To the Editor:

We read with great interest the recent article in CHEST (September 2007) on tako-tsubo cardiomyopathy (TTC) by Kurowski et al. and would like to congratulate the authors for their elegant study. In 35 patients with TTC, they reported the occurrence of emotional stress events in 15 patients (42.8%) including a case of near-drowning syndrome (NDS). In our clinical series of 52 patients (51 women; mean ± SD age, 63.35 ± 10.55 years), an emotional stress event was documented in 43.2%. We also registered a 57-year-old woman presenting with TTC after the occurrence of NDS. A few hours after the event, ECG changes developed, and a typical echocardiographic pattern of apical ballooning with a mild increase in serum troponin level was seen. Left ventriculography confirmed the apical ballooning, and coronary angiography revealed normal coronary arteries. ECG changes and apical contraction abnormalities were completely reversed within 3 weeks. Drowning is an extremely stressful situation that leads, via the uncommon combinations of different pathophysiological mechanisms, to sympathetic nerve activation (SNA). In patients with NDS, submersion in liquid causes hypoxemia due to fluid aspiration or reflexive laryngospasm. Once hypoxemia occurs, cerebral hypoxia, pulmonary reflexes, and concomitant panic and/or struggle induce SNA. Hypoxemia related to NDS could have induced transient myocardial dysfunction mediated by an SNA. Although the pathogenesis of TTC remains unclear, a common pathophysiological pathway seems to be an exaggerated sympathetic activation. Thus, SNA could be considered the "real" link between NDS and TTC.

From a clinical point of view, it should be kept in mind that prolonged but reversible anterior-apical contraction abnormalities without significant coronary artery disease may also occur in critically ill patients who have been hospitalized because of a wide variety of primary noncardiac illnesses (ie, neurogenic myocardial stunning). NDS should therefore be added to the already long list of stressful conditions that can lead to the development of TTC. Patients surviving the drowning represent a very interesting and challenging population with potential severe cardiac complications, including malignant arrhythmias and myocardial dysfunction. Thus, in the critical care setting, careful monitoring is needed in order to implement the appropriate diagnostic and therapeutic interventions.

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REFERENCES

Latent Pulmonary Hypertension

Looking Beyond the Scene

To the Editor:

Although many noninvasive laboratories are introducing exercise Doppler echocardiography (Ex-Echo) as a standard technique to unmask latent or presymptomatic pulmonary hypertension (exercise-induced pulmonary hypertension [Ex-PHtn]), several important issues need redress.

1. A consensus should be reached on the optimal exercise protocol (treadmill vs supine/upright/semicrecumbent bicycle) to be implemented since each protocol is characterized by different loading conditions. At the present time, semirecumbent exercise echocardiography appears to be more suitable for reliable and reproducible echo-Doppler measurements considering that measures are made during exercise and recovery.

2. There is a need to define the full physiologic range of pulmonary pressure responses to both bicycle and treadmill exercise in relation to age, gender, body mass index, and level of physical training. In highly trained athletes, a high workload is associated with moderate increases in pulmonary artery systolic pressure as a direct consequence of increased stroke volume and left ventricular filling pressures.

3. An emerging question is who to screen for Ex-PHtn, knowing the yield of a screening examinations depends not only...
on the sensitivity and specificity of the test employed, but also on the prevalence of the disease (pretest probability) in the study population. Current data report the presence of Ex-PHtn in COPD, heart transplantation, susceptibility to high-altitude pulmonary edema, congenital heart disease, thromboembolic pulmonary hypertension, scleroderma, and relatives of patients with pulmonary arterial hypertension. However, the actual prevalence and clinical value (early stage disease?) of Ex-PHtn in the wide spectrum of conditions involving the cardiorespiratory system remain not fully explored.1–4,6,8–11

4. Well-designed longitudinal studies are warranted to investigate the natural history of pulmonary hypertension and whether preclinical treatment can prevent the development of more severe forms of pulmonary vascular disease in susceptible persons. Ex-PHtn remains a fascinating clinical condition and ECHO a versatile tool “to look beyond the scene” of otherwise unexplained effort dyspnea.

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REFERENCES
1 Huez S, Naeije R. Exercise stress tests for detection and evaluation of pulmonary hypertension. Eur Heart J 2007; 9:H17–H21
7 West JB. Left ventricular filling pressures during exercise: a cardiologic blind spot? Chest 1998; 113:1685–1697

Oral vs IV Corticosteroids for In-Hospital Treatment of COPD Exacerbations

To the Editor:

In the December 2007 issue of CHEST, de Jong, et al1 compared the use of oral and IV prednisolone in the treatment of inpatients with COPD exacerbations. In an accompanying editorial, Taskin2 emphasized that the treatment failure rate at 90 days in both treatment groups was quite high (IV prednisolone group, 67%; oral prednisolone group, 56.3%). In an earlier study, Niewoehner et al3 had a much lower failure rate at a similar interval (37%) using a much higher prednisolone dose for a slightly longer interval. Taskin2 rightly encouraged carefully designed trials to address the impact of different dosing regimes of systemic corticosteroids in hospitalized patients with acute exacerbations of COPD.

I would make a plea to compare the use of a single daily dose of the corticosteroid (as in the study by de Jong et al1) with comparable total but divided daily-dose regimens of prednisolone. These studies would be useful in both inpatient and outpatient settings and for patients with exacerbations of COPD, bronchial asthma, and other allergic illness. It is my firm clinical impression (albeit anecdotal) that divided dose administration of prednisolone is more effective and has a longer duration of action than single daily-dose administration. I am aware of the theoretical concern about more adrenal-pituitary axis disruption with the divided dose (and therefore more therapeutic effect), but because of the relatively short duration of these dosing schedules (ie, < 30 days), we do not see any adverse effects.

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REFERENCES