MOLLUSCUM CONTAGIOSUM MASQUERADING

DIAGNOSING GIANT LESIONS IN AN UNFAMILIAR TERRITORY

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Abstract: Molluscum contagiosum virus commonly affects children, causing localized skin diseases. We present the case of an immunocompetent 8-month-old patient with multiple giant molluscum contagiosum lesions. Lesions had a cup-like shape and were characterized by eosinophilic inclusion bodies on the keratinocytes as well as inverted lobules of hyperplastic squamous epithelium. It is crucial to identify this clinical variation to avoid unnecessary severe treatments.

Key Words: epidermal cyst, molluscum contagiosum, skin neoplasms

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Written informed consent was obtained from the patient for publication of this case report and any accompanying images.
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Molluscum contagiosum (MC) is a cutaneous papular infectious disease caused by 4 closely related species of DNA poxviruses: MC virus (MCV) 1–4 and their variants. It primarily affects children, sexually active adults and immunocompromised individuals, particularly those infected with HIV.[1–5] In healthy children, 70% of cases usually resolve spontaneously within 18 months, indicating that the illness course is often self-limited. Clinically, MC presents as small, raised, round papules on the skin with a pearly surface. These papules are usually 1–5 mm in size and commonly appear on the trunk, axillae, antecubital fossa and popliteal fossa. In most cases, a clinical diagnosis of MC can be made without histopathological confirmation, provided the presentation is not unusual. Lesions with a diameter of at least 1 cm are classified as giant MC, which is a less common subtype. This type of MC is often associated with immunodeficiency states and HIV.[4–7]

Here we present the case of an 8-month-old boy, who was initially diagnosed with infected epidermoid cysts but was later found to have the giant clinical variant of MC based on histopathological examination, clinical and radiological findings.

CASE REPORT

Clinical and Laboratory Examination

An 8-month-old male was presented with 2 scalp swellings on the right side of his head. The swellings appeared 2 months after birth and were not present in any of the family members. The patient had no history of cat or dog contact, oral moniliasis, persistent diaper rash, recurrent fever, vomiting or immune system disorders. Prenatal and postnatal histories were unremarkable. When he was 2 or 3 months old, he was given oral antibiotics, but no shrinkage of the masses was observed.

Redness was noted on the lesions on the scalp in the right parietal and right occipital regions (Fig. 1). The mass located in the occipital region had intense white, foul-smelling, spontaneous discharge, but it was painless.

The laboratory examination revealed a hemoglobin of 9.3 g/dL, a leukocyte count of 13,650/μL with 40% neutrophils, 49% lymphocytes, 11% monocytes and a platelet count of 409,000/μL. The erythrocyte sedimentation rate was 31 mm/hour, and the C-reactive protein concentration was 21.6 mg/L. The immunoglobulin concentrations were within normal range. All markers for hepatitis, toxoplasma, rubella and cytomegalovirus were negative. The patient's ß-human chorionic gonadotropin and alpha-fetoprotein concentrations were normal (<0.2 IU/L and 34.8 ng/mL, respectively). Due to the presence of Staphylococcus capitis in the wound culture, the patient was started on trimethoprim-sulfamethoxazole as per the antimicrobial susceptibility testing.

Radiologic Examination

The ultrasonography revealed 2 hypoechoic lesions with a dense content over the bone, measuring 2 × 0.5 and 2 × 0.7 cm in size, without significant internal vascularization. The boundaries between these lesions and the bone had disappeared. There might be an inflamed and ruptured epidermoid or dermoid cyst, or hemangioma in the foreground. During the magnetic resonance examination, mass lesions were observed over the right parietal bone. The lesions had caused a defect in the posterior midline and had similar characteristics in being T2 hyperintense and T1 hypointense, with a slight contrast enhancement (Fig. 2). No intense contrast enhancement was observed, which would otherwise suggest hemangioma.

In the differential diagnosis, it was important to rule out Ewing sarcoma and Langerhans cell histiocytosis, along with inflamed and ruptured epidermoid cysts. Therefore, total excision of the masses was performed.

