

# Erythema Nodosum in a patient with COVID-19

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## Background

A 79-year-old woman with past medical history of compensated Hepatitis C (HCV) cirrhosis s/p sustained viral response due to COVID-19 presented to the outpatient primary care office for new-onset rash on her lower extremity one week following an upper respiratory infection. Her respiratory infection symptoms included a mild fever, sore throat, and non-productive cough. The patient reported that her rash initially appeared as her respiratory symptoms began to improve.

Physical exam was notable for several **tender, erythematous nodules approximately 3-5cm across the shin and ankle consistent with a diagnosis of erythema nodosum (EN)**

## Treatment and Clinical Course

No additional diagnostic testing was required, as EN associated with viral illnesses, including COVID-19, typically resolves with conservative management. Supportive care included **rest, elevation of the lower extremities, and support stocking.**

With her history of liver dysfunction, NSAIDs were avoided in the treatment plan. At her most recent visit, her COVID-19 viral symptoms as well as her skin rash had subsided completely.

## Discussion

There is a newly recognized association of EN with respiratory infections, particularly COVID-19. Since EN associated with viral illnesses resolves with supportive care and is not indicative of further underlying pathology, no further diagnostic testing is required. EN presents with acute-onset painful subcutaneous nodules classically in the pretibial region, and it has commonly been associated with systemic illnesses including underlying infections, malignancies, autoimmune conditions, and drugs.

EN has been reported in conjunction with viral illnesses like **Human Immunodeficiency Virus, Hepatitis B and C, Herpes Simplex virus, and others.** Although the patient presented here has a history of chronic HCV, she did not have an active viral load or HCV symptoms at the time of the EN presentation. Therefore, having previously achieved sustained viral response, it is unlikely that the EN was a manifestation of this patient's prior HCV.

Further, EN has been reported as a reaction to medications like oral contraceptives and some antibiotics. However, the patient had been taking no such medications recently. The treatment for her COVID-19 infection included conservative supportive care with rest and hydration.

EN is one of many skin manifestations recently reported to be an exanthem of COVID-19 in the literature. This patient was improving after acute infection with COVID-19, the diagnosis of which was confirmed by testing, when she developed EN on her lower extremities. She had no symptoms or indications for testing for other systemic illnesses that could cause EN. Additional known, commonly reported skin manifestations of COVID-19 include common viral exanthems like **urticarial rashes, vesicles resembling the exanthem of chicken pox, and diffuse erythema, primarily on the trunk.**

According to the **American Academy of Family Physicians**, the recommended treatment for EN in conjunction with any systemic illness is supportive care including non-steroidal anti-inflammatory drugs (NSAIDs) as well as treatment of the underlying illness. This case emphasizes the importance of recognizing uncommon skin manifestations of COVID-19.

## Physical Exam



## References

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