

# 'Broken-heart syndrome' patients failed by current treatment, says study

January 11 2024

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In the [first-ever study](#) to compare takotsubo patients with heart attack patients and the general population over more than five years, results showed that heart treatments given after takotsubo do not protect

patients.

The team, led by Professor Dana Dawson, from the University of Aberdeen Cardiology and Cardiovascular Research Unit, analyzed data from 3,720 people over a decade and found that takotsubo patients were prescribed the same medication as heart attack patients. They say while this approach worked for the [heart attack patients](#), these medications did not improve the survival rate of takotsubo patients.

Patients who suffered from takotsubo were more likely to die than the [general population](#) and just as vulnerable to dying as patients who had suffered a 'true' heart attack.

Published in *JACC: Advances*, the study used data from Public Health Scotland—the only database in the world that can provide [accurate data](#) on patient treatment and follow-up, including medication prescribed across their lifetime.

Currently, there is no expert consensus how to treat the condition. Instead, medicines used to treat other [heart conditions](#), like heart failure and heart attacks are used. However, takotsubo is not the same as these heart conditions.

Professor Dawson explains, "Takotsubo cardiomyopathy can be triggered by extreme emotional distress, leading to its nickname of broken-heart syndrome.

"It happens as a reaction to upsetting events such as the death of a family member, the ending of a relationship or illness, when distress signals travel from the brain to the heart. But understanding is growing and there is evidence that it can be caused by other factors, including physical trauma or no incident at all.

"Takotsubo cardiomyopathy happens when one of the heart's chambers, the left ventricle, suddenly balloons and weakens. The heart then can't pump blood around the body as before and the extra stress leads to heart failure. It can develop at any age, and typically affects more women than men.

"Symptoms can appear like a heart attack including shortness of breath and [chest pain](#).

"But takotsubo cardiomyopathy is a different condition entirely and unlike a heart attack, patients don't suffer from a blockage of the arteries that supply the heart with blood."

Upon identifying the treatment received by takotsubo patients, Professor Dawson said, "We were surprised to see that when compared to patients with 'classical heart attacks'—they were medicated in the same way. We looked at 10 different categories of medicines and they were prescribed at the same rate—this was true for both typical heart medications and non-cardiovascular medications like HRT and anti-inflammatory medications.

"Our findings are truly unique as we are able to look at follow up prescriptions over a prolonged period of time with world leading accuracy using the Public Health Scotland database.

"Our data shows quite starkly that we are not treating this condition correctly.

"These patients have increased mortality compared to the general population, an increased vulnerability to developing heart conditions and as much chance of dying from this as people who have suffered heart attacks.

"It is vital that we identify precise ways to treat this unique group of people, and that is what we plan to do as we continue our research. This study has identified one drug as a potential breakthrough with promising therapeutic benefit, however, further research is needed to establish if this is the key to treating this devastating illness"

Dr. Sonya Babu-Narayan, Associate Medical Director at the British Heart Foundation, said, "These data from Scotland show that the diagnosis of takotsubo, a condition more common for women, is linked to a higher chance of death in the long term.

"Patients surviving takotsubo syndrome were treated much the same way as those surviving a heart attack—but unlike for [heart attack](#) survivors, being prescribed usual [heart](#) medications was of uncertain benefit. More research into takotsubo could better reveal its causes and which treatments could save and improve lives."

**More information:** Amelia E. Rudd et al, Cardiovascular and Non-cardiovascular Prescribing and Mortality After Takotsubo—Comparison With Myocardial Infarction and General Population, *JACC: Advances* (2024). [DOI: 10.1016/j.jacadv.2023.100797](https://doi.org/10.1016/j.jacadv.2023.100797)

Provided by University of Aberdeen

Citation: 'Broken-heart syndrome' patients failed by current treatment, says study (2024, January 11) retrieved 29 April 2024 from <https://medicalxpress.com/news/2024-01-broken-heart-syndrome-patients-current.html>

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