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# HOSPITAL UiTM Newsletter

Issue 8/2020

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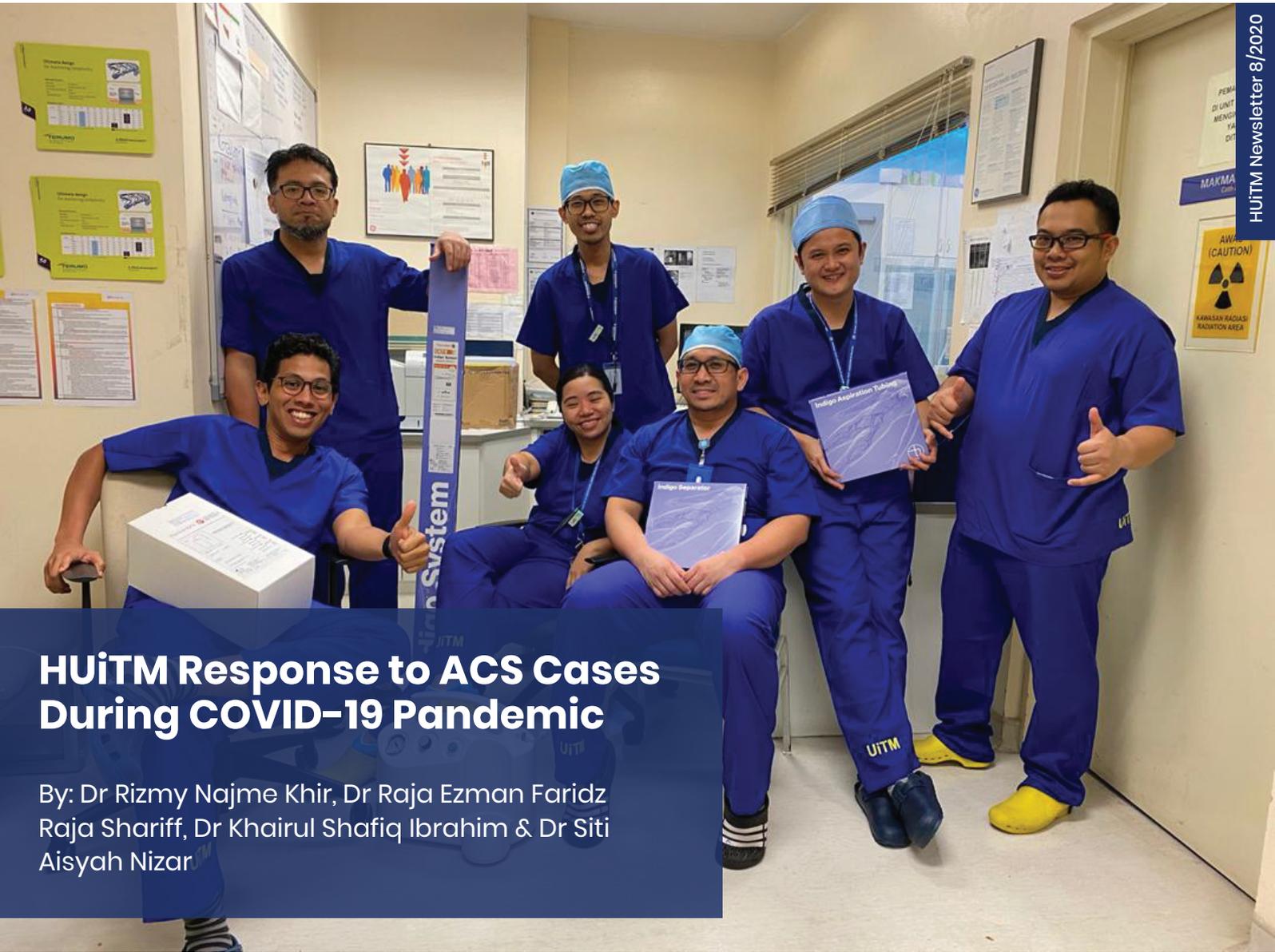
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## HUITM Response to ACS Cases During COVID-19 Pandemic

By: Dr Rizmy Najme Khir, Dr Raja Ezman Faridz Raja Shariff, Dr Khairul Shafiq Ibrahim & Dr Siti Aisyah Nizar

Assalamualaikum & Salam Sejahtera,

News of the first case of COVID-19 infection was in late December 2019, affecting the province of Wubei, specifically the city of Wuhan. By late January 2020, the World Health Organization (WHO) declared COVID-19 a public health emergency. At the time of writing, over 9,708,622 confirmed cases have been reported worldwide, with over 490,828 confirmed deaths.

Initially, little was known about the virus and how it spreads. Poor awareness and lack of personal protection were contributing factors to the exponential rise in cases within Wuhan. Furthermore, there was an underestimation of the level of threat, with majority likening COVID-19 to both MERS-COV in 2012 and SARS-COV in 2003 - whilst deadly were limited to only certain geographical areas.

“

..little was known about the **virus** and how it spreads

”

Malaysia has not been spared with a total case of 8,600 and 121 of death at the time of writing. Health services have now shifted towards prioritizing care of patients affected by COVID-19. Non-communicable diseases have been relegated to the sidelines in these unfortunate times, including Coronary Artery Disease and its complications, yet there is little evidence to suggest a reduction in the number of non-communicable disease occurring during these times.

There have been reports of great reductions in catheterization laboratory activation worldwide. Numbers have dropped by 38% in the USA and up to 70% in Italy. Contributing factors include rising numbers of fibrinolytic use and reduced numbers of patients presenting to the emergency departments globally, fearing being infected by COVID-19. The latter remains an even bigger cause for concern of which major societies like the European Society of Cardiology have since acknowledged and are trying to address.



