

## CASE REPORT

# Extraoral exanthem revealing Gianotti-Crosti syndrome in a young child: A case report

Amira Besbes<sup>1,2</sup>  | Mouna Korbi<sup>3</sup>  | Faten Besbes<sup>4</sup> | Yamina Elelmi<sup>1,5</sup>

<sup>1</sup>Faculty of Dental Medicine, University of Monastir, Monastir, Tunisia

<sup>2</sup>Medical and Molecular Parasitology and Mycology Laboratory, LR12ES08, Faculty of Pharmacy, University of Monastir, Monastir, Tunisia

<sup>3</sup>Dermatology Department, Fattouma Bourguiba University Hospital Center of Monastir, Monastir, Tunisia

<sup>4</sup>Pediatrics Department, Fattouma Bourguiba University Hospital Center of Monastir, Monastir, Tunisia

<sup>5</sup>Pediatric Dentistry Department, University Dental Clinic of Monastir, Monastir, Tunisia

## Correspondence

Amira Besbes, Faculty of Dental Medicine, University of Monastir, 5019 Monastir, Tunisia.  
Email: besbesemira@gmail.com

## Abstract

We reported a case of a 14-month-old girl with erythematous and papulovesicular pink to red lesions on the face, the upper and the lower limbs. The history and the morphological features confirmed the diagnosis of Gianotti-Crosti syndrome.

## KEYWORDS

child, dentist, exanthem, Gianotti-Crosti syndrome

## 1 | INTRODUCTION

Gianotti-Crosti syndrome (GCS) is a relatively rare and benign eruption, also known as papular acrodermatitis. It was described first by Gianotti in 1955 then by Gianotti and Crosti in 1965 as a self-limiting exanthem characterized by a papules or papulovesicles.<sup>1</sup> It is described as pink, red to brown symmetric monomorphous eruption in the face, extremities, and buttocks. The eruption resolves spontaneously in 2–4 weeks but it may last several months.<sup>2</sup> It is commonly known as a childhood eruption. However, two cases of GCS in a teenage and an adult were reported.<sup>3,4</sup> It was mainly related to viral, bacterial infections or vaccination.<sup>1,5–7</sup>

Dentists may be the first persons who detect this illness or participate in the diagnosis by excluding intraoral causes of cutaneous facial eruption.

The aim of this report was to describe the diagnostic approach of GCS and its therapeutic management.

## 2 | CASE REPORT

A 14-month-old girl presented in the Academic Dental Clinic of Monastir, in July 2020, for papulovesicular facial and perioral rash that occurred in the last 3 days. The patient had no medical history. Her mother reported the occurrence of diarrhea, slight temperature rise,

hypersalivation associated with irritability and loss of appetite. She thought that those were symptoms of tooth eruption, worsened by sun exposure.

Clinical examination showed few erythematous lesions on the cheeks and the chin (Figure 1), but no intraoral lesions. On dermatological examination, we noted papulovesicular lesions in the upper and lower extremities (Figures 2 and 3). Few lesions appeared in the chest. Besides, multiple pink and red-colored 2–3 mm papules were confluent between the arm and the forearm (Figure 2). The palms and the soles were spared. Neither fever nor itch were noted, and the patient seemed active and healthy.

At first sight, eczema or drug-induced rash were evoked, but the patient did not take any medication. There was neither a family history of allergy nor a recent vaccination. The patient did not suffer from chronic disease. A paraviral exanthem or GCS was suspected, and the patient was referred to a dermatologist. The treatment was symptomatic, and the mother was reassured about the benign, self-resolving nature of this rash. She was advised to monitor the child's temperature.

Gianotti-Crosti syndrome was confirmed by the dermatologist and a pediatrician who made a thorough physical examination, which did not reveal splenomegaly, hepatomegaly nor lymphadenopathy. Seventeen days later, the lesions were partially and spontaneously regressing (Figure 4). They completely resolved 21 days later with no scarring (Figure 5). No recurrence was noted after 9-month follow-up.

### 3 | DISCUSSION

The present case required a careful dental examination. Several diagnoses were evoked. The age of the baby girl

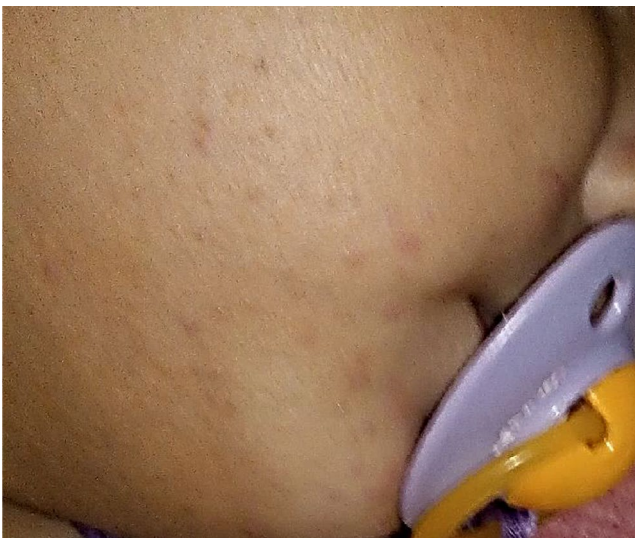


FIGURE 1 Erythematous papules on the right cheek and chin



FIGURE 2 Papular lesions distributed in the left and right forearms surfaces



FIGURE 3 Papular lesions on the lower limbs' surfaces

corresponded to the teeth eruption period. Teething may be associated with low-grade fever, appetite decreasing, runny nose, sleep disturbance, and facial rash.<sup>8,9</sup> This rash



FIGURE 4 Papules partially resolved after 17 days



FIGURE 5 Papules totally resolved after 21 days

is not directly due to teething. It is due to the excess of saliva which irritate the skin. In fact, infants drooled in the period of teething. When this saliva coats the baby's skin, it creates ideal conditions for microbes to grow on the skin. It also contains digestive enzymes and may contain pieces of food, both of which can cause irritation. Thus,

an erythematous rash may appear around the mouth, the cheeks, the chin as well as the neck or even the chest.