Histopathologic Examination

The histopathologic examination revealed a deep dermal cystic cavity in the sections taken from 2 firm, white to skin-colored, dome-shaped, pearly, umbilical nodular lesions. The lining of the cavity was largely removed, and the hyperplastic squamous epithelium that bordered the undamaged section of the cyst had cytopathic alterations, indicative of MC. The lesion was cup-shaped and contained large eosinophilic inclusion bodies on the keratinocytes. Inverted lobules of hyperplastic squamous epithelium extended into the underlying dermis, known as molluscum or Henderson-Patterson bodies. The cells contained large red cytoplasmic inclusions that pushed the hyperchromatic and shrunken nuclei toward the cell membrane (Fig. 3). The diagnosis was solitary giant molluscum based on clinical and histological findings.

No signs of recurrence were observed during the 3-month follow-up period.

DISCUSSION

A double-stranded DNA virus called MC virus is the source of a benign, infectious skin illness that is clinically characterized by dome-shaped papules with a central hollow or depression. Atypical lesions of MC may occur in patients with altered or impaired immunity, such as those with atopic dermatitis, after long-term use of corticosteroids and immunosuppressive therapy, sarcoidosis, leukemias and especially in patients with acquired immune deficiency syndrome.[1,7–10] These lesions can mimic a wide range of other conditions and often grow to a large size on an unusual site.

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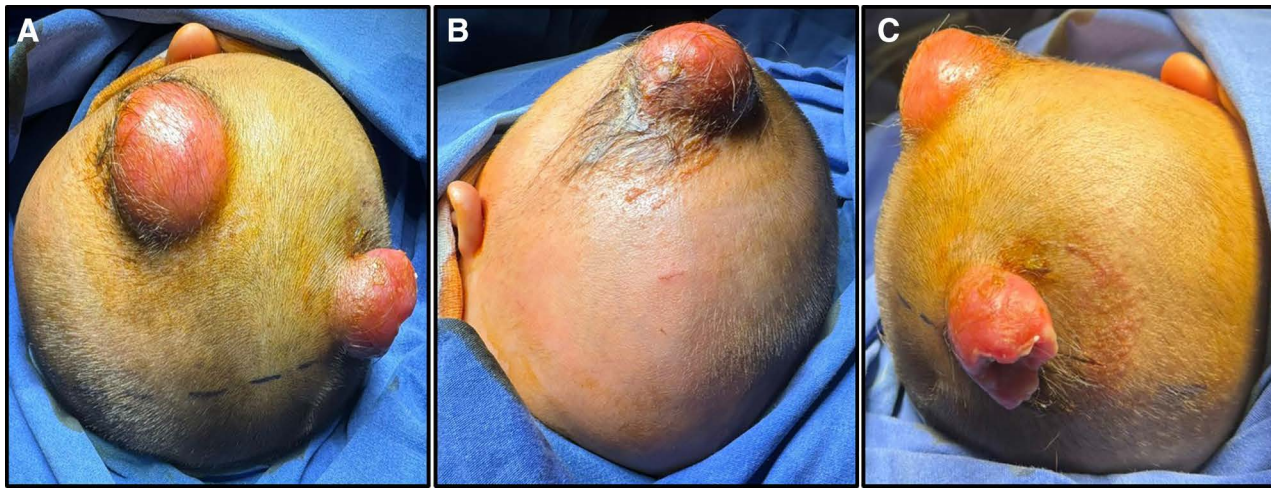


FIGURE 1. Solitary 2 cm Sized, Skin-Colored, Firm, Subcutaneous Nodule on the Scalp in the Right Parietal and Right Occipital Regions.

