

Molluscum contagiosum: Unusual presentation and diagnosis on cytology

Neha Yadav, Suhailur Rehman, Hena Ayyub Ansari, Ghazala Mehdi, Mohammad Habib Raza¹

Departments of Pathology and ¹Surgery, Jawaharlal Nehru Medical College, AMU, Aligarh, Uttar Pradesh, India

ABSTRACT

Molluscum contagiosum is a cutaneous viral infection presenting as multiple pearly white umbilicated vesicles. Fine-needle aspiration cytology plays a pivotal role in establishing the rapid and correct diagnosis of clinically unsuspected cases, thereby aiding proper patient management. Our case report focuses on the diagnosis of molluscum contagiosum in a 30-year-old male with atypical presentation as a solitary ulcerated nodule on the right cheek.

Key words: Atypical presentation, cheek nodule, fine needle aspiration cytology, molluscum contagiosum

INTRODUCTION

Molluscum contagiosum was first described as a clinical entity in 1871 by Bateman.^[1] It was studied by various authors - Lipschitz, Von Prowazek, Kuznitsky, Mac callum.^[2] Molluscum contagiosum is a cutaneous viral infection caused by a poxvirus. It is spread by direct contact or as a sexually transmitted disease. Characteristically, multiple, discrete dome shaped skin-colored epidermal nodules with central umbilication are observed in the affected area. The crater formation is due to dissolution of the stratum corneum.^[3]

The diagnosis is usually easily made on the basis of clinical examination. However, cytology and rarely biopsy are needed in lesions with unusual presentations as often seen in immunocompromised individuals, to support the clinical diagnosis.

In this context, we will discuss a case of molluscum contagiosum presenting as a solitary ulcerated cheek nodule diagnosed by fine needle aspiration cytology.

CASE REPORT

A 30-year-old male presented in the surgery outpatient department as a follow-up case of intestinal obstruction for which he was operated 2 years back. The surgeon took note of an ulcerated nodule over his right cheek below the lower eyelid. The swelling was present for the last 5 months, with a history of pain and pus discharge. On local examination, the nodule was 18 mm × 20 mm in size, firm, immobile and tender. The ulcerated margins were indurated, and ulcer bed showed pus. A provisional diagnosis of skin adnexal tumor was made. There were no other significant clinical findings.

The pus discharge from the nodule was sent for microbiological examination. The fine needle aspiration of the cheek nodule was performed using a disposable 24-gauge needle attached to a 10 ml syringe. A scanty creamish white aspirate was obtained. An imprint smear was also prepared. The smears were stained with hematoxylin and eosin and Papanicolaou stain.

The cytology revealed a large number of basophilic rounded structures intimately mixed with degenerated squamous cells and inflammatory cells in the background [Figures 1 and 2]. The cytological features were diagnostic of molluscum contagiosum infection, with secondary bacterial infection causing an abscess formation.

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Address for correspondence: Dr. Suhailur Rehman, Department of Pathology, Jawaharlal Nehru Medical College, AMU, Aligarh - 202 002, Uttar Pradesh, India. E-mail: suhailurrehman2k2@gmail.com

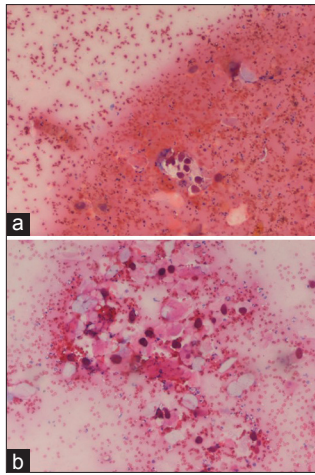


Figure 1: (a and b) Fine needle aspiration smears showing scattered molluscum bodies admixed with anucleate squames (low power view)

DISCUSSION

Molluscum contagiosum is caused by a DNA poxvirus, with most infections being attributed to the type 1 strain of the virus.^[4]

In immunocompetent patients, molluscum contagiosum present as only few lesions limited to the limbs, flexural folds, lower abdomen, or genitalia.^[5] Immunocompromised patients often have more extensive and atypical lesions, such as in HIV infection.^[6-8] A reduction in the number of Langerhans's cells has been reported in such cases.^[9] However, unusual features have been documented in immunocompetent patients as well^[10,11] and can cause diagnostic difficulties. Variants include molluscum contagiosum with metaplastic ossification, giant molluscum contagiosum, pseudocystic and pedunculated forms.^[12-14]

