

“Rising Sun”, Minimally Invasive TRI from Japan to the Rest of the World

Takashi Matsukage*

Department of Cardiology, TOKAI University, Japan

Initially, as a proud interventional cardiologist, I would like to congratulate the 20th anniversary of Transradial Intervention (TRI), and please let me show my sincere gratitude for the great work by Kiemeneij and Laarman [1]. Twenty years have past since TRI was performed for the first patient in order to prevent bleeding complications. In that time, one out of ten patients experienced major bleeding complication after a stent was implanted to a coronary artery. These bleeding complications sometimes caused fatal outcome, and there was a need for finding a safer entry site such as a radial artery. At that time, anything about TRI was not found in textbooks. However, since then, many beneficial evidences about TRI have accumulated, and nowadays it is the case that TRI provides enormous benefit to society by reducing major bleeding and vascular complications and enabling early ambulation. Without Dr Kiemeneij and Laarman [1] innovative passion, we could not have come this far.

In addition, on behalf of “Radialists”, I salute the pioneer; Dr. Saito et al. [2] for his half a lifetime of service to TRI. He has crossed the seven seas and educated physicians about TRI worldwide as a representative of evangelist.

Their feat is great works, and certainly many patients have been saved by them [2]. In fact, evidence level of TRI has greatly improved for STEMI patients [3].

Following the two great pioneers, many Japanese physicians published a lot of manuscripts about advanced TRI techniques including slender devices. They approached the subject from 3 different angles: minimizing diameter of guiding catheters, guide wires and puncture sites.

Why should they be minimized?

It is not necessary to use 6Fr GC for all patients [4].

TRI by slender guiding catheter delivers relief of discomfort feeling of patient [5].

The procedure and the clinical success rate were similar between in 5 and 6 Fr TRI, but post procedural radial occlusion was significantly lower in 5FrTRI [6].

Actually, slender TRI has some degree of positive significance [7-14], although there exists only a little amount of significant evidences so far. In Japan, we have experienced and advanced technological evolution from genesis of TRI. However, only Japan is not capable of moving the world. So, we have to work cooperatively for the development of new devices and creative techniques. Moreover, through such cooperation, we will be able to save more patients by slender TRI.

References

1. Kiemeneij F, Laarman GJ (1993) Percutaneous transradial artery approach for coronary stent implantation. *Cathet Cardiovasc Diagn* 30: 173-178.
2. Saito S, Tanaka S, Hiroe Y, Miyashita Y, Takahashi S, et al. (2003) Comparative study on transradial approach vs. transfemoral approach in primary stent implantation for patients with acute myocardial infarction: results of the test for myocardial infarction by prospective unicenter randomization for access sites (TEMPURA) trial. *Catheter Cardiovasc Interv* 59: 26-33.
3. Task Force on the management of ST-segment elevation acute myocardial

infarction of the European Society of Cardiology (ESC), Steg PG, James SK, Atar D, Badano LP, et al. (2012) ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. *Eur Heart J* 33: 2569-2619.

4. Saito S, Ikei H, Hosokawa G, Tanaka S (1999) Influence of the ratio between radial artery inner diameter and sheath outer diameter on radial artery flow after transradial coronary intervention. *Catheter Cardiovasc Interv* 46: 173-178.
5. Gwon HC, Doh JH, Choi JH, Lee SH, Hong KP, et al. (2006) A 5Fr catheter approach reduces patient discomfort during transradial coronary intervention compared with a 6Fr approach: a prospective randomized study. *J Interv Cardiol* 19: 141-147.
6. Dahm JB, Vogelgesang D, Hummel A, Staudt A, Völzke H, et al. (2002) A randomized trial of 5 vs. 6 French transradial percutaneous coronary interventions. *Catheter Cardiovasc Interv* 57: 172-176.
7. Yoshimachi F, Masutani M, Matsukage T, Saito S, Ikari Y (2007) Kissing balloon technique within a 5 Fr guiding catheter using 0.010 inch guidewires and 0.010 inch guidewire-compatible balloons. *J Invasive Cardiol* 19: 519-524.
8. Yoshimachi F, Ikari Y, Matsukage T, Masutani M, Mori Y, et al. (2008) A novel method of PercuSurge distal protection in a five French guiding catheter without an Export aspiration catheter. *J Invasive Cardiol* 20: 168-172.
9. Matsukage T, Masuda N, Ikari Y (2008) Simultaneous triple-balloon inflation technique within a 6 Fr guiding catheter for a trifurcation lesion. *J Invasive Cardiol* 20: E210-E214.
10. Masutani M, Yoshimachi F, Matsukage T, Ikari Y, Saito S (2008) Use of slender catheters for transradial angiography and interventions. *Indian Heart J* 60: A22-A26.
11. Matsukage T, Yoshimachi F, Masutani M, Katsuki T, Saito S, et al. (2009) A new 0.010-inch guidewire and compatible balloon catheter system: the IKATEN registry. *Catheter Cardiovasc Interv* 73: 605-610.
12. Matsukage T, Yoshimachi F, Masutani M, Saito S, Nakazawa G, et al. (2009) Virtual 3 Fr PCI system for complex percutaneous coronary intervention. *EuroIntervention* 5: 515-517.
13. Matsukage T, Masutani M, Yoshimachi F, Takahashi A, Katsuki T, et al. (2010) A prospective multicenter registry of 0.010-inch guidewire and compatible system for chronic total occlusion: the PIKACHU registry. *Catheter Cardiovasc Interv* 75: 1006-1012.
14. Matsukage T, Masuda N, Ikari Y (2011) Successful transradial intervention by switching from 6 French to 5 French guiding catheter. *J Invasive Cardiol* 23: E153-E155.

*Corresponding author: Takashi Matsukage, Department of Cardiology, TOKAI University, Japan; E-mail: ptc@b03.itscom.net

Received May 07, 2013; Accepted May 15, 2013; Published May 17, 2013

Citation: Matsukage T (2013) “Rising Sun”, Minimally Invasive TRI from Japan to the Rest of the World. *J Vasc Med Surg* 1: e104. doi: 10.4172/2329-6925.1000e104

Copyright: © 2013 Matsukage T. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.