Patient

Artificial intelligence could detect irregular heartbeats

Experts believe artificial intelligence can spot irregular heartbeats before doctors can.

Computer modelling can identify signs of atrial fibrillation (AF), a condition used to describe irregular heartbeats.

The research, published in The Lancet, looked at electrocardiogram (ECG) scans from 181,000 US patients with pre-existing heart conditions between 1993 and 2017.

Computer modelling was used to look out for what doctors believe are subtle signs of past irregular rhythms - including scarring of the heart - that cannot be spotted by the human eye on ECGs.

The modelling correctly identified AF in 83% of cases.

The sooner the condition is identified, the sooner treatment can be given to prevent it from getting worse.

Dr Paul Friedman, of the Mayo Clinic who led the research, said it showed 'real potential'. "It is like looking at the ocean now and being able to tell that there were big waves yesterday."

Prof Charalambos Antoniades, Professor of Cardiovascular Medicine, University of Oxford, said: "This is an exciting and high-quality study with a large number of participants, demonstrating that artificial intelligence can see what is not visible to the human eye. Detecting atrial fibrillation before doctors can, by an algorithm reading normal ECGs, could enable patients to be treated early with anti-blood-clotting medication and may save lives."

Despite the promising findings, the authors said the AI detected AF in some of the 'healthy' participants in the study, meaning there could be a large number of false positives with this technique. More research needs to be done to ensure that patients are not misdiagnosed.

Professor Tim Chico, an expert in cardiology at the University of Sheffield, said: "This AI-based approach could provide a revolutionary advance, although it's important to note that this research is still in the early stages and we need to see replicated results, and how the algorithm responds when tested on the general population."

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