LETTERS TO THE EDITOR

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Takotsubo Cardiomyopathy after reconstruction with pectoralis major flap in oral cancer

To the Editor

Takotsubo cardiomyopathy (TCM) is a temporary syndrome of sudden, acute, reversible heart failure. It clinically mimics acute coronary syndrome (ACS) and in literature a correlation of 1.6% with malignancy is showed [1].

Patients suffer from acute chest pain and dyspnea and can become diaphoretic and develop syncopal episodes. Abnormal laboratory test and cardiac study findings show ST-segment elevation and T-wave inversion on ECG and minimal rise in cardiac enzymes [2]. Ecocardiography frequently shows an hypo-akinesia of the left ventricular apex, like an aneurysm with hyperkinesia of the bases [3].

However, the cause of this syndrome is not secondary to obstructive coronary artery disease, as it is for ACS. The specific etiology of this cardiomyopathy is not fully understood, although many hypothesis have been proposed.

There are some causative factors such as multivessel coronary artery vasospasm, microvascular dysfunction, impaired fatty acid metabolism within the myocardium, and myocardial stunning from a catecholamine surge [4]. Research shows that significant physical or emotional stressors precede TCM [5]; an overall mortality rate of 1% to 3.2% is described [6].

The prevalence of Takotsubo's cardiomyopathy amongst patients experiencing myocardial-infarction-like symptoms is approximately 1.2-2%, with the highest percentage documented among postmenopausal women, 90% of cases [7].

The treatment of TCM is mainly supportive, with an attempt to maintain the momentary deficits in the cardiac function [8].

A 78-year-old female patient affected by Squamocellular Carcinoma (SCC) of the right margin of the tongue cT3 G3, was hospitalized in our maxillofacial surgery department. The patient's comorbidities were hypertension and dyslipidemia. She was a no-smoker, and she wasn't an alcohol abuser. Surgical removal of the tumor, selective neck dissection (SND) and reconstruction with pectoralis major pedicled flap was performed. Definitive histological examination diagnosed SCC pT3 pN0 (0/36) G2 R0 (TNM Classification sec AJCC 2017). The clinical case was discussed by the Tumor Board and, considering the definitive histological examination and the postoperative MR with contrast enhancement, radiotherapy (RT) was indicated.

To provide enteral nutrition despite bypassing the mouth, a nasogastric feeding tube was positioned. In view of the discharging from the hospital to ensure nutritional support and drug administration at home a Percutaneous Endoscopic Gastrostomy (PEG) was performed on the 15th postoperative day. The patient was ready to be released from the hospital when she started complaining of weakness, chest pain and dyspnea on the 17th postoperative day.

ECG, blood tests and cardiological counseling were performed. Considering ST-segment elevation and T-wave inversion on ECG, ST-elevation myocardial infarction (STEMI) was suspected, and the patient was promptly transferred to the Coronary Care Unit. Coronary angiography was performed, and it showed coronary arteries undamaged and TCM was diagnosed. The patient was treated with supportive care which included beta blockers, antihypertensive drugs and intravenous hydration. After the resolution of the symptoms, the patient was transferred back to our department on the 20th postoperative day.

The patient was discharged from Hospital and returned back home 22 days after surgery. It is noticeable that this complication has lengthened the patient's hospitalization increasing the risk of further complications such as infections or deep vein thrombosis. Moreover, due to TCM the patient was exposed to invasive diagnostic procedures such as coronary angiography. Another consequence to be taken into consideration for oncologic patients operated on, is that a lengthening of hospitalization may mean a delay in the start of adjuvant procedures such as radiotherapy or chemotherapy.

The percentage of oncologic patients affected by TCM varies between 1.3% and 1.6% [1,2], even if the correlation between malignancies and the etiology of TCM is debated[9]. In literature are reported two studies describing similar cases of TCM occurred in patients affected by oral cancer[10,11].

In conclusion, although it is a relatively rare pathology, in postmenopausal female patients undergoing surgery, even without a history of heart disease or risk factors in anamnesis, TCM should always be considered in case of symptoms such as chest pain and dyspnea.

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