

## Two Cases of Imported Cutaneous Leishmaniasis in Korea

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Cutaneous leishmaniasis in Korea is one of the imported tropical diseases, which are increasing in their number (Kim *et al.*, 1983).

The authors observed 2 cases of cutaneous leishmaniasis who had been in Saudi Arabia. Their clinical histories would be recorded.

**Case 1.** A 30-year old Korean man visited Dermatology clinic of Seoul National University Hospital (SNUH) complaining of round ulcerative nodules on skin of the right wrist on March 14, 1983. The lesions were reddish, well-defined and child fist-sized nodules with central necrosis and crust formation (Fig. 1). He had no pain nor itching. Duration of the skin lesion was 5 months. He stayed in Saudi Arabia as a worker. His address was Chinchon, Chungchongbuk-do. Clinical laboratory examination revealed no abnormality. No fungus was found. Skin biopsy was carried out.

Histopathological findings showed a marked hyperkeratosis and focal parakeratosis in the epidermis. Rete pegs were elongated irregularly revealing a mild pseudoepitheliomatous feature. Basal cells were relatively well preserved and there was no inflammatory exudate in the epidermis (Fig. 2A). Main lesion was in dermis where heavy inflammatory exudate was seen together with necrotic centers (Fig. 2B). The necrotic center was composed of eosinophilic amorphous material and nuclear debris. There was a zone of histiocytic collection around which small round cells and some eosinophils were infiltrated. Myriads of characteristic amastigotes (Leishman bodies) were seen in and around

necrotic areas. These organisms outside cellular boundaries were also seen (Fig. 3). They were ovoid and had definite outer membrane. A dark spot was seen in one pole, which represented the kinetoplast. The whole organism varied in size and shape. They measured 2~4 $\mu$ m in maximum cross (Fig. 4).

This case was treated with metronidazole and trimethoprim-sulfamethoxazole (Bactrim (R)) for 6 weeks. His clinical manifestations began to improve remarkably 4 weeks after beginning of treatment.

**Case 2.** A 27-year old Korean man visited Dermatology clinic of SNUH on February 17, 1984. His chief complaint was skin ulceration on face and the left forearm of 4 month duration (Fig. 5). An itching papule appeared first on the left forearm and then on face in November, 1983. The papules became larger, ulcerated and covered with crust. He stayed in Hafar al Batin, Saudi Arabia for one year from January 26, 1983 to January 27, 1984. Physical examination showed a skin nodule, 1.5 $\times$ 1 cm, on the left forearm and 3 $\times$ 1.5 cm on face. Both had central ulcerations with crust formation. Other physical findings were in normal range and clinical laboratory examinations showed no abnormality. His past history and family history were not contributory. A skin biopsy was done.

Microscopically, the skin showed focal ulceration extending down to mid-dermis. The ulcer base consisted of necrotic debris and a considerable histiocytic proliferation together with small round cell infiltration. Remaining epidermis was

moderately hyperkeratotic and showed pseudo-epitheliomatous hyperplasia. The necrotizing inflammation extended into deep dermis and a portion of subcutis. The central zone of necrosis and surrounding epitheliomatous hyperplasia were quite characteristic. Higher magnifications of these areas between necrotic center and histiocytic masses disclosed numerous intracellular dot-like organisms. These micro-organisms were seen in the cytoplasm of the proliferating histiocytes that had abundant foamy cytoplasm and large vesicular nuclei (Fig. 6). Nuclear debris and some neutrophils were seen around these organisms. Neither giant cells of Langhans' type nor well defined granulomas with caseation were seen in the biopsy section. Among inflammatory infiltrate, plasma cells predominated although Russel bodies were not easily seen. Although fibroblasts were proliferating mixed with histiocytes, collagen lay down or actual scar formation was not a significant change.

The case was treated with metronidazole.

The imported cutaneous leishmaniasis was firstly recognized by Yoo *et al.* (1978) in Korea. A total of 15 cases had been recorded after the first record (Kim *et al.*, 1983). Therefore these cases become the 17th and the 18th recorded cases of imported cutaneous leishmaniasis in Korea. Almost all of the recorded cutaneous leishmaniasis cases were imported from Middle East countries.

Nowadays several tropical diseases other than cutaneous leishmaniasis, such as malaria, schist-

osomiasis, visceral leishmaniasis, are known to be imported from their endemic areas to Korea (Ahn *et al.*, 1982; Park *et al.*, 1984; Min *et al.*, 1982; Chi *et al.*, 1983).

To prevent the untoward import of such diseases, health education against those diseases which are endemic in the scheduled countries should be included in the training program before departure.

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### 중동에서 유입된 피부 리슈마니아증 2례

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사우디 아라비아에서 근무하고 귀국한 2명의 한국인 남자가 피부의 궤양을 主訴로 서울대학교 병원 피부과에 진찰을 받으러 왔다. 육안적으로 가피를 형성한 궤양을 동반한 피부 결절로 4~5개월을 경과한 병변이었다.

두 례 모두에서 조직 생검을 통해, 특징적인 조직의 파괴와 조직내 거식세포(histiocyte)의 세포질내 무편모성 리슈마니아 총체(amastigote 또는 Leishman body)를 관찰할 수 있었다.

이 예들은 문헌상 중동에서 국내로 유입된 피부 리슈마니아증의 제 17번째 및 18번째의 증례라 하겠다.

### EXPLANATIONS FOR FIGURES

**Fig. 1.** Gross view of skin lesion with crust formation on right wrist of the first case.

**Fig. 2.** Incisional skin biopsy of the first case. The epidermis shows hyperkeratosis and mild acanthosis (Fig. 2A). Heavy inflammatory exudate including necrotic centers which are surrounded by the histiocytes is observed in the dermis (Fig. 2B). Hematoxylin & eosin(HE) stained, 2A×40, 2B×100.

**Fig. 3.** Higher magnification of histiocytic zone of the skin lesion of the first case, showing numerous intracellular amastigotes (arrows), which are of ovoid or ellipsoid shape with definite kinetoplast, HE stained, ×1,000.

**Fig. 4.** Skin lesion on the forearm with crust of the second case.

**Fig. 5.** The lesion on face of the second case.

**Fig. 6.** Numerous amastigotes (leishman bodies) in the cytoplasm of the plump histiocytes in the biopsied skin of the second case, HE stained, ×360.

