histopathological feature is seen in these cases. Juljulian and Kurhan in 1971[13] reported acantholysis as a histological feature of lesions of acrodermatitis enteropathica.

Frier et al[14] tried 5% enzymaticiase in hydrolysate in 10% dextrose intravenously. Although this produced a dramatic improvement discontinuation caused severe relapse.

Despite the increasing number of well studied case reports, little is known with certainty about the etiology or management of the disease. Analysis of literature reveals uniform characteristic clinical features but results of laboratory studies and therapeutic trials offer no uniform pattern. In these cases 'Jasad Bhasm' an indigenous ayurvedic preparation in the form of zinc salt powder which is available at ayurvedic stores has been used and found to give excellent results.

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