Introduction: Syncope is a common clinical presentation in clinical practice. And it is accounting for 1% to 6% of hospital admission and up to 3% of emergency room visits. Syncope is one of the most challenging problems seen in medical practice.

Methods: The aim of this study was to review the Clinical study and diagnostic evaluation of syncope patients who admitted to Department of Cardiovascular Medicine, Mandalay General Hospital. This study was one-year descriptive study, which included 144 syncope patients admitted to Department of cardiovascular Medicine, Mandalay General Hospital, from 1st May 2018 to 30th April 2019.

Result: Syncope admission accounted 3.64% of total cardiac admission in one-year period. Mean age was 55.4 years (range 14 to 87 years). Out of 144 patients, 39.58% were males and 60.41% were females. The most common co-morbidities in this study was hypertension followed by Diabetes and CAD. Out of 144 patients, cause of syncope could not be established in 27.08%. On evaluation with ECG, 62.5% (90) syncope patient had normal sinus rhythm in 12 Leads ECG on admission, remaining 37.5% (54) patients had high degree AV block-36, Atrial Fibrillation-10, Ventricular Tachycardia-7 and SVT-1 respectively and 18 patients had significant ST-T changes noted. On 24 hours holter ECG monitoring was performed in 40 patients, 10 had paroxysmal Atrial Fibrillation and atrial flutter, 1 had paroxysmal SVT, 2 had non-sustained VT, 2 had high PVCs load, 8 had significant sinus pauses with 17 had normal 24 hours holter ECG. Forty seven patients of explained syncope underwent Head Up Tilt Table Test, 44.6% (21) showed positive test and 55.3% (26) had negative test. In this study, twenty patients had structural heart diseases, 18-acute myocardial infarction and 2-severe mitral stenosis: they were treated as PCI and PTMC. Thirty eight patients were treated with PPM and one patient underwent CRT-D implantation.

Conclusion: In this study 27.08% of patient could not be established causes of syncope. The weak point of this study was, in our center, we could not proceeded long term arrhythmia monitoring like event loop recorder or implantable loop recorder. The diagnostic yielded for on admission 12 leads ECG for syncope was 37.5% and 2D echo was investigation of choice for structural heart diseases.