Our patient presented with an ulcerated nodule on the cheek. With this atypical presentation, the differential diagnosis would include several lesions, ranging from the simple epidermoid/sebaceous cyst and seborrheic keratosis to the more problematic skin adnexal tumors and possibly, a basal cell carcinoma. However, the identification of the characteristic molluscum bodies on aspiration smears enabled a definite and fast diagnosis. The molluscum bodies are also known as the Henderson-Patterson bodies and actually contain virion particles and debris.^[3] Nevertheless, the slide must be screened carefully as the molluscum bodies can easily be missed against a background composed predominantly of anucleate squames or blood. A heavy infiltrate of atypical lymphoid cells as seen in a pseudolymphoma can sometimes occur, and this can cause suspicion of a neoplastic lymphoid proliferation.^[15]

In addition, in HIV-infected or otherwise immunocompromised patients, one must rule out other

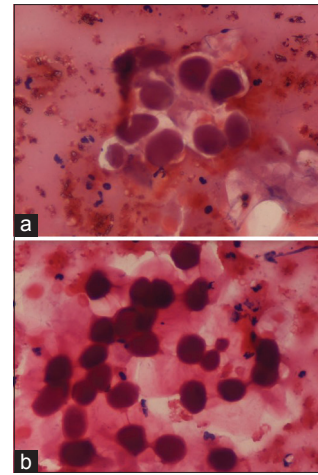


Figure 2: (a and b) High power view showing the sharply defined basophilic molluscum bodies with the nucleus pushed to the periphery in some cells

infections such as cryptococcosis and histoplasmosis.^[3] It is important to be aware of the spectrum of presentation in these patients. Clinical correlation along with cytologic appearance may thus help to arrive at the correct diagnosis.

CONCLUSION

Molluscum contagiosum presenting as a solitary ulcerated nodule over cheek is unusual. In such circumstances, the cytological diagnosis of molluscum contagiosum is suggested by demonstrating the characteristic molluscum bodies in the aspirated material and imprint smear.

REFERENCES

1. Meirovsky E, Keys S, Behr G. The cytology of molluscum contagiosum, with special regard to the significance of the so-called vacuoles. *J Invest Dermatol* 1946;7:165-9.
2. Goodpasture EW, King H. A Cytologic study of molluscum contagiosum. *Am J Pathol* 1927;3:385-94.3.
3. Xu X, Erickson L, Chen L, Elder DE. Diseases caused by viruses. In: Elder DE, Elenitas R, Johnson BL Jr, Murphy GF, Xu X, editors. *Lever's Histopathology of the Skin*. 10th ed. (South-Asian edition). New Delhi: Wolters-Kluwer Health/Lippincott Williams and Wilkins; 2008. p. 637.
4. Scholz J, Rösen-Wolff A, Bugert J, Reisner H, White MI, Darai G, et al. Epidemiology of molluscum contagiosum using genetic analysis of the viral DNA. *J Med Virol* 1989;27:87-90.
5. Buller L, Mark R. Poxviruses. In: Cohen J, Powderly WG, editors. *Infectious Diseases*. Vol. 2. 2nd ed. Edinburgh: Mosby; 2004. p. 2053.
6. Aldabagh B, Ly MN, Hessel AB, Usmani AS. Molluscum contagiosum involving an epidermoid cyst with xanthogranuloma-like reaction in an HIV-infected patient. *J Cutan Pathol* 2010;37:282-6.
7. Freeman CL, Moriarty AT. Molluscum contagiosum presenting as cellulitis in an AIDS patient: Cytologic and ultrastructural features. *Diagn Cytopathol* 1995;12:345-9.
8. Al-Mutairi N. Unusual presentations of molluscum contagiosum. *J Cutan Med Surg* 2008;12:295-8.
9. Vera-Sempere FJ, Rubio L, Massmanian A. Counts and areas of S-100-positive epidermal dendritic cells in atypical molluscum contagiosum affecting HIV+patients. *Histol Histopathol* 2001;16:45-51.

10. Al-Hilo MM, Abbas MY, Alwan AI. Atypical clinical presentation of molluscum contagiosum in Iraqi patients; clinical descriptive study. *Al - Kindy Col Med J* 2012;8:18-27.
11. Kumar N, Okiro P, Wasike R. Cytological diagnosis of molluscum contagiosum with an unusual clinical presentation at an unusual site. *J Dermatol Case Rep* 2010;4:63-5.
12. Cribier B, Scrivener Y, Grosshans E. Molluscum contagiosum: Histologic patterns and associated lesions. A study of 578 cases. *Am J Dermatopathol* 2001;23:99-103.
13. Pandhi D, Singhal A. Giant molluscum contagiosum. *Indian Pediatr* 2005;42:488-9.
14. Naert F, Lachapelle JM. Multiple lesions of molluscum contagiosum with metaplastic ossification. *Am J Dermatopathol* 1989;11:238-41.
15. Del Boz González J, Sanz A, Martín T, Samaniego E, Martínez S, Crespo V. Cutaneous pseudolymphoma associated with molluscum contagiosum: A case report. *Int J Dermatol* 2008;47:502-4.

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