

11 local institutes team up for study on heart failure

Major multi-agency project aims to learn more about condition and treatment options

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For half of those diagnosed with heart failure, there is no treatment that works – let alone a cure.

But scientists here are embarking on an ambitious project to learn more about the disease, prevent it and eventually treat those who suffer from it.

With more than 1,000 patients,

nine local research institutes and both national specialist heart centres on board, the study promises to be the most extensive ever done here on the subject. Having so many agencies on board means the study will be able to benefit from each one's expertise.

"When you tell patients they have heart failure, they don't seem to flinch," said programme lead Carolyn Lam, a senior consultant at the

National Heart Centre Singapore.

"But... I'm not talking about having a heart attack at 60. I'm talking about heart failure – end-organ failure. That's devastating."

Heart failure sufferers often experience breathlessness and fatigue to a point where even getting out of bed is a chore.

There are no accurate estimates of how common the condition is here. However, according to a 2010 local study, about 20,000 residents previously hospitalised for heart failure were still alive that year.

While one variant of heart failure – where the heart loses its ability to

pump – can be treated, at least half of heart failure patients fall into another category. For this group, the heart is able to pump but cannot relax properly, meaning it is unable to fill with blood.

This is becoming more common, said Dr Lam, and no effective treatment has been found.

Her team of scientists hope to pool their expertise, studying their patients to the level of their genes. They will be analysing the data found in their MRI scans, blood samples and biopsies of body tissue.

The goal is to be able to pick up heart failure cases earlier and tailor

treatment to their needs, based on their genetic make-up. "Usually, we diagnose cases when they come in with symptoms," Dr Lam said. "By then, they are already very breathless and limited in activity."

The multi-agency study is coordinated by the Agency for Science, Technology and Research (A*Star), and involves organisations such as the Genome Institute of Singapore and the Duke-NUS Graduate Medical School.

Seven of the nine research institute directors will also be directly involved, as well as pharmaceutical companies such as AstraZeneca.

One benefit is that doctors in clinics and researchers in laboratories will be working and discussing their results with one another.

"What has happened in the past is that (research) happens in different pockets in different institutions," said Dr Benjamin Seet, executive director of the Biomedical Research Council at A*Star. "But what we need to really make an impact is for people to work together."

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