

PP79 HIGH LATERAL STEMI

LUQMAN FAIZ M¹, AHMAD
SUHAILAN M¹, FARINA MS¹, NUR
AIZA MS²

¹ *INSTITUT JANTUNG NEGARA (IJN),
KUALA LUMPUR, MALAYSIA*

² *HOSPITAL AMPANG, SELANGOR,
MALAYSIA*

INTRODUCTION

We describe a case of high lateral ST-elevation myocardial infarction (STEMI) which was managed at our Emergency Department (ED) with a favourable outcome.

CASE & RESULTS

A 71-year-old lady presented to ED with typical left sided chest pain associated with diaphoresis and shortness of breath. Her electrocardiogram (ECG) showed ST elevation (STE) in leads I and aVL with reciprocal changes in lead III and aVF. There were no STE in the septal (V1-2) or anterior (V3-4) leads. At angiography, our patient had an isolated occlusion of diagonal branch (D1) of left anterior descending artery (LAD), which supplies the high lateral region of the heart. The occlusion was ballooned and stented, and she made an uneventful recovery.

DISCUSSION

The ST segment elevation in high lateral STEMI is usually localized to lead I and aVL (or AVL and V2), without involvement of V5 and V6. Concurrent ST depression (STD) of lead II, III and aVF is usually present, as these leads are electrically opposite to I and aVL. The magnitude of the reciprocal change in the inferior leads is determined by the magnitude of the STE in I and aVL. The

STE in lead I and aVL in our patient was obvious, however this may not always be the case. Patients may present with subtle STE (≤ 1 mm) in the high lateral leads and the only clue is the presence of inferior STD on the ECG, which may be misdiagnosed as inferior ischemia. First Diagonal branch (D1) occlusion may not fulfil the STEMI criteria. Therefore it is important to look for other early ECG clues for acute coronary occlusion which includes non-concave STE, hyperacute T waves in lead I & AVL, along with inferior reciprocal changes (STD in lead II, III and AVF). A serial ECG may be useful in revealing the progression of STE in the high lateral leads.

CONCLUSION

First diagonal branch (D1) occlusions of the LAD can be challenging to identify on the ECG. ST segment depression in the inferior leads should be regarded as the reciprocal to a high lateral STEMI until proven otherwise.

KEYWORDS

High, Lateral, STEMI