Does radial access for Percutaneous Coronary Intervention (PCI) result in better patient outcomes compared to femoral access in treatment of ST-segment elevation myocardial infarction?

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Background: PCI is recommended by NICE as an effective intervention in STEMI; however it is not entirely clear whether radial or femoral access is the optimal choice for this procedure. This literature review examines the evidence available and discusses which of the two approaches has the best impact on patient outcomes.

Methods: The following review questions were drawn up to focus research: 1. Does radial access carry a reduced risk of vascular complications compared to femoral? 2. What is the difference in mortality between the two approaches? 3. What is the difference in quality of life between the two approaches? 4. Is there a significant reduction in reperfusion time using femoral access compared to radial? A literature search was conducted on the database MEDLINE. Due to the availability of good evidence on MEDLINE, other databases were not used in our literature search. Criteria included English language papers from 2010-2015. A total of 11 studies were included.

Discussion: Overall, the studies examined revealed fewer vascular complications and a decreased mortality in patients undergoing PCI via radial access compared to femoral. There were no significant changes in quality of life between the two approaches. There were also no significant differences in reperfusion time.

Conclusion: Although femoral has traditionally been the favoured approach for PCI, from the evidence base that across all age groups, it is evident that outcomes are improved using the radial approach. However, there is significant scope for research and innovation to improve techniques for radial access in the future.

Biography
Max and Michael are both medical students in their fourth year, studying at the University of Birmingham. They are both interested in pursuing careers in cardiology and are keen to kick start their research portfolios. This will be their first medical academic conference.

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