Sudden Death in Young Males After Police Detention. A New Syndrome of Possible Cardiovascular Origin

To the Editor:

We have performed a systematic review of sudden and unexplained deaths in the first 24 hours following police detention in Spain within the last 10 years. We searched for “death following police detention” or equivalent expressions in general newspaper and agency search engines.

We found 60 deaths without an apparent cause. Only 1 (1.7%) case was in a female who died after approximately 20 hours of detention. This percentage contrasts with the fact that women represent 10% of all detentions. Fifty-nine cases were of young men with a median age of 33.5 (8.7) (range, 18-58) years, without a history of cardiovascular disease. Out of those detained, 17 (28.8%) had a medical history (12 drug addicts, 4 psychiatric diseases, and 1 treated for rehabilitation). Medication was administered prior to the episode in 4 (6.8%) cases (sedatives in 3 and methadone in 1). Death was immediate in 17 (28.8%) cases in the detention centre, with a similar age to those who died after leaving the site (35.8 [9.5] and 32.3 [8.3] years, respectively; \( P=.20 \)). Figure shows that the distribution by age is similar to that of the convicted males. We found 7 cases in the first 3 years (1998-2000), 20 in the next 3 (2001-2003), and 32 in the last 3 (2004-2007, including the first 11 days of 2008).

General adaptation syndrome in animals was described more than 50 years ago, which frequently leads to sudden death following capture. This is a reaction to high-stress situations that is mediated by catecholamines. It has been shown that this syndrome originates in the heart, and the case of a black swan that died in the first 12 hours after capture due to heart rupture at the level of the apex has been described.

A tako-tsubo-type stress-induced cardiomyopathy has recently been described in humans, which is also related to high catecholamine levels. It is typically seen in postmenopausal women, though it also affects men (up to 20%) and persons under 40 years of age. The stress trigger is more common in white patients and the initial symptom occasionally is cardiac arrest with a rate of ventricular fibrillation of up to 9%. Death due to cardiac rupture at the level of the apex has also been reported in this cardiomyopathy. Additionally, it is known that the capture and immobilization of a rat reproduces the...
concentrations of catecholamines into the bloodstream.

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REFERENCES


Sudden death syndrome in young males following police detention and general adaptation syndrome in animals may share the same pathophysiological mechanism. Though it is only speculative, tako-tsubo-type stress-induced cardiomyopathy may be related to these syndromes, and their common aetiology would be the rapid release of high concentrations of catecholamines into the bloodstream.