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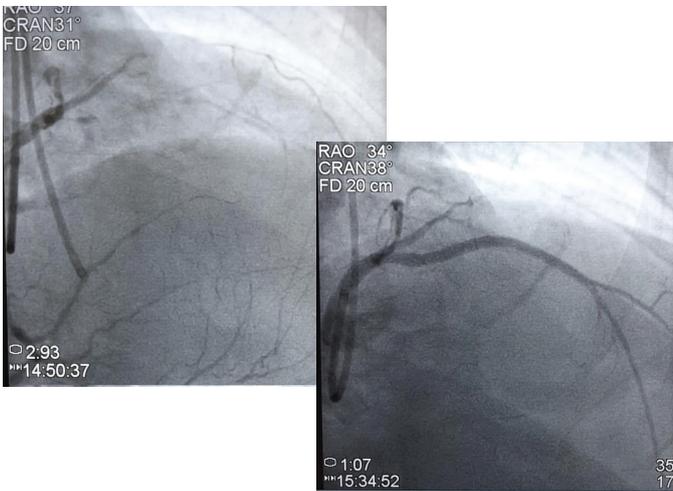


An international European Society Cardiology (ESC) survey has shown a decrease in STEMI presentations, with the large majority of survey participants reporting at least a 40% reduction during the COVID-19 pandemic period. These findings were largely consistent across six continents and supported by evidence from European and the US registries suggesting a 25% to 40% reduction.

Global consensus on management of STEMI have shifted from prioritising primary PCI strategy to thrombolysis-first strategy. This conservative approach was adopted to ensure minimal contact was maintained throughout the management of ACS patients, who potentially may be infected by COVID-19. This has been mirrored by the National Heart Association Malaysia (NHAM) who have similarly promoted thrombolytic administration in favour of primary PCI.



## Assessment & Management of ACS Patients



HUiTM has had close links with Hospital Selayang (HS) and Hospital Sungai Buloh (HSB) over the past decade in providing cardiovascular services. HS and HSB continue to battle with rising COVID-19 pandemic, HUiTM have stepped in to provide support in handling acute cardiovascular care for non-COVID-19 patients.

During these COVID-19, all electives PCI and angiogram were postponed to ensure that HUiTM could accommodate emergency cardiac cases requiring transfer to our centre.

All acute cardiac patients were transferred to HUiTM within 48 hours of presentation from neighbouring hospitals. This was to ensure that these neighbouring hospitals could focus their efforts on managing COVID-19 cases. All referrals were scrutinized for potential risk of COVID-19 before transfer. Further risk stratification via thorough history, physical examination, blood test specifically full blood count, chest radiography and nasopharyngeal swab for COVID-19 were done before any invasive cardiac procedures were performed. Turn-around time for all tests specifically the COVID-19 PCR screening at our centre was within 24 hours.

A pragmatic approach is needed in treating patients requiring Primary PCI for STEMI where COVID-19 status is unknown. This would mean pursuing life-saving treatment regardless of the COVID-19 status. HUiTM adopts a PCI-first strategy rather than thrombolysis. However, to ensure the safety of health care workers, we developed a care pathway in collaboration with HUiTM ED and SARI team. This includes a clear guide on patient's movement from ED to cardiac catheterization laboratory and appropriate use of Personal Protective Equipment (PPEs).

	Total Number of STEMI	Total Number of ACS	Total Number of Angiogram	Total Number of PCI
March			73	19
April	17	39	88	38
May	25	33	67	36

The total number of PCI cases almost doubled from March to April and total angiogram cases were still high despite elective procedures being rescheduled, compared to the same period last year. We could also see rising number of STEMI cases being referred to HUiTM during this pandemic with 17 cases in April and 25 cases in May.

Most of the patients were referred from Hospital Selayang, Hospital Sungai Buloh, neighbouring district hospitals and also from private hospitals. Among the common presentations reported are chest pain and heart failure symptoms.

Total Number of KKM Patients Referred to PPUiTM Sg Buloh				
	Cardiology	Respiratory	Cardiothoracic	Others
Inpatient	123	7	2	18
Outpatient	9	1	0	145
Total	132	8	2	163

From a total of 150 MOH inpatients who benefited from this MOH 2020 scheme, 123 of them were cardiology patients. The financial assistance enable patients to be quickly transferred to PPUiTM Sungai Buloh to get urgent treatment.

Total Number of KKM Patients who Benefited from MOH 2020 Scheme	
Inpatient	150
Outpatient	155
Total	305

## Experience donning PPEs during interventional cardiac procedures

When full PPEs are required for a particular case, there will be a maximum of 5 staff in the cath lab, which include one cardiologist, one scrub nurse, one radiographer, one floor nurse and one medical lab technologist (MLT). There will also be one cardiologist and one MLT in the control room at all times with minimal PPE protection. Following a successful procedure, the patient will be moved to an isolated room CCU, to continue to be cared by nurses wearing full PPEs whilst waiting for COVID-19 swab results

Performing angiograms and PCIs during the COVID-19 pandemic was indeed challenging. The cardiology team had to put on full personal protective equipment and occasionally their vision was limited due to face shield misting up. Even with air-conditioning on, the staff were still sweating. While this is not a major problem, it can also be a hindrance. However, the staff were able to get around these problems by using tricks learned from the scuba divers.

In summary, COVID-19 has allowed cardiology department to offer better services to affected patients. It is hoped that this initiative by KKM can be continued for the benefit of patients.

#UiTMDiHatiku  
#COVID19



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