



Letter by Elshazly Regarding Article “Primary Coronary Angioplasty for ST-Elevation Myocardial Infarction (STEMI) in Qatar: First Nationwide Program”

Mohamed B Elshazly*

Department of Medicine, Institution,
Osler Residency Program, Johns
Hopkins Hospital, Baltimore, MD, USA
*Email: melshaz1@jhmi.edu

Dear Editor:

In their article “Primary Coronary Angioplasty for ST-Elevation Myocardial Infarction (STEMI) in Qatar: First Nationwide Program”, Gehani et al. developed an impressive plan to implement primary percutaneous coronary intervention (PCI) for the first time in Qatar.¹ As a graduate of Weill Cornell Medical College in Qatar, I have witnessed immense improvement in the Qatari healthcare system over the past few years. From building the new state of the art Heart Hospital to developing the first unified nationwide primary PCI program in the world, there is no doubt that Qatar has made an immense leap towards implementing world-class cardiovascular healthcare in the Middle East.

The authors are applauded for their immense efforts to develop such a complicated protocol from scratch. Strategies such as 12-lead ECG transmission by EMS, a single easily reachable dedicated phone line, near campus accommodations for the primary PCI team and a nationwide awareness program are all crucial to sustaining a door to balloon (DTB) time of <90 min, which is the essence of primary PCI²⁻³. Given the importance of achieving DTB time <90 min for the success of this program, it is important to outline some areas for improvement.

Accurate diagnosis of STEMI is the most important step of this program especially in the extremely busy ED and Primary Health Centers of Hamad General Hospital (HGH). Most patients with STEMI present to the ED and outpatient clinics, instead of calling EMS. Therefore, efficient standard protocols for the evaluation of patients presenting with chest pain should be developed. These protocols should outline specific time intervals from first contact with medical personnel to arrival at the catheterization lab such as the Mayo clinic protocol⁴ and should be printed and distributed to all healthcare providers in Qatar. An online training course about primary PCI should be offered to all medical personnel.

In the current high-tech era, an electronic medical record (EMR) system is imperative for faster diagnosis of equivocal cases of STEMI. For example, rapid access to baseline ECGs can help differentiate a new Left Bundle Branch Block from an old one. Therefore, developing an EMR for ECGs that is easily accessible to the on call interventional cardiologist is very crucial.

HGH is the biggest hospital in the country. It incorporates all specialties other than cardiology, which has relocated to the Heart Hospital. HGH patients who develop STEMI will require transfer to the Heart Hospital for primary PCI. This is a time consuming process that will waste 20–30 min of transport. Having a fully equipped catheterization lab at HGH as well as other large hospitals such as Al-Wakrah is an idea worth considering for maintaining a DTB <90 min. Training specialized transport teams that understand the concept of “time is life” in STEMI is also crucial.

[http://dx.doi.org/
10.5339/gcsp.2013.9](http://dx.doi.org/10.5339/gcsp.2013.9)

Submitted: 2 January 2013
Accepted: 31 March 2013
© 2013 Elshazly, licensee
Bloomsbury Qatar Foundation
Journals. This is an open access
article distributed under the terms
of the Creative Commons
Attribution license CC BY 3.0, which
permits unrestricted use,
distribution and reproduction in any
medium, provided the original work
is properly cited.

Finally, it is important to recognize that timely feedback starting at day one will help significantly improve this program at a faster pace. 24–48 h audits and feedback on each case will help identify flaws that can be fixed reliably and quickly.

REFERENCES

- [1] Gehani A, Al Suwaidi J, Arafa S, Tamimi O, Alqahtani A, Al-Nabti A, Arabi A, Aboughazala T, Bonow RO, Yacoub M. Primary coronary angioplasty for ST-Elevation Myocardial Infarction in Qatar: first nationwide program. *Global Cardiol Sci Pract.* 2012;23, <http://dx.doi.org/10.5339/gcsp.2012.23>
- [2] Authors/Task Force Members, Steg PG, James SK, Atar D, Badano LP, Blömostrom-Lundqvist C, Borger MA, Di Mario C, Dickstein K, Ducrocq G, Fernandez-Aviles F, Gershlick AH, Giannuzzi P, Halvorsen S, Huber K, Juni P, Kastrati A, Knuuti J, Lenzen MJ, Mahaffey KW, Valgimigli M, van't Hof A, Widimsky P, Zahger D. ESC guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation: the task force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC). *Eur Heart J.* 2012;33(20):2569–2619.
- [3] O'Gara PT, Kushner FG, Ascheim DD, Casey DE Jr, Chung MK, de Lemos JA, Ettinger SM, Fang JC, Fesmire FM, Franklin BA, Granger CB, Krumholz CB, Linderbaum JA, Morrow DA, Newby LK, Ornato JP, Ou N, Radford MJ, Tamis-Holland JE, Tommaso JE, Tracy CM, Woo YJ, Zhao DX, CF/AHA Task Force. 2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction: Executive Summary: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation* 2012.
- [4] Nestler DM, Noheria A, Haro LH, Stead LG, Decker WW, Scanlan-Hanson LN, Lennon RJ, Lim CC, Holmes DR Jr, Rihal CS, Bell MR, Ting HH. Sustaining improvement in door-to-balloon time over 4 years: the Mayo Clinic ST-Elevation Myocardial Infarction Protocol. *Circ Cardiovasc Qual Outcomes.* 2009;2(5):508–513.