Tricuspid valve obstruction by a Tumour Thrombus in primary liver cell carcinoma

Basil N Okeahialam
Cardiology Sub-Unit 1, Department of Medicine, Jos University Teaching Hospital, Jos, Nigeria

Key words: Tricuspid valve, Obstruction, Tumour thrombus, Liver cancer

Citation: Okeahialam B.N. Tricuspid valve obstruction by a tumour thrombus in primary liver cell carcinoma. International Cardiovascular Forum Journal. 2015;4:86-87 DOI: 10.17987/icfj.v4i0.129

An adult male in his early thirties presented with gradual weight loss over several months; during which he became jaundiced and lately insidious breathlessness. On physical examination, he was cachectic with irregular upper abdominal distension. There was no lower limb oedema or other feature of congestive cardiac failure. There was however a hard, knobbly and tender liver on abdominal palpitation; which on abdominal ultrasound was reported as primary liver cell carcinoma (PLCC). Alpha fetoprotein level was also in support of the diagnosis.

An echocardiography done following his complaint of breathlessness later revealed a huge mobile thrombus in the right atrium. Over the next few days, it increased in size and got to the tricuspid valve making it incompetent. With this was a worsening of his breathlessness. Worrying that it may detach and block the main pulmonary artery, attention shifted from confirming the diagnosis with a liver biopsy to lysing the thrombus. Poor finances and lack of easy availability delayed this option. He was then scheduled for daily echocardiography to monitor the thrombus. A few hours before he died he went into shock; prompting a suspicion of massive pulmonary embolism.

An echocardiography done revealed that the thrombus had become trapped by the tricuspid valve leaflets (Figure 1). It was no longer mobile precluding blood flow across the valve. In the absence of a functional Cardiothoracic Surgical Unit, he could not be availed of embolectomy; neither could he get thrombolysis as no thrombolytic was available. He died as a consequence.

PLCC can present with thrombi, though uncommonly\(^1\). It is a venotrophic tumour which can metastatise through the venous system (Hepatic vein and the Inferior Vena Cava) into the right atrium\(^2\) with extremely poor outcome\(^3\). In the past, this dismal prognosis followed the primary hepatic malignancy or in some cases, complications like massive pulmonary embolism and sudden death\(^4\). The tumour thrombus may or may not cause separate symptoms. When there are symptoms, they may be dwarfed by the primary pathology and its effect in other symptoms\(^5\).

This patient died suddenly in cardiogenic shock; which turned out to be a consequence of tricuspid valve obstruction (Figure 1).

This scenario has been reported on a few occasions in the past\(^6\) but not in our environment. In Africa, these patients present late by which time any surgery carries a high risk. Right atrial thrombus in patients with PLCC may be consequent upon their hypercoagulable state\(^7\). Hepatic vein thrombosis has been reported in PLCC\(^8\) and could migrate to the right side of the heart. On the other hand the thrombus may be related to the tumour spreading through the venous channels to the right side of the heart 5. With reported successes with chemotherapy, such cases of PLCC with cardiac involvement stand a chance of palliation in their morbidity status. Such treatment should be offered to them.

* Corresponding author. E-mail: basokeam@yahoo.com

ISSN: 2410-2636 © Barcaray Publishing
Statement of ethical publishing

The author states that he abides by the statement of ethical publishing of the International Cardiovascular Forum Journal.

Conflict of interest:

The author declares that there is no conflict of interest.

Address for correspondence:

Basil N Okeahialam, FWACP
Cardiology Sub-Unit 1, Department of Medicine, Jos University Teaching Hospital, Jos, Nigeria
E-mail: basokeam@yahoo.com

References