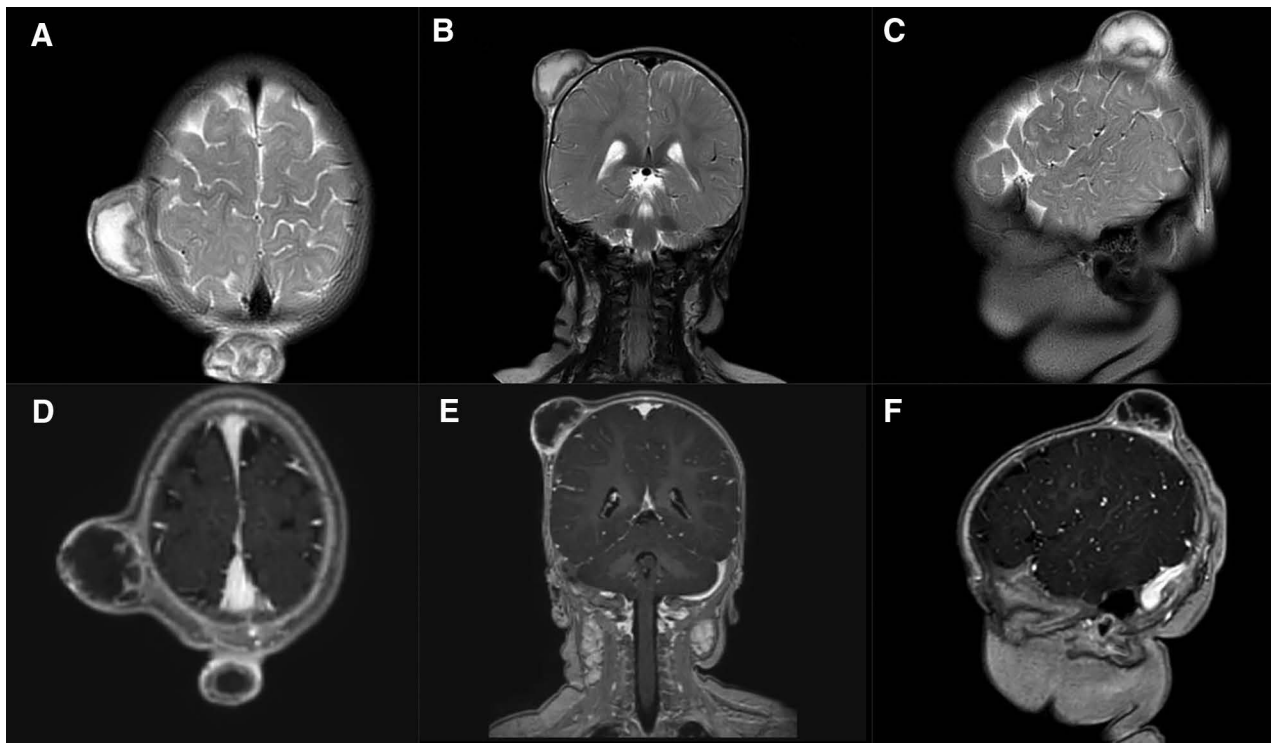


FIGURE 2. Preoperative Magnetic Resonance Images (MRİs) of the Presented Case. 2 Lesions are Observed With Similar Character Which are Causing Bone Defects, T2 Hyperintense T1 Hypointense with Sight Contrast Enhancement on the Right Parietal Done and on the Posterior Midline. A: Axial T2-weighted and (D) axial contrast-enhanced T1-weighted, (B) coronal T2-weighted and (E) coronal contrast-enhanced T1-weighted, (C) sagittal T2-weighted and (F) sagittal contrast-enhanced T1-weighted of the mass on the parietal bone.

Giant MC is a rare occurrence in immunocompetent individuals. Some studies have suggested that it may be an indicator of HIV infection in both adult and pediatric patient populations. Individuals who have isolated pink nodules on their face or anogenital area for a brief period should be monitored for this uncommon infection. The diagnosis is typically made based on the distinctive appearance of the lesions, without the need for laboratory testing. Immunocompetent individuals with MC infections typically do not require specific medications as the lesions eventually disappear spontaneously.[1,5,11]

MC has an unusual nodular variation known as giant MC, which measures 0.5–1 cm in diameter or more. This clinical appearance can resemble viral warts, amelanotic melanoma, furuncles, intradermal nevi, basal cell carcinoma and kerathoacanthoma.[1,3,9]

