Although traffic accidents are probably as old as traffic itself, whiplash injury was first diagnosed in the 1970s [1]. Not much later, physicians across the Western world started to establish the diagnosis more frequently and during the heyday of whiplash injury in the 1990s, people with soft neck collars could be found on almost every street. In this issue of the Netherlands Journal of Critical Care (NJCC), Van Beek and Knockaert [2] report on a case of Tako-tsubo cardiomyopathy. For some years now, Tako-tsubo has been frequently diagnosed in the field of intensive care and it is tempting to regard this as another fashionable but poorly understood condition.

Tako-tsubo cardiomyopathy was first described in Japan by Dote in 1991 and named after the Japanese name for an octopus trap [3]. This is because of the resemblance of the characteristic left cardiac ventriculogram – showing akinesis and ballooning of the apex together with sparing of or even hypercontractility of the basis of the heart (figure 1) – with a fishing pot. It is believed that this reversible form of cardiomyopathy is induced by physical or psychological stress. With this in mind, intensivists have recently embraced the syndrome and now establish the diagnosis on a regular basis. After all, many patients in the intensive care unit (ICU) have high levels of physical and psychological stress, and many of them also have symptoms of reduced myocardial contractility. Because we increasingly use cardiac echography in the ICU, we can observe different patterns of abnormal myocardial contractility. Some of these patterns do indeed resemble the Tako-tsubo octopus pot, but other morphological forms of stress-induced cardiomyopathy have also been described, such as a nonapical or mid-ventricular form [4] and even a right ventricular form [5].

Tako-tsubo cardiomyopathy might be a new and trendy diagnosis similar to that of whiplash, now diagnosed by enthusiastic cardiologists and intensivists, but perhaps also destined to disappear within a decade. However, in contrast to whiplash injury in which the aetiology and the resulting symptoms are continuously debated, there is a clear causal relationship between a determinant (i.e. release of catecholamines) and an outcome (i.e. reversible cardiomyopathy) for Tako-tsubo car-

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**Keywords** - Tetanus, Clostridium tetani, Tako-tsubo cardiomyopathy, Apical ballooning
diomyopathy that can be measured. The strength of this relationship can be determined by applying the causality criteria of Hill [6], which among other things evaluated the strength of a causal principle, the temporality, plausibility, and experimental reproducibility. In the case of Tako-tsubo cardiomyopathy, there is a clear strength of association present between various causes of catecholamine release and the cardiomyopathy itself. There is also a temporal relation between exposure to catecholamine release and any subsequent development of symptoms. There is plausibility because of an increased understanding of the mechanisms by which various disorders such as emotional stress, infection, brain injury, and trauma lead to the common pathway of catecholamine release and the reversible cardiomyopathy. Finally, animal experiments reproduced the syndrome [7]. Therefore Tako-tsubo, unlike whiplash injury, is a true disease entity and an adequate therapeutic response is essential. Failing to establish the diagnosis is potentially harmful, for example, when a massive volume of fluids or even more exogenous catecholamines are administered. In contrast, failure to diagnose whiplash injury does not have major clinical consequences.

Although stress-induced cardiomyopathy appears to be a relevant diagnosis in many ICU patients, we should avoid establishing this diagnosis too often or too easily. Amongst others, an acute coronary syndrome should be excluded and coronary angiography is therefore often mandatory. The patient described in this issue of NJCC is suffering from tetanus and develops periods of autonomic dysfunction with ST-segment elevation and apical ballooning [2]. After one month cardiac function had normalized. This relationship strongly points to stress-induced cardiomyopathy and might justify the fact that coronary angiography was omitted in this particular case.

The case report on stress-induced cardiomyopathy by Van Beek and Knockaert [2] is the first article on Tako-tsubo to be published in NJCC. We expect more articles to follow in the coming years. Tako-tsubo cardiomyopathy is here to stay.

References