

## Immunohistochemical and ultrastructural features of Langerhans cells in condyloma acuminatum

- Jin-Yun Feng<sup>11</sup> Department of Dermatology, The Second Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China  
Jin-Yun Feng, Department of Dermatology, the Second Hospital of Xi'an Jiaotong University, 157 Xiwu Road, Xi'an, Shaanxi 710004, China  
Tel: +86 29 87217312  
Fax: +86 29 87217312  
e-mail: [fjyfjy888@163.com](mailto:fjyfjy888@163.com),
- Zhen-Hui Peng<sup>11</sup> Department of Dermatology, The Second Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China,
- Xiao-Ping Tang<sup>22</sup> Department of Infection, The Eighth People's Hospital of Guangzhou, Guangzhou, Guangdong, China,
- Song-Mei Geng<sup>11</sup> Department of Dermatology, The Second Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China  
and
- Yu-Ping Liu<sup>22</sup> Department of Infection, The Eighth People's Hospital of Guangzhou, Guangzhou, Guangdong, China
  - <sup>1</sup>Department of Dermatology, The Second Hospital of Xi'an Jiaotong University, Xi'an, Shaanxi, China, and  
<sup>2</sup>Department of Infection, The Eighth People's Hospital of Guangzhou, Guangzhou, Guangdong, China

Jin-Yun Feng, Department of Dermatology, the Second Hospital of Xi'an Jiaotong University, 157 Xiwu Road, Xi'an, Shaanxi 710004, China

Tel: +86 29 87217312

Fax: +86 29 87217312

e-mail: [fjyfjy888@163.com](mailto:fjyfjy888@163.com)

Feng J-Y, Peng Z-H, Tang X-P, Geng S-M, Liu Y-P. Immunohistochemical and ultrastructural features of Langerhans cells in condyloma acuminatum.

J Cutan Pathol 2008; 35: 15–20. © Blackwell Munksgaard 2007.

### Abstract

**Background:** There are few studies on the abnormal morphology of Langerhans cells (LCs) in condyloma acuminatum (CA) lesions and the essence of the abnormal morphology of LCs in CA lesions is still not well elucidated. The aim of this study was to further investigate the morphological features of LCs in CA lesions.

**Methods:** CD1a<sup>+</sup> LCs in 13 CA lesions and in 13 normal controls were labeled using immunohistochemistry and examined by light microscopy. Ultrastructural investigation on LCs in six CA lesions and in six normal controls was performed by electron microscopy.

**Results:** Compared with those in normal controls, most CD1a<sup>+</sup> LCs in CA lesions exhibited dysplastic dendrites and abnormal distribution. The number of CD1a<sup>+</sup> LCs in CA lesions ( $26.31 \pm 18.84$ ) was statistically lower ( $p < 0.001$ ) than that in normal controls ( $72.00 \pm 27.40$ ). Electron microscopy showed that the number of Birbeck granules within lesional LCs ( $4.00 \pm 2.94$ ) was significantly decreased ( $p < 0.001$ ) than that within normal LCs ( $10.80 \pm 4.78$ ). The ultrastructures of most lesional LCs displayed degenerative changes.

**Conclusions:** The morphology of most LCs in CA lesions shows degenerative changes, which suggest that these LCs have been functionally impaired.