

## CORRESPONDENCE

## A Patient of Chronic Hepatitis C Complicated by Thalassemia Major and Chronic Osteomyelitis: A Therapeutic Challenge for a Clinician

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Sir,

The treatment of hepatitis C infection has evolved rapidly in the recent past and has opened up a lot of new options for clinicians.<sup>1</sup> There are various drug regimens promoted by different guidelines. But sometimes a clinician may face certain other comorbidities with hepatitis C where the treatment regimen needs to be balanced according to various considerations.

We had a 14 year old female patient who presented to us with acute onset pain of the right leg. She was a known case of thalassemia major, on monthly blood transfusion. Recently, she had also been diagnosed with chronic hepatitis C infection. The exact duration of this infection was not known. At presentation, the patient was severely emaciated with a body weight of 23 Kg. She had severe pallor, moderate hepatosplenomegaly and a discharging sinus below the right tibial tuberosity.

Initial tests revealed hemoglobin of 3 g/dl, a total leukocyte count of 18000/ $\mu$ L, bilirubin of 3.6 mg/dl and SGOT/SGPT of 120/76 IU/L respectively. Her prothrombin time was normal and ultrasonography of liver did not show any fibrosis. Imaging of the right tibia showed diffuse inflammation of the entire bone. HCV viral genotype was 3 and the initial HCV viral load (by Taq-Man) was 1.02 million IU/ml. Serum ferritin was 1220 ng/ml.

The patient was given blood transfusion to raise the hemoglobin to 9 gm/dl. After consultation with the orthopaedics department, treatment for the osteomyelitis was started with

iv cefuroxime 750 mg thrice daily and vancomycin 15 mg/kg twice daily. However, the contentious issue was treatment of the hepatitis C infection. In the multidisciplinary meeting, one group was in favour of deferring this treatment till the osteomyelitis was resolved. But the orthopaedics colleagues were unsure of the duration of therapy needed for the osteomyelitis. It could take years and also need repeated surgeries. Hence, a decision was reached to treat the hepatitis C infection. She was started on oral sofosbuvir 400 mg and daclatasvir 60 mg once daily. After 4 weeks, her viral count became undetectable and after 12 weeks of this therapy, the viral count remained undetectable at 12, 24 and 48 weeks. She needed regular blood transfusion to maintain hemoglobin above 8 gm/dl and the discharging sinus remained at 6 months. She was unable to walk on the right leg till then.

For HCV genotype 3, treatment options now include sofosbuvir combined variably with daclatasvir, velpatasvir, ribavirin or interferon-alpha.<sup>1</sup> However, associated comorbidities will often decide the actual drug combination.

Interferon is generally avoided in patients with bacterial infection.<sup>2</sup> Interferon therapy is known to predispose to various bacterial infections. Although there is no specific data on the effect on interferon alpha on osteomyelitis, it was generally agreed upon by experts in our hospital to avoid it in a patient with chronic severe skeletal infection. Velpatasvir is still not available in Eastern India. Ribavirin could not be used as it is directly contraindicated in congenital haemolytic anemias like thalassemia.<sup>3</sup> Although sometimes ribavirin has been used in thalassemia patients, it leads to an increase in transfusion requirements.<sup>3</sup> In our patient, there was already iron overload. Hence, ribavirin was not given as it would lead to further increase in transfusion frequency. (Treatment for the iron overload could not also be started as deferiprone may lead to agranulocytosis and further spread of the infection.) Thus, finally, sofosbuvir with daclatasvir was the only option.

Our case highlights a complex clinical

dilemma. In India, where prevalence of thalassemia is quite high, such cases of transfusion induced hepatitis C are often encountered. In fact, different studies have shown that hepatitis C is the commonest transfusion transmitted infection in thalassemia in India.<sup>4</sup> Thus clinicians in India need to be aware of the management of hepatitis C in thalassemia patients. Also, thalassemia patients are prone to develop various infections like osteomyelitis. Hence, such complex clinical scenario like ours are likely to be encountered anywhere. We want to sensitize clinicians to the possible mode of management of such cases.

### References

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