

# Research: Improving treatment of patients with heart attack

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When faced with patients suffering a heart attack, doctors have two choices: inject them with medication to dissolve the blood clot (fibrinolytic therapy) or insert a small balloon to open the blocked artery (primary percutaneous coronary intervention (PCI)).

Guidelines for treating heart attacks are generally based on clinical trials that do not take "real-life" conditions into account. The latest study by Dr. Thao Huynh of the Research Institute of the MUHC analyses these gaps and provides potential solutions to improve [treatment](#) of heart attack. Her article was published in the June 23rd issue of *Circulation*.

In this study, Dr. Huynh compares the results of 23 randomized controlled trials conducted under controlled experimental conditions, with the results of 32 observational studies reporting on the treatment of [patients](#) with heart attacks in routine clinical conditions.

Both types of studies show the superiority of PCI over fibrinolytic therapy in reducing mortality and the risk of further episodes of [cardiac arrest](#) and stroke over the short term. However, the advantage of PCI is even more apparent in randomized controlled trials where delays in providing primary PCI are shorter than in routine clinical conditions.

"This study indeed demonstrates that we have to work to reduce these delays if we are to maximize the effectiveness of PCI," explained Dr. Huynh. "When it comes to treating heart attack, reducing delays in providing treatment is the number one priority. It is also essential that

patients with symptoms of heart attack seek prompt medical attention. Delays by patients to seek medical attention may further increase delays to treatment of heart attack. "

Analysis of randomized controlled trials shows that primary PCI also reduces long-term mortality and repeat heart attack. However, this long-term benefit of primary PCI is not observed in observational studies where patients receive treatment within routine clinical conditions.

"The benefit of primary PCI can be lost over the long term if patients are not receiving optimal medical therapy after discharge from hospital. These medications are essential to prevent repeat [heart attack](#)." warned Dr. Huynh.

Source: McGill University ([news](#) : [web](#))

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