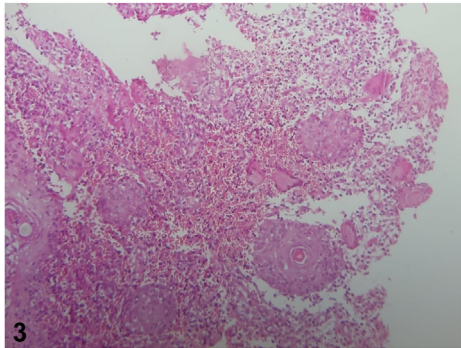
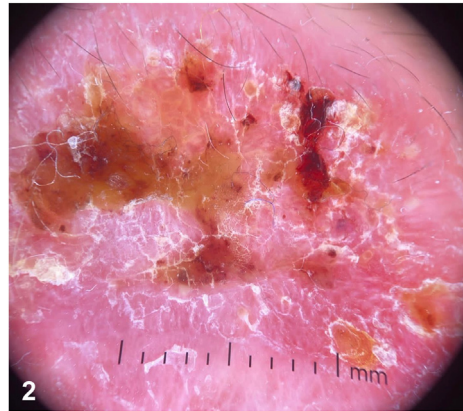


## Reddish plaque and nodules on a child's cheek



Chaimae Ait Khabba, MD, Marwa Asermouh, MD, Mariame Meziane, MD, Laila. Benzekri, MD, and Karima Senouci, MD

**Key words:** child; lupus; tuberculosis; vulgaris.



**CLINICAL PRESENTATION**

A 14-year-old child, operated on; at the age of 5; for dacryocystitis secondary to a trauma of the right eye. He has since presented a recurrent periorbital erythema treated several times as eczema by topic corticosteroids without improvement. The evolution was marked, 9 years later, by the extension of the erythematous plaque to the cheek and nose, appearance of lupoid nodules and keratinization of the appendages of the eye with ectropion (Fig 1). Dermoscopy showed yellow-orange globules, white scales, branching and dot vessels, and white structureless areas (Fig 2). A skin biopsy was performed showing many contiguous poorly circumscribed epithelial and gigante-cellular granulomas (Fig 3). Systemic examination was normal.

**Question 1: What is the most likely diagnosis?**

- A. Cutaneous tuberculosis (Lupus vulgaris)
- B. Sarcoidosis
- C. Leishmaniasis
- D. Leprosy
- E. Deep mycosis

**Answers:**

**A.** Cutaneous tuberculosis (Lupus vulgaris) – Correct. Lupus vulgaris is a particular type of chronic cutaneous tuberculosis (TB).<sup>1</sup> Usually, the lesions are solitary nodules or plaques with ulceration and scarring; they are most commonly located on the face or neck. On dermoscopy they typically appear as “apple jelly” nodules, they are more yellowish; secondary to caseous necrosis or lipid deposits in giant cells. On histology we find lymphoepithelioid and giant cell follicles.<sup>2</sup>

**B.** Sarcoidosis – Incorrect. Women are more likely to develop cutaneous sarcoidosis than male. At dermoscopy, structureless yellowish-orange areas are less seen in hyperkeratotic forms and linear-irregular vessels are more common. It is often associated with endonasal involvement.

**C.** Leishmaniasis – Incorrect. There is no notion of insect bites. The leishmaniasis lesion is well-circumscribed with a central ulceration and a congestive peripheral swelling. On dermoscopy, yellow tears are found with ulceration and hairpin vessels. Parasitological examination of the lesion is often positive with the presence of Leishman bodies on histology.

**D.** Leprosy – Incorrect. Progressive infiltration of the face can cause deepened forehead furrows, involvement of nasal mucosa, thickened skin (leonine facies), thickening of vocal cords, and madarosis. On dermoscopy, the yellow-orange granules are poorly delimited. On histology the Virchow cells are characteristic and the infiltrate respects the papillary dermis from which it is separated by Unna band.

