To the Editor:

Dermatological manifestations of Chikungunya fever

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Chikungunya fever is caused by an Alphavirus, which is transmitted by day biting mosquitoes, *Aedes aegypti* and *Aedes albopictus*. The name chikungunya comes from 'Swahili', a language spoken in East Africa, which literally means "that which bends up" referring to the stooped posture that develop as a result of the arthritic symptoms of the disease. The disease was first described in 1953, following an outbreak in the border between Tanganyika and Mozambique. This virus is mainly found in Africa and many countries of South East Asia. It has been reported from Sri Lanka in 1969. Most recent outbreaks have been reported from India, Sri Lanka and various Indian Ocean islands including Comoros, Mauritius, Reunion and Seychelles[1].

The incubation period is usually 3 – 7 days, with a range of 1 – 12 days. Chikungunya is characterized by abrupt onset fever, the temperature often reaching 39 to 40°C, accompanied by intermittent shaking chills. After the acute phase the temperature may remit for 1 – 2 days to come back again, resulting in a "saddle-back" fever curve.

The joint pains are polyarticular and symmetrical, involving knees, elbows, ankles, and small joints of the hands. Pain is more intense on waking up in the morning. Chikungunya patients typically avoid movements as much as possible. Joint swelling may occur, but effusions are uncommon. Patients with milder articular manifestations are usually symptom-free within a few weeks, but severe cases may require months to resolve entirely. This prolonged joint pain associated with Chikungunya is not typical of dengue. Generalized myalgia, as well as back and shoulder pain are common.

Other symptoms may include headache, photophobia, sore throat, fatigue, nausea, vomiting and colicky abdominal pain. Conjunctival injection is present in some cases. Haemorrhagic phenomena are uncommon.

The characteristic skin rash starts as a flush over the face and neck on the first day of illness and evolves to a maculopapular or macular eruption. It later spreads to the trunk and limbs. Palms and soles may also be affected. Pruritus may accompany the rash. There may be peeling of skin a few days after the appearance of rash.

During December 2006 – January 2007 a number of suspected cases of Chikungunya fever with unusual skin manifestations were referred to our Department. These manifestations included freckle-likecentrofacial pigmentation, nasal blotchy erythema, herpetiform ulceration of mouth and genitalia, lymphoedema, streaky/blotchy erythema of legs, and peeling of hands and feet.

A number of patients presented with freckle-like or diffuse hyperpigmentation on the nasal bridge and sides of the nose 2 – 3 weeks after the acute illness (Figure 1). The skin colour gradually returned to normal over the ensuing weeks.

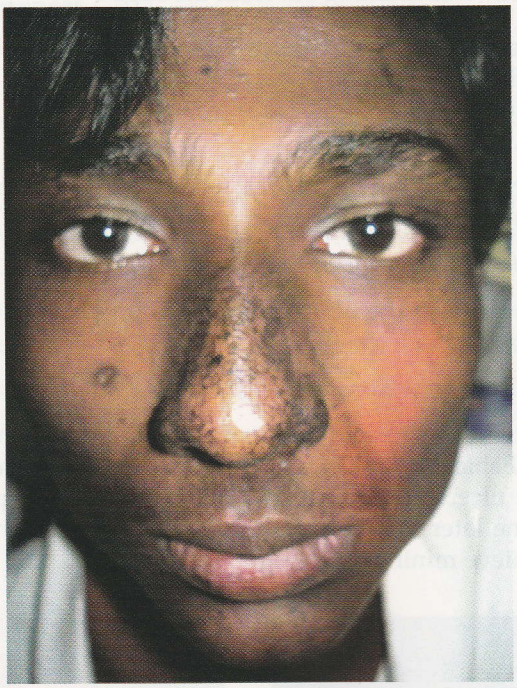

Figure 1. *Freckle-like centro-facial pigmentation.*

Nasal blotchy erythema, often associated with facial flushing and periorbital and/or facial oedema, was a manifestation noted in the febrile phase.

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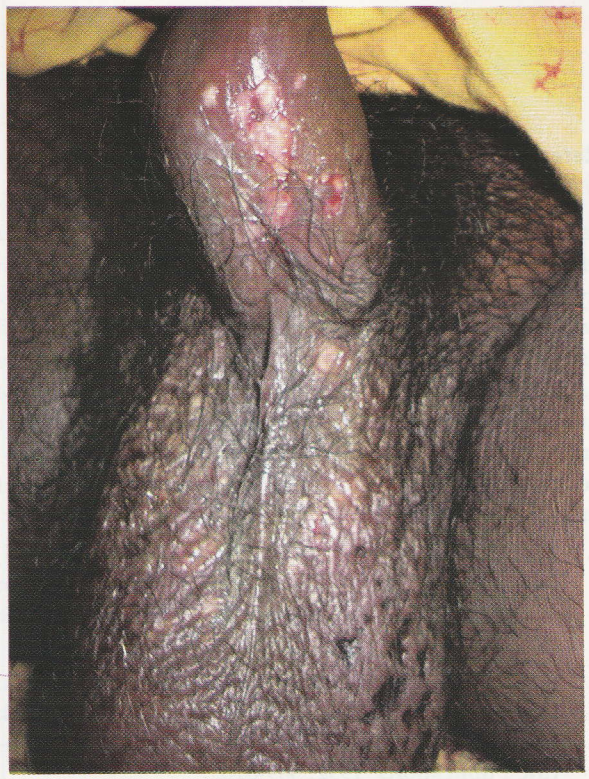

