

Spontaneous Regression of Generalized Molluscum contagiosum Turning Black

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Ogino A, Ishida H. Spontaneous regression of generalized molluscum contagiosum turning black. *Acta Derm Venereol* (Stockh) 1984; 64: 83-86.

In this report, the unusual case of an infant with extensive eruptive molluscum contagiosum (MC) scattered over the back and buttocks that became inflammatory with blackening and subsequently healed spontaneously over a short period of time is described. To our knowledge, the blackening of spontaneous regressing MC has not yet been described. The mechanism involved in the phenomenon of spontaneous resolution of the inflammatory MC with blackening is discussed. *Key words:* *Molluscum contagiosum*; *Spontaneous regression*; *Rejection*. (Received March 22, 1983.)

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Molluscum contagiosum (MC) is a common and benign infectious disease on the skin which ordinarily afflicts the trunk and extremities of infants. It has been suggested that atopic patients are more susceptible than normal individuals to more widespread viral infection with MC virus as well as herpes simplex and vaccinia virus (4). However, papers dealing with the widespread eruption of MC in a young child with atopic dermatitis are scanty (4, 8). Many studies have been done on the clinical and histological features of the spontaneous regression of plantar (1), common (2) and flat warts (10). Although the spontaneous disappearance of MC has been described previously in a few reports (6, 7, 9), no other cases of blackening with inflammation in regressing MC have been reported in the literature.

CASE REPORT

A 15-month-old male infant was referred to the Division of Dermatology of the Kyoto National Hospital on September 25, 1981 for evaluation of numerous eruptive papules. Eight months prior to the initial visit, he developed a few papules on the back, gradually increasing in number and size. The infant had suffered from mild atopic dermatitis on the trunk, extremities and postauricular regions.

Physical examination indicated that scattering over the back and buttocks, there were approximately 650 tiny pearly papules with a central delle (Fig. 1). The papular lesions were clinically diagnosed as MC. Due to his young age and such widespread distribution of the lesions, it was impossible to remove all of the papules with forceps. Therefore, no special therapy was given except for the application of 5% sulfadiazine pasta. One month later, these papular lesions progressively enlarged and individually became inflammatory with an erythematous halo. During the next two months, these inflammatory papules gradually increased in number and turned black in the central delle (Fig. 2). During a few weeks, each of the inflamed papules with blackening flattened or was destroyed spontaneously, eventually undergoing involution. Four months after the patient's initial visit, almost all of the papules regressed and healed with a slightly elevated scar.

Histological examination of a biopsy specimen from an inflammatory large papule with a



Fig. 1. Numerous eruptive lesions of molluscum contagiosum scattered over the back and buttocks.

Fig. 2. Multiple enlarged inflammatory molluscum papules on the back, one and a half month after the initial visit. Note inflamed papules with blackening in a central delle.

central black crust on the back revealed molluscum lobules surrounded by dense infiltrates of a mixture of lymphocytes, histiocytes and polymorphonuclear leukocytes and diffuse epidermal necrosis. The cellular infiltrates were extending into a damaged overlying epidermis showing degeneration and necrosis. The stratum corneum and degenerated Malpighian layer had focal areas of clotted blood and hemorrhage (Fig. 3).

Laboratory studies disclosed that the level of serum immunoglobulin (Ig) A decreased to 19 mg/dl (normal: 26 to 74 mg/dl) while serum IgG, M and E were within normal limits. Indirect immunofluorescent study showed that a circulating IgG antibody against molluscum bodies was positive at a titer of 1:32 (dilution).

DISCUSSION

The following three possible events have been suggested for the induction of inflammation in MC lesions: 1) secondary infection after a trauma or scratching, 2) discharge of its contents into the dermis, 3) immunological response (9). In molluscum papules with inflammatory changes, a mixture of inflammatory cells, lymphocytes and histiocytes surrounding molluscum lobules and extending into a damaged epidermis was described as a specific histological finding (6, 7, 9). It was suggested that the immunological response in the involutionary process was consistent with a cell-mediated rejection reaction (7).

The phenomenon of blackening and the subsequent regression of warts has been commonly associated with involution in common (2) and plantar warts (1). The blackening was explained on the basis of hemorrhage into the lesions associated with the thrombosis

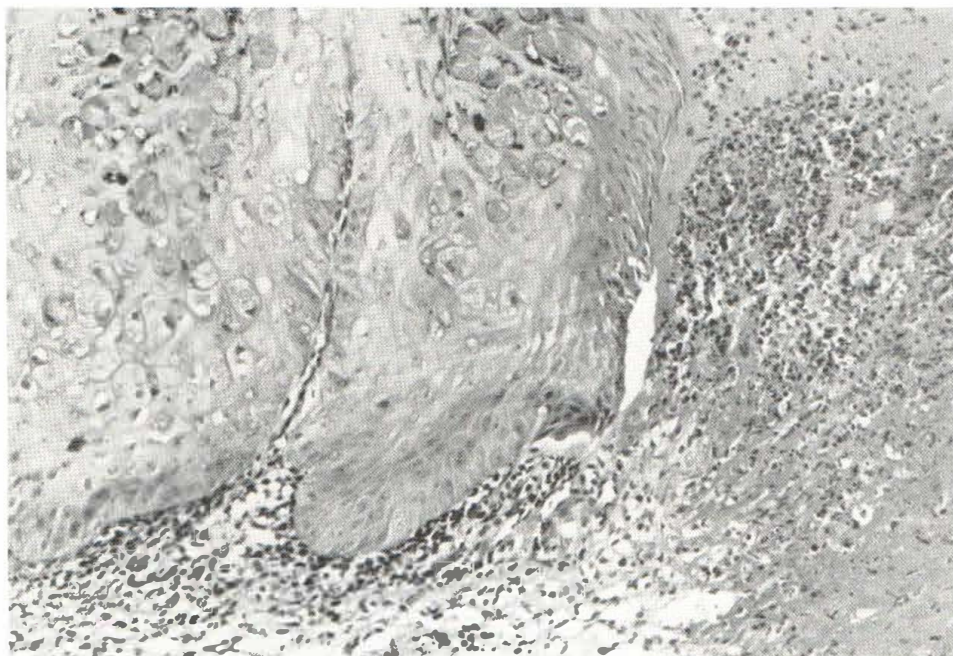


Fig. 3. Histological feature of inflammatory molluscum contagiosum with blackening. Intensely inflammatory cell infiltrate composed of lymphocytes and polymorphonuclear cells invading areas of degenerated epidermal cell layer. Hematoxylin-eosin, original magnification, $\times 100$.

of small blood vessels in the dermis and degeneration and necrosis of epidermal cells. These histological features in the blackened involuting MC lesions were strikingly similar to those seen in a hyperacute rejection of renal homograft transplantation in which humoral immunity seems to play a major role (5). Epstein (3) demonstrated by the fluorescent antibody technique that 89% of patients with MC had circulating antibodies against molluscum bodies. The demonstration of such specific antibodies and the complement-fixing antibody may support the theory of humoral hypersensitivity in the spontaneous cure mechanisms of MC. In conclusion, we suspect from these data that some immune mechanism may be involved in the spontaneous resolution of MC.

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