**E.** Deep mycosis – Incorrect. The painless lesions are aligned with the course of the lymphatic vessels. It is often associated with pulmonary involvement. On histology there is an epithelioid, gigante-cellular, and suppurative granulomatous reaction in the center.

**Question 2: What is the most specific test to confirm the diagnosis?**

- A. Mantoux test
- B. Response to antituberculosis drugs
- C. Culture on the Lowenstein-Jensen medium
- D. Gene amplification techniques (polymerase chain reaction)
- E. Direct examination with Ziehl Nilsson stain

**Answers:**

**A.** Mantoux test – Incorrect. A negative tuberculin skin test does not exclude infection or active tuberculosis. Tuberculin reactivity can be reduced by conditions that decrease delayed hypersensitivity reactions.

**B.** Response to antituberculosis drugs – Correct. The response to a specific antituberculosis treatment

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From the Department of Dermatology-Venereology, Ibn Sina University Hospital, Mohammed V University, Rabat, Morocco. Funding sources: None.

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Correspondence to: Chaimae Ait Khabba, MD, Department of Dermatology-Venereology, Ibn Sina University Hospital, Mohammed V University, 10170 Rabat, Morocco. E-mail: [Cha.aitkhabba@gmail.com](mailto:Cha.aitkhabba@gmail.com).

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may constitute the only proof of the diagnosis of cutaneous tuberculosis, especially in the case of lupus vulgaris as in our patient (Fig 4).<sup>3</sup>

**C.** Culture on Lowenstein-Jensen medium – Incorrect. The slow multiplication of Koch's bacillus (BK) imposes an average duration of culture of 28 days. The bacteriological results are often negative, due to the difficulty in carrying out cultures and the sterility of bacteriological samples during lupus vulgaris linked to immune hyper-reactivity.

**D.** Gene amplification techniques (polymerase chain reaction) – Incorrect. It may be useful in these paucibacillary forms. However, their sensitivity is medium, as is their specificity (possible false positives)<sup>4</sup>

**E.** Direct examination with Ziehl Nilsson stain – Incorrect. Acid-fast bacilli are usually easy to find in early lesions but are rare once granulomas are developed.

**Question 3: What is the best treatment option in this case?**

- A.** 2 RHZE/4 RH
- B.** Isoniazid only
- C.** Injectable streptomycin
- D.** Surgical excision
- E.** Ciprofloxacin

**Answers:**

**A.** 2 RHZE/4 RH – Correct. Chemotherapy still remains the treatment of choice. It aims to cure the disease as rapidly as possible to prevent relapses and the emergence of resistant strains. The recommended regimen comprises an initial bactericidal or intensive phase including isoniazid (H), rifampicin (R), pyrazinamide (Z), and either ethambutol (E) for 2 months and a continuation or sterilizing phase with isoniazid and rifampicin for 4 months.<sup>5</sup>

**B.** Isoniazid only – Incorrect. Treatment with isoniazid alone has been proposed in TB lupus without visceral involvement. This therapeutic mode is discussed in view of the possibility of primary resistance to isoniazid and the risk of secondary resistance.

**C.** Injectable streptomycin – Incorrect. This drug has lower degree of efficacy and a higher degree of intolerability and toxicity; hence, it is only used for patients with cutaneous TB resistant to the first-line agents.

**D.** Surgical excision – Incorrect. It is not a curative treatment. However surgical intervention is useful for the treatment of isolated lupus vulgaris and TB verrucosa cutis and some cases of scrofuloderma in addition to chemotherapy.

**E.** Ciprofloxacin – Incorrect. Recently, fluoroquinolone antibiotics such as ciprofloxacin, ofloxacin, and levofloxacin are commonly used, but as second-line drugs for patients with resistant cutaneous TB.

**Abbreviation used:**

TB: tuberculosis

**Conflicts of interest**

None disclosed.

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