

Acute Vulvar Aphthous Ulcer as a Complication of COVID-19 Infection: A Case Series

Dr. Amanda Ifejika¹, Dr. Giovanna Mesquita Mucciaccio¹, Assoc. Prof. Ajay Vatsayan¹, Dr. Joshua Steadson²

¹Department of Obstetrics and Gynaecology, Hornsby Ku-ring-gai Hospital, Hornsby, NSW

²Department of General Medicine, The Children's Hospital at Westmead, Westmead, NSW



BACKGROUND

Vulvar aphthous ulcers (VAU), also known as Lipshutz ulcers, are an uncommon, self-limiting, and non-sexually acquired condition characterised by acute onset ulceration of the vulva typically affecting young girls and women. The pathogenesis is thought to be attributed to a non-specific inflammatory response to systemic illness often preceded by flu-like symptoms¹. There is a growing body of literature on the effects of COVID-19 infection and the development of VAU in young women and adolescents. Here we present two cases of VAU in adolescent girls ages 12 and 14.

CASE 1

A 12-year-old girl presented to the Emergency Department with a 5-day history of progressive painful genital ulceration and dysuria. Her symptoms began 24 hours following the onset of viral symptoms and testing positive for COVID-19. Her past medical history included congenital hypothyroidism managed with thyroxine 150 mcg daily. She was not sexually active and denied any history of trauma, sexual abuse, oral ulcers, or precipitants including new soaps or detergents. She reported a history of similar ulcers one year prior when she was COVID-19 positive which resolved without treatment. She denied intercurrent ulcers between the two presentations.

On admission, her observations were within normal range. Physical examination revealed three well-circumscribed, shallow necrotic ulcers involving the labia minora with overlying exudate (Figure 1). Her blood tests were unremarkable. Chlamydia trachomatis, Neisseria gonorrhoeae and Varicella zoster virus PCR and bacterial culture were negative. Epstein-Barr virus and Herpes simplex virus serology and PCR were negative.

She was commenced on clobetasol propionate 0.05% ointment twice daily. The patient reported a complete resolution of her symptoms in two weeks.



Figure 1. Acute aphthous ulceration of the right labia minora demonstrating sharp, well-demarcated borders and sloughing. The lesion on the left labia minora is not well visualised.

CASE 2

A 14-year-old girl presented to the Emergency Department with a 3-day history of progressive painful genital ulceration and dysuria. Her symptoms were preceded by a sore throat and fever. She tested positive for COVID-19 infection two days prior to her presentation. Her past medical history included eczema managed with montelukast. She was not sexually active and denied any history of trauma, sexual abuse, oral ulcers or precipitants including new soaps or detergents.

On examination, her observations were within normal range. We observed two symmetrical, well-circumscribed, shallow necrotic ulcers on the opposing surfaces of the labia minora, measuring 2 cm by 2 cm with an overlying exudate. CRP was 70 mg/L otherwise, her blood tests were unremarkable. Chlamydia trachomatis, Neisseria gonorrhoeae and Varicella zoster virus PCR and bacterial culture were negative. Epstein-Barr virus and Herpes simplex virus serology and PCR were negative.

She was commenced on oral prednisone 50 mg daily, tapered over 1-2 weeks. She was advised regular sitz baths, paracetamol, and ibuprofen for symptomatic relief. One week later, the patient showed significant clinical improvement with a complete resolution of her symptoms in two weeks.

DISCUSSION

First described by Australian dermatologist Dr. Benjamin Lipshutz, VAU typically presents with viral prodromal symptoms including fever, fatigue, and malaise followed by acute onset genital pain and ulceration. Dysuria is also common and may lead to acute urinary retention in severe cases². VAU typically present with one or more well-demarcated ulcers involving the vestibule or labia minora. The lesions can vary in size but are typically greater than 1 cm with an overlying fibrinous exudate. They can also present with mirror-image "kissing" lesions on the opposite labia³.

The pathogenesis of VAU is thought to be a type III hypersensitivity immune response to viral or bacterial illness which leads to microthrombosis and tissue necrosis⁴. The diagnosis of VAU requires the exclusion of other aetiologies including Behcet syndrome, autoimmune bullous diseases, and sexually transmitted infections such as HSV. Other precipitating infectious aetiologies include Epstein-Barr virus, mycoplasma pneumoniae, cytomegalovirus, toxoplasma gondii, parvovirus B19, influenza A and B and adenovirus². There is a growing body of literature on the effects of COVID-19 on the development of vulvar ulcers in adolescents.

Upon review of the literature, we found 18 documented cases of VAU following COVID-19 infection. The patients' ages typically ranged from 9 to 21 years old, except for two cases involving patients aged 35 and 41 years old. Viral symptoms preceded the appearance of genital ulceration by an average of 5 days. Treatment was typically supportive and consisted of oral NSAIDs for pain relief, sitz baths and topical anaesthetics such as lidocaine. Oral corticosteroids were used in 7 cases. In all cases, the ulcers resolved in 1 to 6 weeks.

CONCLUSION

Our case series adds to the growing body of literature on the effects of COVID-19 infection in the development of VAU in adolescent girls. Clinicians should be aware of this association to avoid misdiagnosis and unnecessary medical management.

References:

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