The Transient Left Ventricular Apical Ballooning Syndrome or Tako-Tsubo Caerdiomyopathy: A Single Center Experience

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Background: Apical ballooning Syndrome (ABS) or Tako-Tsubo Cardiomyopathy is a cardiac syndrome characterized by transient akinesis of the mid and apical segments of the ventricular wall provoked by stress in the absence of significant coronary artery disease.
This syndrome was first described in 1991 in Japan; since then case series have been reported in Europe and in USA. We are reporting our experience with 14 patients treated.
Methods: between 2003-2008we prospectively evaluated 14 consecutive patients according to the proposed Mayo Clinic Criteria for the diagnosis of ABS. All patients underwent coronary angiography (CA) and serial echocardiographic studies (TTE).six patients underwent left Ventriculography (LV).
Results: The median age was 60 years, 90% women, 70% postmenopausal. Clinical presentation included chest pain (80%) dyspnea (40%) pulmonary edema (20%) and hypotension (10%). The onset of ABS was preceded by emotional or physical stressor (8 and6 patients respectively).
Admission electrocardiogram showed ST elevation in the precordial leads in 90% and T wave abnormalities in 20%.
Deep T wave inversion occurred in all patients 2-3 days after admission and prolongation of corrected QT occurred in 70%.
All patients had mildly elevated serum troponin levels.
All patients had normal coronary arteries and EF was 33 %+_ 8(LV in 6 patients) with akinetic apex and midventricular wall and hyperkinetic base.
TTE showed low EF at presentation 35+_ 7 with typical wall motion abnormalities, 2 had LVOT obstruction, 4 had MR, and 1 patient developed apical thrombus on the third day.
Within 3 weeks Left Ventricular systolic function recovered completely (EF 56%) There were no hospital or follow up deaths. Hospital stay range from 4 to 14 days.
Conclusions: Transient abnormal Left Ventricular contraction pattern with ballooning appearance, which spares the base of the heart, typical of Tako-Tsubo was present in all patients.
Complications in our series were: LVOT obstruction, MR at the acute phase and apical thrombus in the sub acute phase.
Differentiating transient LV apical ballooning from acute MI is important and the only mean to do so is urgent coronary angiography and LV and serial TTE.