Can We Be Too Happy?
A Variant of Broken Heart Syndrome

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Background

Happy Heart Syndrome (HHS) is a rare variant of Takatsubo Cardiomyopathy (TC) induced by a positive emotional event. TC was first described by Japanese physicians in 1991 who noted atypical cardiac morphology in 5 women with left ventricles resembling a Takatsubo pot used to catch octopus. The diagnostic criteria for TC were released in 2010, often referred to as the Mayo Clinic Criteria.
Since first description TC has been described by numerous names from Apical ballooning syndrome, broken heart syndrome, stress cardiomyopathy, many others. HHS is a rare but consistently documented presentation of TC. In the GEIST (German, Italian, Spanish, Takatsubo) Registry 4.1% of the 2482 patients with TC had "Happy Hearts"

Case

- 62-year-old female visitor to the hospital presented to emergency department with chest pain.
- Her husband was currently critically ill in the intensive care unit after a STEMI.
- Onset of chest pain occurred 4 hours after receiving overwhelmingly positive news about her critically ill husband.
- No known prior cardiac or psychiatric history.
- EKG with minor ST-elevations in anterior leads.
- Mildly elevated troponin.
- No significant obstructive coronary disease on coronary angiography.
- Left ventriculogram significant for apical ballooning (figure).
- Diagnosed with TC secondary to a positiv HHS.
- Resolution of cardiomyopathy at one month without further intervention.

Less than 5% of TC are associated with positive emotional triggers.

TC cases may benefit from psychiatric consultation **regardless of trigger.**

TC has significant **morbidity and mortality** at 5.6 % patient death per year.

Propranolol has been suggested as a preventive treatment for recurrence of TC.

Intense **positive emotion** as a known trigger may **adds complexity** to physiological theories.

Patient ventriculogram with apical ballooning consistent with TC.

References

ChatGPT 4.0 Used to create image

Discussion

TC: Predominantly Female (~90%), Older age (~66 year old)

HHS: Classically more men than in negative stimulus TC but still majority female

Further study may provide insight into the pathogenesis of mood-related cardiac pathologies, provide possible preventive steps, and improve treatment outcomes for these patients.

TC: 55.8% vs ACS: 25.7
Comorbid sychiatric or neurological disorders: