

Radial access should be first choice for PCI, ESC says

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The radial approach for percutaneous coronary interventions (PCI) was developed 20 years ago and is used for more than 50% of procedures in France, Scandinavian countries, the UK, Spain and Italy. Despite the advantages of radial access some countries in Europe such as Germany use radial access for fewer than 10% of PCI.

Evidence has accumulated in the literature showing the benefits of radial over femoral access for PCI including reduced bleeding and improved survival. In addition, the development of smaller and thinner devices has made the radial approach increasingly practical.

The European Association of Percutaneous [Cardiovascular Interventions](#) (EAPCI), the Acute [Cardiovascular Care](#) Association (ACCA) and the Working Group (WG) on [Thrombosis](#) of the European Society of Cardiology (ESC) therefore decided it was time to write a consensus document outlining the advantages, disadvantages and expertise requirements of the radial approach. The paper is published today in *EuroIntervention*, online ahead of print.

Patients receiving an acute intervention, for example in myocardial infarction, need [anticoagulants](#) and [antiplatelet drugs](#) but these increase the risk of bleeding. Meta-analyses of randomised studies and large observational registries show that radial access reduces procedure access site-related major bleeding compared to femoral access. In addition, patients receiving the femoral approach must lie down for several hours after PCI to reduce the risk of severe bleeding while radial access allows

patients to stand up in one hour.

Dr Marco Tubaro (Italy), ACCA member and co-author, said: "The radial approach strongly reduces the bleeding complication at the site of the procedure. The reduction in bleeding translates into a reduction in events and even into a reduction in mortality, particularly in patients with ST-elevation [myocardial infarction](#) (STEMI)."

Professor Kurt Huber (Austria), a representative of both the WG on Thrombosis and ACCA, said: "There's a lot of knowledge now that radial access is relatively safe, it's easier for the patient, there are fewer bleeding complications, and most acute interventions can be performed through the radial artery because we have smaller and thinner devices. This was not the case some years ago."

He added: "In a small percentage of patients the radial approach does not work, for example if the arteries in the arm are too small, if rare anatomical situations hinder the radial approach or if specific interventional strategies are necessary. So interventionalists should also know the femoral approach. The more experience interventionalists have with radial, the less they are forced to switch to femoral."

The consensus document emphasises the importance of maintaining expertise in both techniques. The authors state: "Proficiency in the femoral approach is required because it may be needed as a bailout strategy or when large guiding catheters are required."

Professor Martial Hamon (France), first author of the paper, said: "Overall I think there is a consensus now that the radial arteries can be used as the default access site for PCI. However we need to be aware of remaining concerns, for example risk of stroke and radiation exposure, especially during the learning curve. There also remains the issue of non-access site bleeding whatever the access site used. These issues are

outlined in the paper."

He added: "It is now clear after the RIFLE and RIVAL trials that radial access reduces major bleeding at the vascular access site and as a consequence improves patient outcomes, including survival, especially in STEMI. It is therefore essential that PCI centres use radial access as the strategy of choice in high risk acute coronary syndromes (ACS) patients in conjunction with current recommendations regarding optimal antithrombotic strategies."

Dr Ferdinand Kiemeneij (Netherlands), inventor of radial access for PCI and last author of the paper, said: "Although this technique was initiated 20 years ago there is still a lot going on to get everyone doing this procedure. It is taking off quite rapidly now and I think this paper really adds to a more general acceptance of the technique. I'm convinced that it will improve patient care overall by providing more knowledge, more training and better awareness. So this will play a key role, especially now it's supported by the European Society of Cardiology."

Dr Jean Fajadet (France), EAPCI President, said: "It is twenty years since Ferdinand Kiemeneij performed the first PCI via radial access and it is therefore the right time for a position paper on the radial approach. Since 1992, thousands of patients have benefited from this technique, which offers multiple advantages: early ambulation, improved comfort, reduced bleeding risk, shorter hospital stay and reduced cost."

He added: "In recent years, studies have shown a correlation between low bleeding complication rate and low mortality rate, justifying the use of radial access in patients at high risk of bleeding. In the coming years we can expect the radial approach to be the preferred access route for PCI."

More information: Hamon M, Pristipino C, Di Mario C, Nolan J,

Ludwig J, Tubaro M, Sabate M, Mauri Ferre J, Huber K, Niemela K, Haude M, Wijns W, Dudek D, Fajadet J, Kiemeneij F. Consensus document on the radial approach in percutaneous cardiovascular interventions: position paper by the European Association of Percutaneous Cardiovascular Interventions and Working Groups on Acute Coronary Care and Thrombosis of the European Society of Cardiology. *EuroIntervention*. 2013; online publish-ahead-of-print January 2013, [www.pcronline.com/eurointerven ... f_print/20130128-01/](http://www.pcronline.com/eurointerven...f_print/20130128-01/)

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