Research Paper Medicine

A case report on rare case of Takotsubo cardiomyopathy

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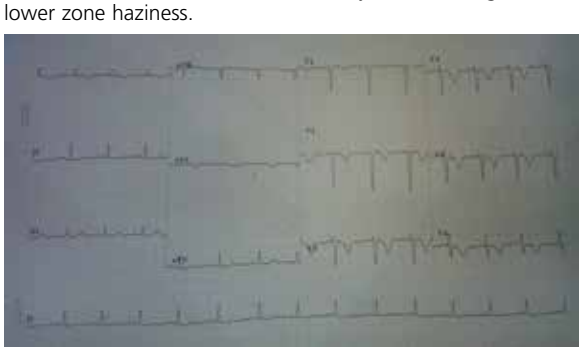
KEYWORDS

Case description:
A 55 year old female presented to our tertiary care centre with complaint of severe breathlessness since night.She was relatively asymptomatic before night,After her husband's death the day before she was very upset.She got sudden onset of severe breathlessness,which was aggravated in supine position since last night.Breathlessness was associated with subjective unpleasant awareness of patient's own heart beat.

On examination BP was 110/70 mm of Hg and pulse was 90 per minute in right radial artery in sitting position with regular rhythm. On auscultation bilateral basal crepitations were sounded in both the lung fields. Patient was given immediate O_2 support through mask at 4 litres per min. Immidiate 12 lead electrocardiogram and chest roentgenogram was ordered.ECG was showing 'T' wave inversion in anterior leads which is shown below and chest X-ray was showing bilateral lower zone haziness.



Provisional diagnosis of Heart failure due to ischaemic heart disease was made and patient was referred to cardiologist for bedside 2 dimensional echocardiography. Patient's routine investigations such as complete blood count and routine serum tests such as(Liver function test,renal function test,Random plasma sugar etc)were normal and serum cardiac biomarker troponin I was negative.2D Echo showed generalized hypokinesia and apical ballooning along with ejection fraction-35%. So,cardiologist asked to undergo coronary angiography in order to rule out Takotsubo cardiomyopathy.

Coronary angiography was absolutely normal for epicardial arteries,The report is shown below through diagram.

Cardiologist's panel has confirmed the diagnosis of Takotsubo cardiomyopathy. On their advice patient was put on tablet carvedilol(3.125 milligram) 2 times everyday,tablet lasix(10 milligrams),tablet aldactone(25 milligram) and tablet losartan(25 milligram)in the morning.Patient was discharged on 3rd day after admission.On discharge patient was completely asymptomatic with clear chest on auscultation.Patient was advised to come for follow-up after 3 months with fresh 2-D echo and electrocardiogram.Electrocardiogram was showing normal sinus rhythm and 2-D Echo showed ejection fraction=69%.Patient is followed regularly for sign and symptoms or progress of the disease.Drugs were gradually tapered and stopped during the course of illness.At present she is not on any medication and having normal life.

Discussion:
Takotsubo cardiomyopathy ,also known as transient apical ballooning[1],stress induced cardiomyopathy or Gebrochenes-Herz syndrome is a type of non ischaemic cardiomyopathy in which there is a sudden temorarary weakning of the muscular portion of the heart.This weakning is generally triggered by emotional stress as seen in this case,it is also known as broken heart syndrome[2] .It is one the cause for acute left ventricular failure.,lethal ventricular arrhythmias and even ventricular rupture[3].

Causes of this rare disease are mainly related to emotional stress in more than 85% of patients.These being death of loved one,fear of exam and public speaking,argument with a spouse,financial problems.[5]

Acute asthama,chemotherapy and stroke are typical examples of physical stressors[5].

The disorder is more common in post menopausal women[6]. some studies have shown that it may be due to wrap around left anterior descending artery[7]but other studies have rejected this association[8].Parvo virus B19,transient vasospasm,mid ventricular obsctruction are also suggested as etiologies.

Diagnosis is based on clinical as well as investigational grounds.It presents clinically as acute heart failure(shortness of breath and chest pain).The ECG findings are consistent with ST elevation anterior wall myocardial infarction,or T wave invesion or QT prolongation.[1]

Cardiac enzyme elevation may be present but it is mildly elevated in severe disease. It can be normal in mild to moderate disease. Coronary arteries are totally normal.Suggested treatment includes use of combined alpha and beta blocker,Angiotensin convertase enzyme inhibitor and diuretics.Prognosis is very good if patient survives the initial event.

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REFERENCES

1)Eshtehardi p,Koestner SC,Adorjan P,Windecker S,Meire B ,Hess OM,Wahl cook S(july 2009)"transient apical ballooning syndrome-clinical characteristics,ballooning pattern and long term follow up in swiss population"Int.J.Cardilo135(3):370-5. | 2)"Mayo clinical research revels broken heart syndrome recurs in 1 of 10 patients"Medical news today,Medilexicon international ltd. | 3)Akashi YJ,Nef HM,Mollmann H,UeyamaT(2010)."stress cardiomyopathy"annual review of medicine61:271-86 | 4)Gianni M,Dentali F et al.(December,2006)"Apical ballooning syndrome or Takotsubo cardiomyopathy:a systemic review".European Heart journal(oxford university press) | 5)Sharkey S,Lesser J(2011)retrieved from http://circ.ahajournals.org/content/124/18/e64.full | 6)Azzarelli S,Galassi AR,Amico F et al"clinical features of transient left ventricular apical ballooning"am J of Cardiol. | 7)Ibanez B et al in revista esponola de cardiologica(in Spanish)(2004) | 8)Inoue M,Shimizu M et al"differentiation between acute myocardial infarction and Takotsubo cardiopathy." |