CHAPTER 4

Takotsubo Syndrome

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INTRODUCTION

Takotsubo syndrome was first described in 1990 in Japan by Sato et al. (1). In the literature, Takotsubo syndrome (TTS) is referred to by many names such as 'Takotsubo cardiomyopathy', 'broken heart syndrome' ,'apical ballooning syndrome', and 'stress cardiomyopathy' (2). In Japanese, takotsubo literally means 'octopus trap'. It was named so because the morphology of the left ventricle in systole on echocardiography resembles an octopus trap (3).

It is characterized by a transient left ventricular wall motion abnormality characterized by dynamic changes in the electrocardiogram and/or elevated cardiac biomarkers without angiographic obstructive coronary artery disease (4). Although there are several conditions such as sympathetic overactivation, coronary artery vasospasm and microvascular dysfunction in the pathogenesis of TTS, myocardial damage due to excessive catecholaminergic secretion is the most postulated theory. Albeit there are many factors thought to be responsible, its exact pathogenesis is still unclear (5).

The true prevalence of TTS is not clearly known. Recently, an increase in Takotsubo cases has been observed. Reports in the past years have shown that approximately 1 - 3% of acute coronary syndrome (ACS) cases were TTS (6). It occurs more frequently in females and especially during the postmenopausal period (7). Previously thought to have a favorable prognosis, TTS has been related to unfavorable short- and long-term cardiovascular outcomes (8).

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CONCLUSION

Takotsubo syndrome, defined as temporary left ventricular dysfunction related to a stressful trigger in the absence of obstructive coronary artery disease, has been increasingly recognised since its description. TTS is characterised by acute coronary syndrome-like clinical symptoms, ECG findings, increased cardiac biomarkers and regional ventricular wall motion abnormality, which are mostly triggered by stress. Initially thought to have a favourable prognosis, it has shown that the condition may be serious in time. The mechanisms of pathogenesis are related to increased catecholamine levels and have not been fully elucidated.

Treatment modalities are directed towards ventricular dysfunction and its consequences. In the future, larger prospective trials are needed to elucidate the pathogenesis of TTS and to develop treatment strategies.

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