Abstract: **P813**

**Iatrogenic takotsubo syndrome: incidence and impact.**

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Background: Although Takotsubo syndrome (TTS) was once considered to be rare and largely benign, it is now recognised to represent a major cause of cardiac morbidity and mortality, especially in aging women. The biochemical precipitant of attacks of TTS is an increase in catecholamine concentrations within the myocardium, engendering inflammatory activation via biased post-receptor signalling at myocardial β2-adrenoceptor level. Cases of TTS have been reported in patients treated with catecholamines, and with antidepressants which limit catecholamine re-uptake. In the current investigation, we sought to delineate the extent and potential impact of this "iatrogenic" form of TTS.

Methods/Results: Patients’ data from a regional registry of 272 consecutive cases of TTS were evaluated. After exclusion of patients (n = 14) in whom TTS has occurred in association with life threatening extracardiac disease states, a total of 47 (18%) of patients were identified as having antecedent exposure to potentially "iatrogenic" agents (antidepressants in 29 cases, β2-adrenoceptor agonists in 14). Demographics, including proportion of male patients, did not differ significantly between patients with and without "iatrogenic" TTS, but plasma concentrations of the catecholamine metabolite normetanephrine tended to be greater (median 1160 vs. 950 pmol/L; p = 0.07). Long-term survival (median follow-up 3.5 years) was marginally (p = 0.09) worse for patients with "iatrogenic" TTS.

Conclusion:

(1) A potentially iatrogenic component of precipitation (via iatrogenic elevation of catecholamine levels and β2-adrenoceptor stimulation) is present in a substantial proportion of patients.

(2) In such patients there is an implication of increased long-term mortality risk, potentially accentuated by continued administration of the precipitating agent(s).