# TRAGICALLY YOUNG: THE 26-YEAR-OLD KADAZAN FEMALE WHO LOST HER BATTLE WITH HEPATITIS-NEGATIVE HEPATOCELLULAR CARCINOMA AND BETA-THALASSEMIA MAJOR.

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**Aim:** To highlight the importance of considering beta-thalassemia as a potential risk factor for hepatocellular carcinoma despite being hepatitis negative.

**Case presentation:** A 26-year-old Kadazan woman presented with right upper quadrant abdominal pain and jaundice for two weeks. She has underlying beta-thalassemia major requiring two weekly blood transfusions since she was six months old. Her recent serial MRI T2 showed severe liver iron concentration (LIC) despite regular iron chelation therapy, indicating poor compliance. Clinically hepatosplenomegaly was evident. Blood tests showed anemia and obstructive jaundice. Her αFP level was elevated, 3725.1 U/mL. The rest of the tumour markers were unremarkable. Her Hepatitis B and C tests were negative, and she did not consume alcohol. Hepatobiliary ultrasound detected multiple liver lesions. A contrast-enhanced CT abdomen showed extensive liver and hilar lesions causing portal vein thrombosis and biliary obstruction, compatible with either liver or bile duct malignancy with lung metastasis. A percutaneous liver biopsy confirmed hepatocellular carcinoma (HCC). She unfortunately succumbed to her disease a week later.

**Discussion:** Despite limited local data, the incidence of HCC in Greece and Italy is 2.3 and 1%, respectively. Malaysia's highest rate of beta-thalassemia major is in Sabah. Regular blood transfusions necessitate iron chelation therapy because they increase iron overload. In 2006, the Malaysian government provided free chelation therapy, which increased survival rates. Chelation compliance is difficult. High iron levels promote reactive oxygen species formation, which impairs protein synthesis and disrupts DNA, causing mutations leading to HCC. Abdominal USG is the best screening tool.

**Conclusion:** Physicians should be aware of the potential link between thalassemia and HCC to prompt early evaluation of patients with beta-thalassemia who present with elevated αFP level and baseline ultrasound imaging, allowing for prompt intervention in the event of HCC development.