However, teeth eruption's symptoms were not as intense as observed in this case.<sup>8,9</sup> In addition, this eruption suddenly appeared and was not limited to the face. Oral examination did not reveal any enanthem that can be associated with several exanthematous diseases.

The present case responded to the diagnostic criteria proposed by Chuh et al in 2012.<sup>10</sup> In fact, we reported the following clinical features: symmetric monomorphous pink papules of 1–3 mm of diameter on three sites: the cheeks, the surfaces of the forearms, the legs and few lesions in the trunk and the buttocks. Besides, this illness lasted more than 10 days as described by Chuh et al.<sup>10</sup>

The cutaneous manifestations may be preceded by an upper respiratory tract infection. The constitutional symptoms, including discomfort, low-grade fevers, and diarrhea, are sometimes observed but usually mild.<sup>11</sup>

The diagnosis of Gianotti Crosti was suspected on the basis of the symptoms observed in the patient.

In fact, several differential diagnosis were reported, lichen planus, lichenoid drug reactions, papular urticaria, erythema multiforme, and urticaria.<sup>12–14</sup> The favorable evolution of the eruption eliminated those diagnosis.

Hand-foot-mouth disease is also one of the differential diagnoses. In this case, there were no lesions neither on the patient's palms nor on the soles. Therefore, hand-foot-mouth syndrome which is characterized by a most distinctive enanthem-exanthem complex was excluded.<sup>15</sup>

Atopic dermatitis was also suspected. Nevertheless, the patient did not have any history of drugs intake or family allergy. GCS occurrence was also described after vaccination against polio, influenza, hepatitis B, and DPT vaccine (diphtheria, tetanus, and pertussis)<sup>5,13,16</sup> but the patient did not receive any recent vaccination.

It was reported that the majority of GCS occurrences have been due to hepatitis virus and *Epstein-barr* virus. Nonetheless, occasionally multiple viruses (*cytomegalovirus*, *herpes-virus* 6, *Coxsackie virus*, *rotavirus*, *parvovirus B19*, *human respiratory syncytial virus*, *parainfluenza virus*, *paramyxovirus*, and *poxvirus*) and bacteria (*Borrelia burgdorferi*, *Bartonella henselae*,  $\beta$ -*haemolytic streptococci*, and *Mycoplasma pneumoniae*) have been incriminated.<sup>13</sup> Moreover, GCS has recently been described in a *COVID-19*-positive child.<sup>17</sup> In the present case, the causative agent of the infection was not identified. We did not go further for more investigations, as the patient healed without complications. In fact, GCS heals spontaneously in the absence of particular context such as immunodepression. In contrast, the infectious agent should be identified if the child is immunosuppressed, when the rash is associated with functional disorders or an impaired health or if there is

a pregnant woman in the child's close environment that may require special care.<sup>18</sup>

In the presence of this exanthema, if the child is in good general health, does not present functional disorders that would worsen his general condition and there are no symptoms in favor of a bacterial infection, monitoring and symptomatic treatment should be provided.<sup>19</sup> Application of topical corticosteroids and antihistamines may be useful, if the lesions are itching.<sup>12–14,20</sup> The parent's patient should be reassured that it is a benign disease, which often resolves itself without scarring. Recurrence is very exceptional.<sup>13</sup>

To the best of our knowledge, this is the first case of GCS discovered and described in a dental institution in Tunisia. Dentists may occasionally face this type of infantile exanthems; they should be well-informed of them to avoid complications.

## 4 | CONCLUSION

Dentists may play an important role in detecting several eruption forms on pediatric patients and contribute to the diagnosis. GCS diagnosis is straightforward. Nevertheless, a collaboration with dermatologists and/or pediatricians is mandatory.

## ACKNOWLEDGEMENTS

The authors would like to thank the parent's child for her cooperation.

## CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this article.

## AUTHOR CONTRIBUTIONS

AB involved in oral examination, conception, and drafting of the case report. MK and FB involved in clinical examination, and treatment and drafting of the manuscript. YE involved in oral examination and revision of the article. All authors have given final approval of the version to be published. They have all participated sufficiently in the work and agreed to be accountable for all aspects of the work.

## ETHICAL APPROVAL

The study was conducted in accordance with the Declaration of Helsinki.

## CONSENT

An informed consent was obtained from the patient's mother with a promise that no identifying information will be used.

## DATA AVAILABILITY STATEMENT

Data supporting the findings of this case were included in the manuscript.

## ORCID

Amira Besbes  <https://orcid.org/0000-0003-3742-8687>

Mouna Korbi  <https://orcid.org/0000-0002-9642-3344>

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**How to cite this article:** Besbes A, Korbi M, Besbes F, Elelmi Y. Extraoral exanthem revealing Gianotti-Crosti syndrome in a young child: A case report. *Clin Case Rep*. 2021;9:e04957. <https://doi.org/10.1002/ccr3.4957>