Research Improving Rheumatoid Arthritis Treatment

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A new test could lead to better treatment for patients with rheumatoid arthritis in Staffordshire, following extensive collaborative research by University Hospitals of North Midlands NHS Trust (UHNM), Staffordshire and Stoke-on-Trent Partnership NHS Trust (SSOTP) and Keele University.

The test identifies 'epigenetic' markers in patients, showing which are likely to respond to treatments for rheumatoid arthritis, and which are not likely to respond. This means that patients can now avoid unnecessary side-effects from current treatments, and ensure the most effective course is taken for their care.

Rheumatoid Arthritis is an autoimmune disease which causes inflammation of joints and the surrounding tissues. The disease affects more than 400,000 people in the UK and is often seen in those between 40 and 50 years of age, with women being three times more likely to be affected than men.

Supported by funding from the Haywood Rheumatism Research and Development Foundation, researchers screened 450,000 markers in the blood of newly diagnosed patients, and found that two of these markers, when looked at in combination, predicted a positive response to treatment in more than 96% of cases.

Professor Tony Fryer, Consultant Clinical Biochemist at the Trust and senior author of the research paper, said: "The availability of new technologies has allowed us to identify new markers for treatment response in rheumatoid arthritis that will enable us to tailor medications that give the best results for each individual patient."

Dr Jonathan Packham, Consultant Rheumatologist at SSOTP and Clinical Senior Lecturer at Keele University, worked alongside Prof Fryer on this paper. He said: "A test which shows patients unlikely to respond to first line medicines would transform the effectiveness of treatment for patients being diagnosed with rheumatoid arthritis."

After gaining interest within the field, this study was last month published in a special edition of the research journal, Epigenomics.

Joseph Martin, Commissioning Editor of Epigenomics, said: "It has been a pleasure to work with Professor Fryer and colleagues in such an advancing field.

"We hope the published article will highlight how epigenetic profiling could be used to identify biomarkers associated with current treatment response in rheumatoid arthritis. This in turn may

provide the opportunity for clinicians to optimize treatment options for this autoimmune disease."

This article can be found here: http://www.futuremedicine.com/doi/abs/10.2217/epi-2016-0042?journalCode=epi