

### Takotsubo cardiomyopathy in the very young

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**Introduction:** Takotsubo cardiomyopathy, apical ballooning or “broken-heart” syndrome is characterized by a transient severe dysfunction of the apical segments of the left ventricle affecting the distribution of more than one coronary artery in the absence of angiographic evidence of obstructive coronary artery disease. It is associated with ST changes and T wave inversion, mild elevation of cardiac enzymes, and a sudden emotional and/or physical stress as the precipitating factor. The majority of the reports have been in adults, especially in postmenopausal women. It has rarely been described in children.

**Methods:** Case series of two cases of Takotsubo cardiomyopathy presenting in very young patients

**Results:** We present two young patients of less than 5 years old who developed features of Takotsubo cardiomyopathy that recovered spontaneously. First case (16 months) presented with cyclical vomiting and the second case (2 years) with head trauma and a right subdural hematoma. Both patient presents with clinical features of heart failure, ECG changes of ischemia, cardiac enzyme elevation and echocardiographic evidence of apical hypokinesia. Both patients were treated with conventional cardiac failure support and had complete recovery of their left ventricular function with normalization of their electrocardiogram, echocardiogram and cardiac enzymes within days. A follow up evaluation a few months later confirmed resolution of this condition.



Figure 1. Echocardiogram and ECG at presentation (case 2)

**Conclusions:** Takotsubo or stress-induced cardiomyopathy may occur in children, and it should be considered in any individual at any age presenting with the features mentioned above. Special consideration should be given when there is a known significant emotional/physical event that can provoke stress and increase in catecholamine load.