PRE-HOSPITAL THROMBOLYSIS IN ST-ELEVATION MYOCARDIAL INFARCTION: KUALA KRAI FIRST EXPERIENCE

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INTRODUCTION

ST-elevation myocardial infarction (STEMI) is a serious condition causing heart muscle damage. Early diagnosis and treatment are crucial for improving patient outcomes. However, due to regionalization and lack of percutaneous coronary intervention (PCI) facilities in remote areas, transportation times to PCI centers are longer. The nearest PCI centers, HRPZII (143km) and HUSM (145km), are quite far from Chiku III Health Clinic. In such case, pre-hospital early thrombolysis (PHT) by primary health care team can help. This article discusses the first PHT for a STEMI patient in Kuala Krai.

CASE

A 74-years-old gentleman with underlying IHD, experienced left sided chest pain and diagnosed with anterior STEMI (Killip 3). He was treated with IV Metalyse 7000u /35mg at Chiku III clinic, prior transferred to Emergency Department (ED) Hospital Sultan Ismail Petra. Upon arrival at ED, the symptoms resolving with ECG showed incomplete Right Bundle Branch Block. Patient was discharged 5 days later.

DISCUSSION

PCI procedures are widely available in European countries, but in develeping countries, the service is limited in terms of qualified personnel and infrastructure. Hence, thrombolysis is a common alternative before transferring a patient to PCI-enabled hospitals.

From 2011 to 2013, STEMI accounted for 50.8% of all ACS patients, with only 75% eligible for thrombolytic treatment and 9.4% for PCI. Late presentation at emergency departments and missed STEMI diagnosis were the primary reasons for ineligibility for revascularization.

Early reperfusion is crucial for treating STEMI, as every 30 minutes delay increases the one-year mortality rate by 7.5%. Pre-hospital medical thrombolysis can help achieve the reperfusion door to balloon time target.

Such in case series in 2021, 6 patients were reperfused (out of 9 patients recruited) after IV metalyse PHT, with 4 undergoing PCI at HRPZII. Thus, the benefit of PHT increases with hospital distance for STEMI patients.

CONCLUSION

PHT is definitely a way forward of managing STEMI for rural primary healthcare setting, without nearest capable PCI centre. This approach includes training of trainers, primary health care staffs, development of clear protocol of PHT, training and workshop, feasibility study, regular simulation and continously monitoring and quality assurance audit in the future.

KEYWORDS

“KualaKrai” “Pre-Hospital Thrombolysis” “STEMI”