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CLINICAL INFORMATION

Perioperative approach of patient with takotsubo syndrome

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KEYWORDS
Takotsubo syndrome;
Anesthesia;
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Abstract
Introduction: Takotsubo cardiomyopathy (TCM) is a stress-induced cardiomyopathy. It is characterized by an acute onset of symptoms and electrocardiographic abnormalities mimicking an acute coronary syndrome in the absence of obstructive coronary artery disease. Any anesthetic-surgical event corresponds to a stressful situation, so the anesthetic management of patients with TCM requires special care throughout the perioperative period. We describe the anesthetic management of a patient with a confirmed diagnosis of TCM undergoing segmental colectomy.
Case report: Female patient, 55 years old, ASA III, with history of takotsubo syndrome diagnosed 2 years ago, scheduled for segmental colectomy. The patient, without other changes in preoperative evaluation, underwent general anesthesia associated with lumbar epidural and remained hemodynamically stable during the 2 h of surgery. After a brief stay in the Post-Anesthesia Care Unit, she was transferred to the Intermediate Care Unit (IMCU), with epidural analgesia for postoperative period.
Conclusion: TCM is a rare disease which true pathophysiology remains unclear, as well as the most appropriate anesthetic-surgical strategy. In this case, through a preventive approach, with close monitoring and the lowest possible stimulus, all the perioperative period was uneventful. Because it is a rare disease, this report could help to raise awareness about TCM.

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PALAVRAS-CHAVE
Síndrome de takotsubo;
Anestesia;
Miocardiopatia;
Estresse

Abordagem perioperatória de doente com síndrome de takotsubo

Resumo
Introdução: A miocardiopatia takotsubo (MT) é uma miocardiopatia induzida pelo estresse. Caracteriza-se por um início agudo de sintomas e alterações eletrocardiográficas que mimetizam uma síndrome coronária aguda na ausência de doença arterial coronária obstrutiva. Qualquer evento anestésico-cirúrgico corresponde a uma situação de estresse, pelo que a abordagem anestésica dos doentes com MT exige um cuidado especial em todo o período perioperatório. Descrevemos a abordagem anestésica de uma doente com diagnóstico confirmado de MT submetida a colectomia segmentar.
Caso clínico: Paciente do sexo feminino, 55 anos, ASA III, com antecedentes de síndrome de takotsubo diagnosticada havia dois anos, encaminhada para colectomia segmentar. A paciente, sem outras alterações na avaliação pré-operatória, foi submetida a anestesia geral associada a epidural lombar e manteve-se hemodinamicamente estável durante as duas horas do procedimento cirúrgico. Após uma breve permanência na Unidade de Cuidados Pós-Anestésicos foi transferida para a Unidade de Cuidados Intermédios (UCIM) com analgesia peridural para o pós-operatório.
Conclusão: A MT é uma doença rara, cuja verdadeira fisiopatologia continua por esclarecer, assim como a estratégia anestésico-cirúrgica mais apropriada. Nesse caso, por causa de uma abordagem preventiva, com monitoração rigorosa e o menor estímulo possível, todo o perioperatório decorreu sem intercorrências. Sendo uma doença rara, o seu relato poderá contribuir para o avanço do conhecimento sobre a MT.

Introduction

Takotsubo cardiomyopathy (TCM), first described in 1990 in the Japanese population, is a cardiomyopathy induced by physical or emotional stress.[1] It is characterized by an acute onset of symptoms and electrocardiographic abnormalities mimicking an acute coronary syndrome (ACS). Although there may be a slight rise in enzymes of myocardial injury, there is no obstructive coronary artery disease (CAD) and the clinical presentation reverts completely in days or weeks.[2–4] TCM designation comes from the occurrence of transient dysfunction of the left ventricle (LV). The appearance of the LV during systole resembles a takotsubo (Japanese ceramic pot with rounded base and narrow neck, tsubo; used to trap octopus, tako). This morphology is due to mesoventricular akinesis and apical and basal ventricular hyperkinesis (narrow at the base and with apical bulging).[2,5]

With the growing number of cases reported worldwide, other names has been proposed, justified by the cardiac morphology and clinical presentation context: apical bulging syndrome, transient left ventricular dysfunction with apical bulging, broken heart syndrome, and, more recently, transient left ventricular apical akinesia/dyskinesia or stress-induced cardiomyopathy are some of a total of 75 different names. However, the initial name seems to be the most appropriate, as it is comprehensive enough to allow the addition of new variants, reminds us of the changes in LV morphology and is recognition of the investigators who first described it.[5]

The true prevalence of TCM remains unclear, but it is estimated to correspond to 1%–2% of cases in which there is clinical suspicion of ACS; it predominantly affects women in the postmenopausal period, between 62 and 76 years.[2,4,6]

For TCM diagnosis, a high index of clinical suspicion is needed as well as diagnostic tests such as echocardiography and cardiac catheterization, in addition to ECG and myocardial injury markers that are essential. Echocardiography allows the verification of the typical changes in LV segment contractility. And cardiac catheterization proves the absence of significant coronary changes.[2,6] Several diagnostic criteria have been proposed. The most widely used are the Mayo Clinic criteria (Table 1).[7]

Despite the lack of a clear, singular, and unambiguous explanation of the TCM pathophysiology, the underlying etiologic mechanisms have been the subject of many studies

Table 1 Diagnostic criteria (Mayo Clinic).[7]

- Hypokinesia, transient dyskinesia or akinesia in LV mid and apical segments, with or without apical involvement, with impaired contractility of the vascularization area corresponding to more than one coronary artery
- No obstructive CAD or angiographic evidence of acute plaque rupture
- Electrocardiographic changes *de novo* (ST segment elevation and/or T-wave inversion) and/or slight increase in serum troponin levels
- No pheochromocytoma and myocarditis

It does not include criteria such as age, gender and presence of triggering factor, as well as documentation of the reversibility of LV systolic dysfunction

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