

# Chinese study reveals underuse of lifesaving drugs after heart attacks

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Many heart attack patients in China fail to receive beta-blockers which could prevent another event and save their life. The research is presented at the 30th Great Wall International Congress of Cardiology (GW-ICC).

GW-ICC 2019 is being held 10 to 13 October in Beijing, China. Visiting faculty from the European Society of Cardiology (ESC) will hold scientific sessions as part of the ESC Global Activities programme.

Beta-blockers [lower blood pressure](#) and slow down [heart rate](#) by blocking the action of hormones like adrenaline. They are used to treat a number of heart conditions including heart attack, when the [blood supply](#) to the heart is blocked suddenly, and stable angina, when arteries supplying blood to the heart become narrow, causing chest pain.

This study investigated the use of beta-blockers in 13,375 patients with [acute coronary syndrome](#) or stable angina at 67 hospitals in 24 cities in China. The acute coronary syndrome group included patients with ST-elevation [myocardial infarction](#) (STEMI), non-ST-elevation myocardial infarction (NSTEMI), and unstable angina.

Before hospitalisation, 17% of patients were taking beta-blockers. This rose to 95% within 24 hours of admission. However, rates of beta-blocker use at discharge were 35%, 17%, 25%, and 19% for patients with STEMI, NSTEMI, unstable angina, and stable angina, respectively. Most of the patients who were on beta-blockers at discharge received suboptimal doses.

Study author Dr. Jingjia Wang, of the Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing said: 'Without a doubt, beta-blockers have saved the lives of countless patients with coronary [heart](#) disease. These drugs have been widely used for decades, yet our study shows that many patients who should receive them either don't or get doses that are too low.'

He continued: 'Despite adequate use after admission, rates of prescription at discharge were too low. More than half (56%) had no dose adjustment during hospitalisation, suggesting that clinicians are uncertain about the advantages of increasing the dose. To ensure that patients benefit from this treatment, we urgently need a way to monitor the body's response to dose adjustments and a randomised controlled trial to determine the best method of dose titration.'

Professor Yida Tang, one of the Organising Committee Chairmen of GW-ICC 2019 and senior author of the study, said: 'From this research, we can see that clinicians should pay more attention to the timing, dosage and duration of beta-blockers when using it to treat patients with coronary artery disease, especially with acute coronary syndrome. Therefore, it must be noted that the use of beta-blockers needs to be individualised. That being said, beneficial assessment, early dosage, timely usage and adequate titration are the four main principles of utilisation. Equally important, patients should be aware of follow-up regularly to prevent cardiovascular adverse events and side effects to the greatest extent.'

Professor Michel Komajda, a Past President of the ESC and course director of the ESC programme at GW-ICC 2019, said: 'ESC guidelines recommend that nearly all patients with acute coronary syndrome or stable angina should receive a beta-blocker. In addition, patients should be prescribed the maximum tolerated dose to ensure they achieve the best control of symptoms and reductions in complications and premature

death.'

An analysis of 9,174 European patients in the ESC Chronic Ischaemic Cardiovascular Disease registry found that 86% of patients under 75 were prescribed beta-blockers at discharge, falling to 78% in those 75 and older. Only half of patients were taking all recommended medications (ACE inhibitor, [beta-blocker](#), aspirin, statin) - again this was higher in younger compared to older patients (62% versus 46%, respectively).

Professor Komajda concluded: 'Thanks to cardiovascular research we have lifesaving therapies, but many patients remain undertreated. The ESC will continue to collaborate with its partners to advocate for improvements in access and adherence.'

Provided by European Society of Cardiology

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