

Results of clinical trial on the use of a drug for treating NASH

Non-alcoholic Steatohepatitis (NASH) is a form of liver disease which is on the increase. It is directly related to the general population becoming obese or overweight, particularly in western countries. It is a specific type of fatty liver disease which occurs when the liver becomes damaged due to an overload of fatty deposits. The excess of fat can lead to liver fibrosis/cirrhosis, which is scarring, thickening and hardening of the liver and connective tissue. NASH can ultimately increase the risk of total liver failure which means a liver transplant is required, or patient death can occur.

Although not everyone who is overweight or obese will have fatty liver disease, a person is more at risk of developing liver disease if they are overweight.

At present the only known treatment for NASH and obesity is a reduced fat/low calorie diet and an increase in exercise in order to lose weight and reduce the amount of fat contained within the Liver. Although the cure seems simple, in reality, initiating a lifestyle change in patients or the general population is very difficult and medical intervention is often required.

The clinical trial

The National Institute for Health Research (NIHR) Birmingham Liver Biomedical Research Unit (BRU) has coordinated a ground-breaking clinical trial relating to NASH, which is the first of its type in the world to look at a specific drug treatment*. This trial involved the University of Birmingham and the NHS (University Hospitals Birmingham) forming collaborative partnerships with three other UK hospitals (based in Nottingham, Leeds and Hull), the Pharmaceutical industry and other academic funders/institutions.

The drug involved was Liraglutide (Victoza®) which is currently licenced for the treatment of Type II diabetes (<http://www.victoza.com/>). Victoza® is a drug manufactured and licenced by Novo-nordisk and is administered in the form of an injection. The patient self-injects which means the treatment can be administered at home, directly into the stomach, biceps or other fleshy part of the body.

The clinical trial recruited 52 UK patients with a history of NASH. Forty five of these patients had two liver biopsy's (one at the start of the study prior to treatment, and one at the end of the study after 48 weeks). Seven did not complete the full 48 week clinical trial so the outcome of their treatment could not be included in final results. The treatment was found to be effective as 9 out of 23 patients (39 percent) who received active medication no longer indicated the

presence of NASH in the final liver biopsy. This was compared to only 2 out of 22 patients (9 percent) in the placebo arm. Any side effects of the medication were mainly mild and well tolerated by patients.

Outcome

After 48 weeks of therapy, the livers of some patients actually started to recover from the damage caused by the fat which had been deposited within the liver, and individual cells. Additionally, patients in the active treatment group showed a higher level of weight loss whilst receiving medication. Unfortunately however, after they stopped taking the medication the majority of patients started to regain the weight they had lost whilst participating in the trial.

What does this mean?

This is the first clinical trial to show the potential benefit of a medical intervention outside 'diet change and exercise'. In addition this is the first study to show clearance of NASH using a traditional diabetic licenced therapy.

The results of this study are extremely encouraging and indicate that a larger study is now warranted to prove that the drug is effective in high numbers of patients. A larger (phase III) study is essential before the drug can be approved and licenced for use in the general population. This therapy is therefore not currently available on the NHS.

The results of this trial were presented at European Association for the Study of the Liver (EASL) in April 2015, which is the largest international liver conference in the world with over 10,000 attendees, and was awarded best research/clinical abstract.

** This clinical trial was the first randomised, phase II placebo controlled clinical trial in GLP-1 analogues in NASH in the world.*

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This trial summary has been co-written by patients, public and researchers for members of the public.

Key researchers on this trial: Prof Philip Newsome, Dr Matthew Armstrong

For questions/enquiries on clinical trials email: LiverResearch@contacts.bham.ac.uk

Further information on the NIHR Birmingham Liver BRU: www.birmingham.ac.uk/liver

Information on obesity: <http://www.nhs.uk/conditions/Obesity/Pages/Introduction.aspx>



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