

ST elevation myocardial infarction in a young adult: Expect the unexpected

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BACKGROUND

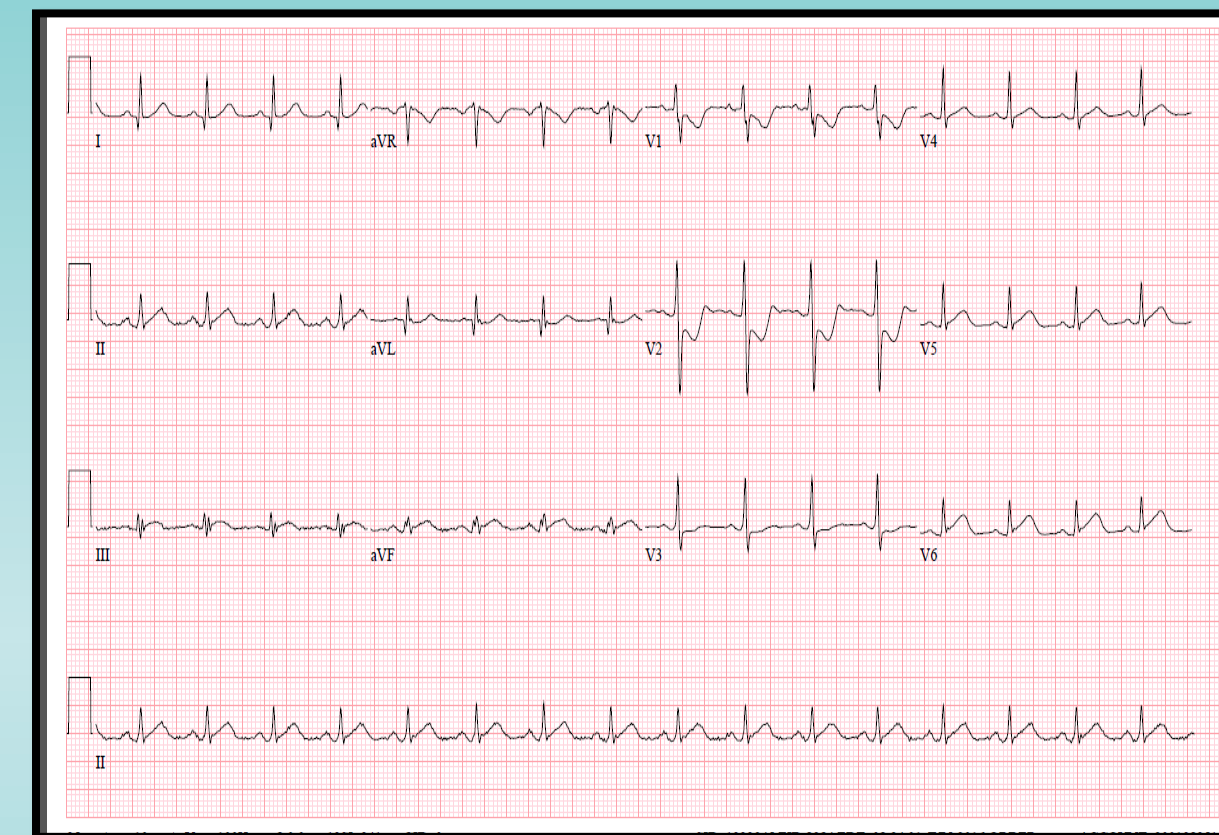
- Acute myocardial infarction (MI) in young adults can present a diagnostic and therapeutic challenge
- Kawasaki disease (KD) is a vasculitis of unknown etiology that occurs in infancy and childhood
- Coronary artery aneurysms (CAA) are the most serious complication of untreated KD seen in upto 25% of patients
- Thrombosis of these CAA or coronary stenosis can present as MI in less than 2% of cases which mainly occur in the 1st year of disease onset
- Late presentations in adult life is extremely rare

