Original Research Paper

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Internal Medicine

THE ICEBERG PHENOMENON: BANE OF DIABETES.

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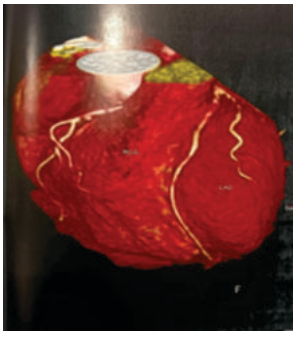
ABSTRACT As is well known, the visible tip of the Iceberg that juts out of water is only 1/8th. The remaining 7/8th is concealed inside water. This simile has been adapted in Medicine as the Iceberg phenomenon, meaning 7/8th of the disease may be hidden, subclinical and undiagnosed. We describe here a case that is typically demonstrative of Iceberg phenomenon.

KEYWORDS : Diabetes Mellitus, Totally asymptomatic, cardiac markers Normal, 2 D echo normal, TMT Normal, Angiography showing significant Coronary Artery Disease , Angioplasty

INTRODUCTION

A 62 Year Retired Bank Manager, known Diabetic (fairly good control with HbA1c of 7.5) had been for routine health check-up. He had no symptoms, complied very well with his medications and walked daily for 8-9 kms without any discomfort whatsoever. His ECG, 2 d echo and TMT were all WNL. Asa part of his annual checkup, his CT angiography was also done, which showed significant blockages and calcifications.



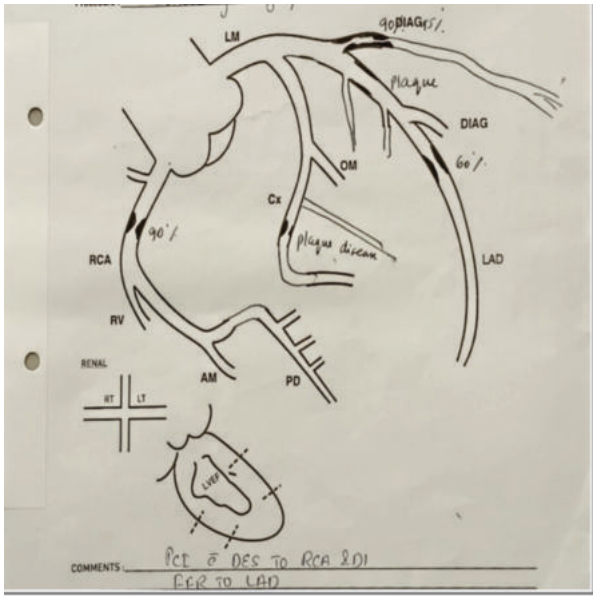
C T Coronary Angiography:

Significant Stenosis- 60-70% in Mid RCA, Calcified Plaques with Moderate Stenosis 40% in Mid LAD, Calcified Plaques with Significant Stenosis in D1 Artery, Calcified Plaques with Mild Stenosis 30%, In Mid Circumflex Artery.

All these were completely unexpected findings.

The patient was understandably surprised and upset at this revelation. As attending physicians, we too were nonplussed and had to take a long hard look at which course to follow. Do we subject a totally asymptomatic person to an invasive procedure like Coronary angiography? Do we ignore these significant CT angio findings? We discussed amongst ourselves, came clean with the patient and laid bare our dilemma. We were painfully aware of the treacherous nature of coronary involvement in DM[1, 2] and that the threat of sudden cardiac death could not be ignored. It was jointly decided to proceed for coronary angiography.

Coronary Angiography:



Was done through Right Radial Artery and denoted following:

LMCA-Normal, LAD Type 2 vessel showing minor plaques in proximal segment followed By 50-60% narrowing in mid segment. Diagonal Braches-D1 moderate caliber vessel with 90-95% Osteoproximal narrowing. LCX-Non-dominant Vessels. With minor Plaques. OM Branches-OM 3- 60-65% Narrowing. RCA-Dominant Vessels, showing 85-90% narrowing In Mid Segment. PDA-normal. PlV-Normal

Final Diagnosis and recommendations: PCI with DES to RCS and D1. Fractional flow reserve (LAD) would be helpful.

TREATMENT:

Accordingly, Patient was planned for Coronary Angioplasty with FFR study.

Vascular Access-Right Femoral. Contrast-Omnipaques 350mg. Guide Wire -0.041 Rut through Ns. Ffr-Pressure Wire' X'. Medication-Heparin 9000 IU, Adenosine (Intra Coronary).

However, during angioplasty it was surprisingly found that RCA was patent, D1 was also patent both of them were showing adequate blood flow. (During angiography both of them were showing blockages,

probably because of coronary vasospasm). Since both the arteries showed adequate blood flow, they were not stented. Procedure successful ffr and rfr guided ptca with 2 DES LAD done with excellent final result.

Post-op patient shifted to ICU for further monitoring and observation. Patient tolerated the stay and medical management, was hemodynamically stable and hence discharged on day 4 of procedure.

DISCUSSION

Diabetes mellitus is associated with an increased risk and higher incidence of cardiovascular diseases including coronary artery diseases (CAD), congestive heart failure (CHF) and atrial fibrillation.[3, 4, 5, 6] Silent myocardial infarctions are fairly common. DM is a prothrombotic and pro inflammatory state and the dyslipidemia is probably much more amplified as compared to a non-diabetic[7, 8]. The coronary involvement in a Diabetic assumes much more vicious/ complex proportions. Diffuse, calcified, rapidly progressing disease with multivessel involvement are common. [9,10]The associated Diabetic Neuropathy may contribute towards the "silent ischemia" seen routinely in diabetics with IHD.

CONCLUSION

This was a usual case in that we were actually treating a report rather than a live person who had NO symptoms whatsoever and whose every noninvasive test was absolutely normal. However, the evidence was infallible. We had to pay heed to the "iceberg phenomenon" and proceed with above, with good results.

In conclusion, even in a person with a fairly good control of DM AND with all possible tests being negative, there may yet be severe lesions in the coronaries. We must maintain a high degree of suspicion and educate ourselves and the general population accordingly.

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