Clinical effectiveness and cost-effectiveness of use of therapeutic monitoring of tumour necrosis factor alpha (TNF-α) inhibitors [LISA-TRACKER® enzyme-linked immunosorbent assay (ELISA) kits, TNF-α-Blocker ELISA kits and Promonitor® ELISA kits] versus standard care in patients with Crohn's disease: systematic reviews and economic modelling

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Plain English summary

Therapeutic monitoring of TNF-α inhibitors vs. standard care

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Plain English summary

Crohn's disease is a serious chronic inflammatory condition of the digestive tract. It currently affects about 115,000 patients in the UK. Severely ill patients can be treated with drugs called infliximab and adalimumab.

These are expensive drugs for the NHS. Some patients improve on them, whereas others improve initially but then lose response. One cause of lost response is that the patient develops antibodies against the drug which cancel out the effect of treatment.

Tests have been developed to measure both the level of drug and the level of antibodies against these drugs in the patient's blood. The idea is that treatment can be adapted in response to the test outcomes to ensure that the patient is on the best treatment for them.

In this assessment we systematically reviewed the literature for three of these new tests and combined the results to obtain our own estimates of clinical effectiveness and cost-effectiveness.

We found that no test accurately measures levels of drugs or antibodies to drugs and that tests disagree, which means that it is difficult to assess the effectiveness of new tests. The model drew mainly on evidence from two randomised controlled trials using infliximab and showed that, compared with standard care, testing appeared to be more costly and less effective.

We conclude that more evidence is required to tell us how the tests and the treatment options prescribed by the test results can benefit the management of patients with severe Crohn's disease.

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