Figure 2. *Herpetiform genital ulceration.*

We saw six male patients presenting with discrete herpetiform/aphthous-like ulcers in the mouth and on the scrotum, root of the penis, and groins on day 3 – 5 of the illness (Figure 2). Oral ulcers were characteristically present on the buccal mucosa of the upper lip on either side of the frenulum (Figure 3). Patients had associated burning sensation and discomfort, high fever (39 – 40°C), and prominent constitutional symptoms, including severe arthralgia. Tzanck smear was negative for multineucleate giant cells. Healing was slow, taking 1 – 2 weeks to improve, possibly aided by wet compressors and oral antibiotics.

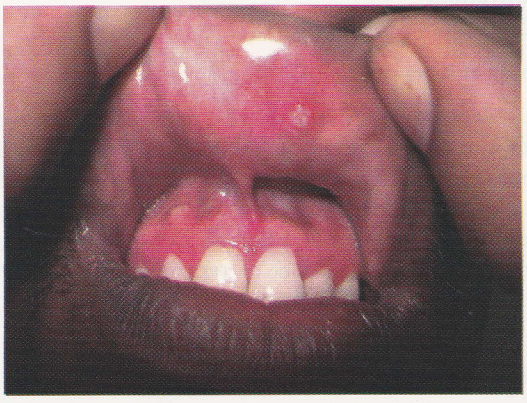

Figure 3. *Aphthous-like oral ulcers in association with genital ulceration.*

Lymphoedema and streaky/blotchy erythema of legs mimicking lymphangitis (Figure 4) appeared early during the illness and lasted for several weeks in some patients. Peeling of hands and feet was another, rather nonspecific, clinical manifestation observed in some of the patients during convalescence.

Serological confirmation of these cases was not possible as facilities were not available in the government hospitals at the time of the epidemic. In future it will be interesting to note if dermatological manifestations correlate with antibody titres.

Dermatological manifestations observed in a recent outbreak of Chikungunya fever in Southern India have been reviewed[2]. They include maculopapular rash, nasal blotchy erythema, freckle-like pigmentation over centrofacial area (Figure 4). Lymphoedema and streaky/blotchy erythema on legs flagellate pigmentation on face and extremities, lichenoid eruption and hyperpigmentation in photodistributed areas, multiple aphthous-like ulcers over scrotum, crural areas and axilla, lymphoedema in acral distribution (bilateral/unilateral), multiple ecchymotic spots (in children), vesiculobullous lesions (in infants) and subungual hemorrhage.

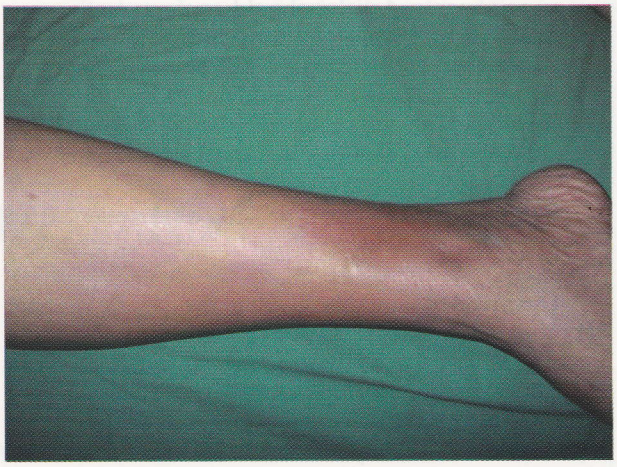

Figure 4. *Lymphoedema and streaky/ blotchy erythema on legs.*

Chikungunya appears to be an emerging infection with an array of interesting skin manifestations, which the practicing dermatologists need to be aware of.

References

1. News letter, Epidemiological Unit, Ministry of Health Care and Nutrition.http://www.epid.gov.lk/pdf/chikungunya/News_letter.pdf; Last accessed 4th April 2007.
2. Chikungunya at All Experts. http://en.allexperts.com/e/c/ch/chikungunya.htm; Last accessed 4th April 2007.