Herpes zoster following percutaneous liver biopsy

Key words: Percutaneous liver biopsy. Herpes zoster.

Dear Editor,

A 40-years-old male patient, with a medical history of chronic hepatitis C, came to our department to perform a liver biopsy for staging and grading disease activity. The procedure did not have any immediate complication, and a fair sample of liver was recovered with a single passage using Menghini-type suction needle (Hepafix®, B. Braun Melsungen AG, Germany). Our patient was discharged asymptomatic after 6 hours.

One week later, he started to notice pain and pruritus in the site of the puncture, and two days afterwards a vesiculo-papular rash was elicited (Fig. 1). He came to our department and the lesions were found in the puncture site and in the same dermatome where the liver biopsy was performed, consistent with a diagnosis of herpes zoster. He was prescribed acyclovir for 8 days, with complete resolution of the lesions and symptoms. He had not developed post-herpetic neuralgia within 6 months of follow-up.

Liver biopsy is overall a safe procedure. In a recent review of 1,412 blind percutaneous thick-needle liver biopsies (1), complications were verified in 259 (18.3%), being pain at the puncture site or right shoulder the most frequent (15.3%). However, there were only nine serious complications (haemorrhage or biliary peritonitis), with no fatalities.

Primary infection with varicella-zoster virus usually happens during childhood, causing the acute and self-limited clinical syndrome of chickenpox. After the first exposure, VZV became latent in neural cells, particularly in the dorsal root ganglia. When the immune system is compromised, for instance in patients with HIV, transplantation, malignancies or immunosuppressive therapy, the virus may replicate in the nerve cells, with virions spreading within the axons to the area of the skin that is innervated from that ganglion, causing inflammation and formation of vesicles (herpes zoster).

Herpes zoster has a reported incidence of 1.2–4.8 cases/1,000 population/year, raising to 7.2–11.8 cases/1,000 population/year in persons older than 60 years (2). Its diagnosis may only require visual inspection, since this dermatomal pattern is usually not seen in other entities.

Fig. 1. Vesiculo-papular rash in the puncture site and in the same dermatome. The arrow indicates the lesion in the puncture site.
In the literature we can find some old reports of herpes zoster following a traumatic injury (3-6). A recent case-control study (7) found that patients with zoster had more trauma in the previous week, particularly with a strong association between head trauma and cranial zoster. Its occurrence after a liver biopsy was reported once (8), with the use of a 13.5-gauge needle, with puncture local guided by CT-scan. In that patient severe pain started the day after the procedure, in contrast to what we report.

The mechanisms underlying VZV reactivation after local injury should be different from herpes zoster related with immunosuppression, and are still not understood. A stimulation of local sensory nerves and a disruption of cutaneous immunity can be implied, as well as non-local mechanisms that are not yet defined (7).

The treatment of herpes zoster is intended to reduce the severity of the pain and the duration of the disease, and consists in antivirals as acyclovir or valaciclovir and analgesics.

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References