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# A Head Scratcher: Hepatocellular Carcinoma Manifesting as a Subcutaneous Scalp Lesion

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Hepatocellular carcinoma (HCC) comprises most primary liver cancer cases (75%–85%) and has a poor prognosis with a median survival of 9–20 months.<sup>1,2</sup> Metastatic HCC sites usually involve lungs, lymph nodes, and bones. Approximately 0.5%–3.5% of HCC metastases occur to the skin.<sup>3</sup> Prompt diagnosis can reduce the mortality rate of HCC by providing early curative treatment options or systemic therapy once metastasized.

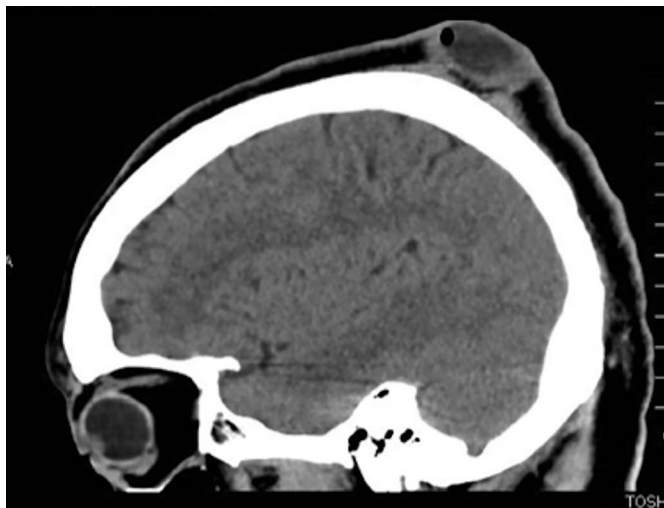
A 54-year-old African American man with a history of obesity and hepatitis B core antibody positivity presented with a month of right-side abdominal pain, 4.5 kg weight loss, fevers, and a painful recurrent scalp lesion that drained purulent material. Physical examination revealed diffuse abdominal tenderness and a 3 × 5 cm firm, nonulcerative posterior parietal scalp lesion (Figure 1). Laboratory test results showed normal liver enzymes and tumor markers including alpha fetoprotein, carcinoembryonic antigen, and carbohydrate antigen 19-9. However, the patient had leukocytosis at  $22.2 \times 10^3$  U/L, low albumin at 3.5 g/dL, and elevated international normalized ratio at 1.4. Initial abdominal computed tomography (CT) showed a right hepatic lobe mass with surrounding retroperitoneal adenopathy suspicious for an abscess; malignancy could not be excluded. A triphasic CT scan showed a large heterogeneous mass in the right hepatic lobe with areas of arterial phase enhancement and portal venous phase washout concerning for HCC (Figure 2). Liver biopsy was pursued given concern for abscess and revealed poorly differentiated HCC with extensive tumor necrosis. Benign liver tissue showed fatty liver with evidence of cirrhosis. CT of the head showed a soft-tissue lesion in a posterior parietal location (Figure 3). The scalp lesion was incised and drained with pathology positive for metastatic poorly differentiated HCC (Figure 4). Immunotherapy was initiated in the outpatient setting.



**Figure 1.** A 3 × 5 cm firm, nonulcerative scalp lesion in the posterior parietal region.

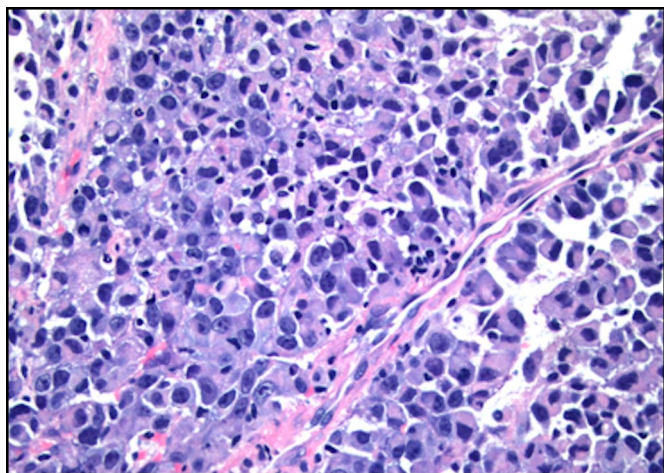


**Figure 2.** A triphasic CT scan demonstrating a large heterogeneous mass in the right lobe of the liver during portal venous phase washout. CT, computed tomography.



**Figure 3.** CT of the head demonstrating a  $3.7 \times 2.3 \times 1.6$  cm posterior parietal soft-tissue lesion. CT, computed tomography.

In the United States, the incidence of HCC has almost tripled since the early 1980s.<sup>4</sup> The main risk factors for HCC include chronic hepatitis B and C, alcohol misuse, and a rise in non-alcoholic steatohepatitis. Early-stage HCC is often asymptomatic, but the initial sign can be a skin manifestation. Subcutaneous scalp metastases are rare and often resemble abscesses and pyogenic granulomas or are hemangiomas with prolific bleeding.<sup>5</sup> Skin metastases occur by direct contiguous tissue invasion, lymphatic spread, hematogenous spread, and iatrogenic



**Figure 4.** Scalp biopsy demonstrating metastatic poorly differentiated hepatocellular carcinoma with marked necrosis.

implantation.<sup>5</sup> This case emphasizes that skin lesions must be evaluated diligently because they can be the first sign of underlying liver malignancy. Given the morbidity and mortality associated with HCC, recognition of cutaneous manifestations of HCC can lead to a prompt diagnosis and initiation of life-saving treatment.

## DISCLOSURE

Author contributions: J. Lin and H. Chaudhry reviewed the literature and drafted the manuscript. J. Lin, H. Chaudhry, A. Gill, M. Roytman, and D. Prajapati revised the article for important intellectual content and were involved in the final approval of the version to be published. D. Slater provided the pathology images. J. Lin is the article guarantor.

Financial disclosure: None to report.

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Informed consent: All attempts have been exhausted in trying to contact the patient, next of kin, and/or parent/guardian for informed consent to publish their information, but consent could not be obtained.

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