CASE

- A 20-year-old male with no past history presented with acute onset severe chest pain
- He denied any drug use, recent or past history of febrile illness, arthralgia or rash
- There was no family history of coronary artery disease (CAD)
- On presentation, he was hemodynamically stable with an initial EKG showing changes diagnostic of an acute inferoposterior STEMI
- Troponin I was mildly elevated at 0.04 ng/ml with repeat value at 0.22 ng/ml
- He was managed per STEMI protocol and received aspirin, sublingual nitroglycerin, morphine and heparin drip
- A stat bedside Echo was done

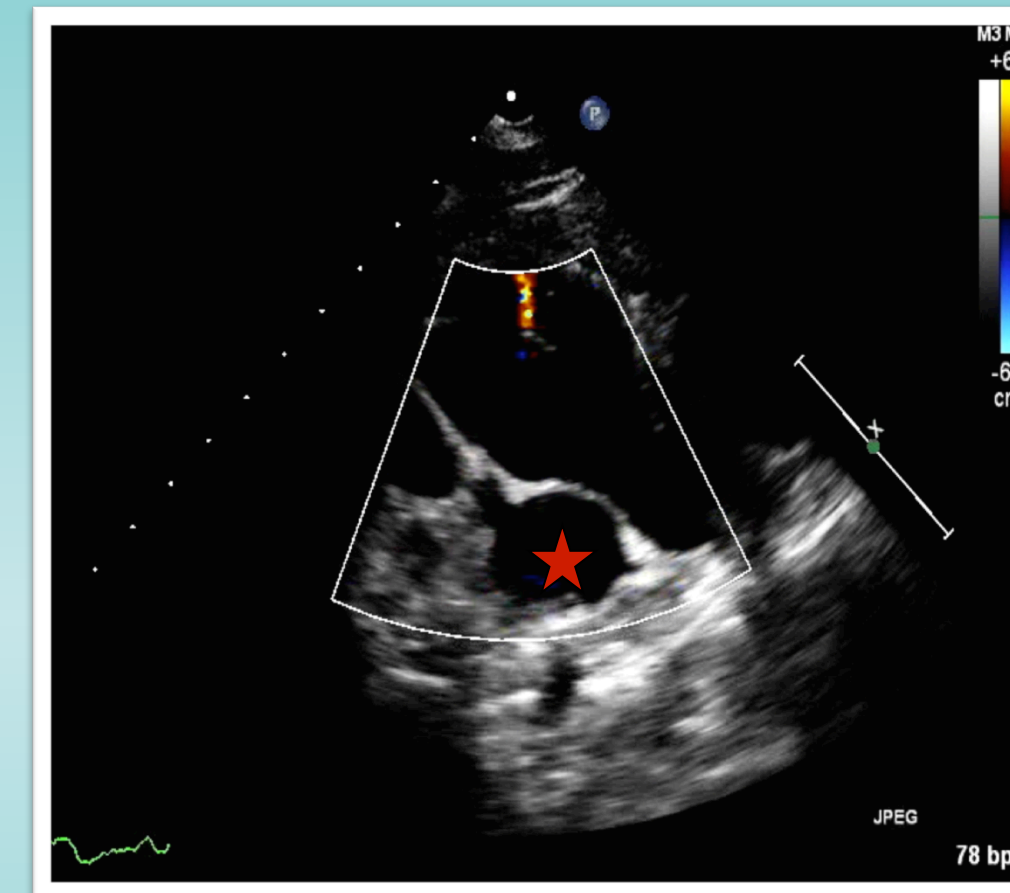
INVESTIGATIONS

Electrocardiogram

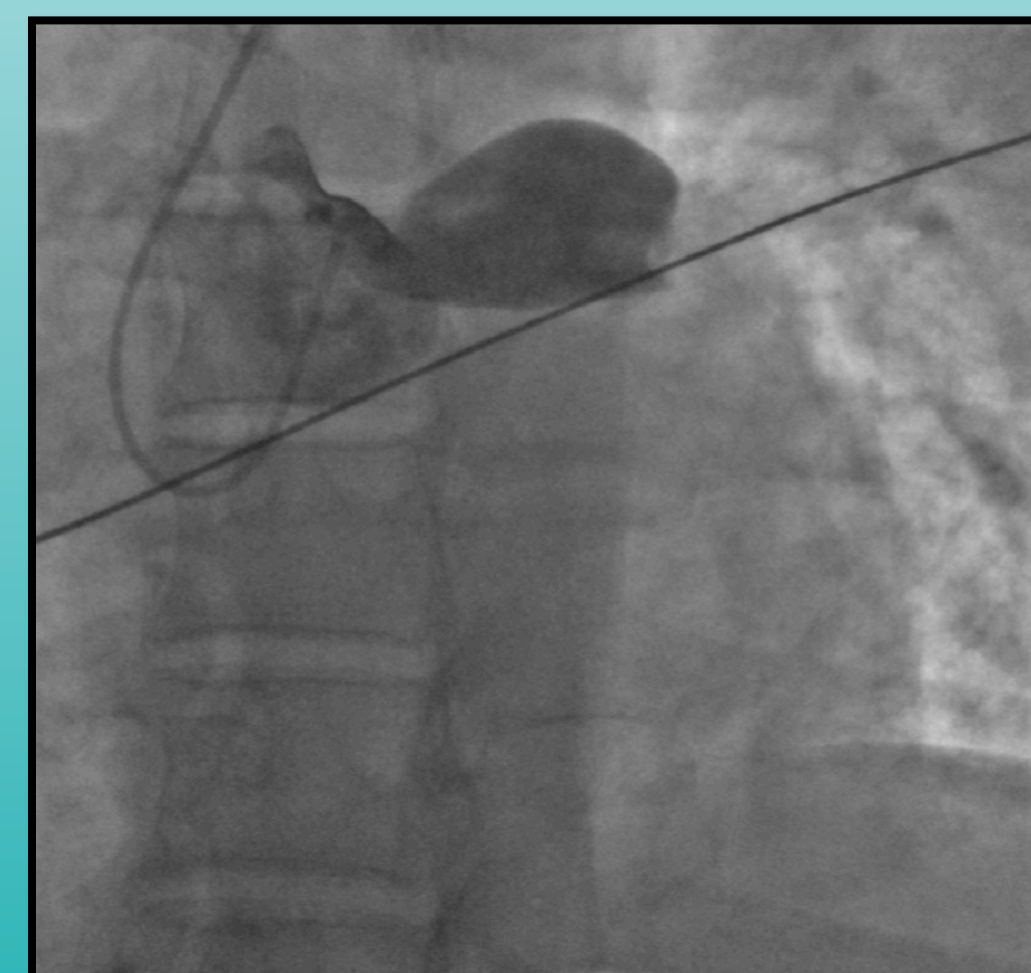


Transthoracic Echocardiogram

★ - Left main



Cardiac Catheterization – Left Main



Right Coronary Artery



DECISION MAKING

- Cardiac catheterization showed severe 3 vessel CAD manifested by ectasia and aneurysmal dilation
- Left main was severely ectatic with a 2.5 cm aneurysm filled with multiple clots
- Left anterior descending artery showed a slow filling with a total occlusion of the proximal circumflex artery
- The above findings deemed the patient unsuitable for percutaneous coronary intervention
- He was started on IV Tirofiban and transferred to a tertiary care center
- Patient underwent emergent 4 vessel CABG along with plication and thrombectomy of the left main aneurysm
- He made an uneventful recovery

CONCLUSIONS

- Aneurysm size in KD based on internal diameter (ID) is classified as small (<5 mm), medium (5–8 mm), or giant (>8 mm).
- Transthoracic echocardiography (TTE) has a high sensitivity and specificity for identifying anomalies in the proximal LMCA and RCA (M.C. sites for aneurysms)
- Interventional cardiologists should be aware of the possible challenges of managing these patients

REFERENCES

- Shaukat et al. Myocardial infarction in a young adult due to Kawasaki disease. A case report and review of the late cardiological sequelae of Kawasaki disease; Int J Cardiol. 1993 Jun;39(3):222-6