Deprivation is associated with reduced response to TNF inhibitors in people with rheumatoid arthritis

Socioeconomic deprivation is associated with reduced response and lower treatment persistence with TNF inhibitors in rheumatoid arthritis

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What was already known?

Health is closely linked to how much money or other resources people have (known as level of deprivation), and different health outcomes based on these factors are called "health inequalities". These may be because of factors affecting, or choices made by, the individual such as smoking. Health inequalities may also occur because of things like local facilities (e.g. the availability of bus routes to attend the hospital), healthcare systems (e.g., access to appointments outside of working hours so people don't have to take time off work) and providers (e.g., the behaviours and biases of doctors, nurses and other healthcare professionals).

Previous studies have shown that, in people with rheumatoid arthritis (RA) from more deprived backgrounds, certain types of treatment for RA work less well than in people from less deprived backgrounds. We investigated whether deprivation influenced how well people respond to newer treatments, namely TNF inhibitors (the most commonly used of the newer treatments).

What was discovered?

We combined data from the BSRBR-RA and BRAGGSS studies to give around twenty thousand individuals with RA. Deprivation was measured according to where participants lived, based on factors such as income, employment, education, health deprivation and disability.

We found that people from more deprived areas were less likely to respond to TNF inhibitors. The chance of people from the most deprived backgrounds going into remission was 20% lower compared to people from the least deprived areas. Deprivation was also associated with a greater chance of stopping the medication, for example, average time on a TNF inhibitor was around one year shorter in the most compared to least deprived groups.

We also investigated whether this was explained by factors such as smoking and obesity, but this did not change the influence of deprivation on response to treatment.

Why is this important/what is the benefit to patients?

People with RA from more deprived areas have worse treatment outcomes, even after accounting for lifestyle factors. Factors that influence health, such as access to care and provision of care, may need to be addressed to reduce the gap between the richest and the poorest.

Should you wish to read this scientific paper in full, the text can be found online here:
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