

## Vulvar Aphthous Ulcer in an Adolescent Girl Suffering From COVID-19 Infection

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### Case Presentation

A 15-year-old girl presented with a two-day-history of a painful vulvar lesion. Clinical examination revealed a well-demarcated ulcer (2 cm) with a fibrinous center located on the left minor labia (Figure 1). There was a second smaller ulcer opposite to the large one imitating a “kissing pattern”. Both developed simultaneously. Regional lymph nodes were unaffected (no pain, no oedema). She suffered from mild systemic symptoms (low fever and rhinorrhea) and was tested positive for COVID-19 (Polymerase Chain Reaction test-PCR) three days before the appearance of the ulcer. The patient was not under treatment for Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) or for any other disease. Personal and family history for previous oral or vulvar aphthosis, as well as for inflammatory bowel or other autoimmune diseases, was negative. The patient had no history of prior sexual activity and serological tests for Epstein Barr, Cytomegalovirus and Syphilis were also negative. The prescribed treatment included a mid-potency topical steroid twice daily. The ulcers healed within 10 days. Both the parents and the patient gave consent to publish images of the lesion.

### Teaching Point

Acute genital aphthous ulcers (AGU) or Lipschutz ulcers represent a rare, painful and distressing condition that commonly affects sexually inactive adolescent girls.[1] Although AGUs are considered an idiopathic condition, they have also been linked to several infections, autoimmune conditions and topical trauma. COVID-19, on the other hand, has been linked to several cutaneous manifestations (among which the reactivation of herpes zoster) but its relationship with AGU is still poorly clarified. [1] The most common infections, which are temporally associated with AGU, are those caused by Epstein-Barr and Cytomegalovirus viruses and in a lesser extent by influenza and mumps viruses, as well as salmonella and mycoplasma. The underlying mechanism in these cases is probably a dysregulation of the immune system with cytokine activation due to systemic illness. The fact that SARS-CoV-2 virus causes a systemic autoimmune inflammatory response which affects multiple organ systems could be the link between the development of aphthous ulcers and COVID infection.[2]



**Figure 1.** Aphthous ulcer located on the left labia minora of a 15-year-old girl suffering from COVID-19. The ulcer has well-demarcated borders, erythematous background and fibrinous center.

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