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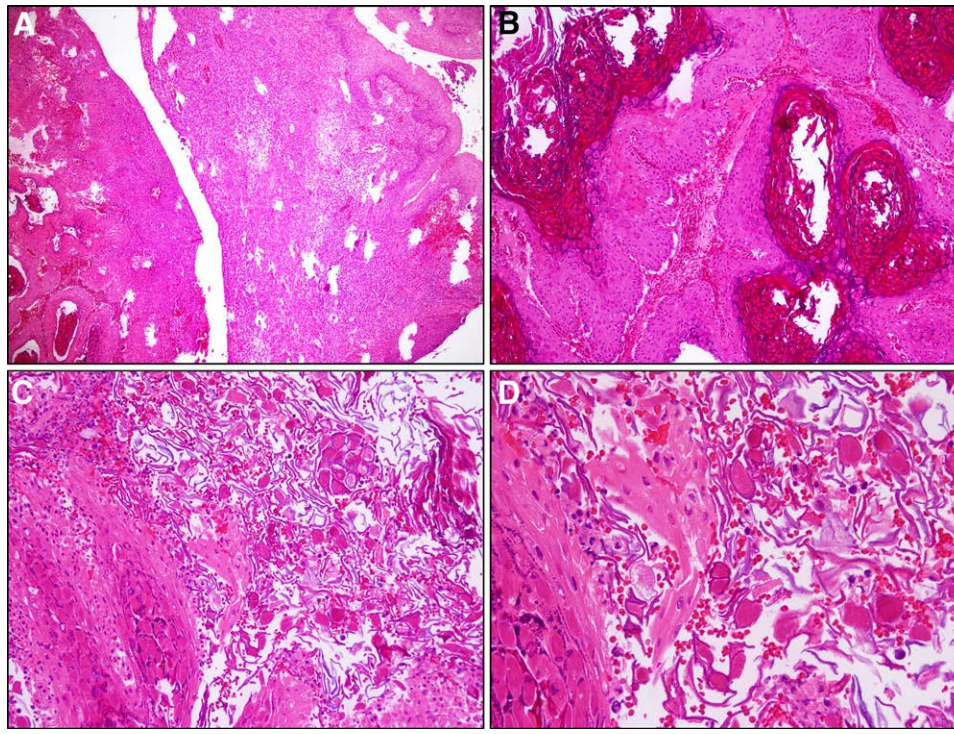


FIGURE 3. A: Lesion with demonstrating epidermal hyperplasia and Henderson-Patterson bodies (H&E, ×40). B: Multiloculated cysts containing laminated horny material and abundant eosinophilic inclusion bodies, dispersed among the keratinous content (H&E, ×100). C,D: Numerous molluscum bodies were seen in the marked hyperplastic and lobulated keratinized squamous epithelium (H&E, ×200 and ×400). H&E indicates Hematoxylin and eosin.

These lesions are rare in healthy individuals and may be linked to immune system disorders such as acquired immune deficiency syndrome, sarcoidosis, leukemias, corticosteroid and immunosuppressive medication, atopic dermatitis, and Wiskott-Aldrich syndrome. Atypical lesions of MC can develop frequently, grow to a large size, and spread widely to unusual body areas. In some cases, a dermoscopic examination may be helpful. Dermoscopy of MC reveals a central orifice, or umbilication, surrounded by linear, thin, corona-like telangiectasias and polylobular white to yellowish amorphous formations. In rare cases, especially in atypical locations, this appearance may differ. In such cases, a histopathologic examination is necessary.[1,8,12]

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CONCLUSIONS

Diagnosing giant MC in an immunocompetent patient can be difficult due to its unusual location or radiological findings. This viral disease can be mistaken for other benign or malignant neoplasms, as well as non-neoplastic diseases. It is crucial to identify this clinical variant of pediatric infection, which is prevalent in a particular demographic group, to avoid unnecessary aggressive treatments or additional investigations. To improve diagnostic accuracy, histopathological examinations should always be carried out whenever possible.

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