Spines in the media: Antibiotics could cure 40% of back pain.

Recently, it has been discussed in the press that 40% of all chronic lower back pain could be cured by taking a long course of antibiotics. Here, we aim to answer some of the questions you may have about this.

Researchers in Denmark carried out a research trial looking into a specific type of lower back pain and its potential treatment. Patients selected for this study had to meet the following criteria

- Lower back pain for 6 months or longer
- Previous disc herniation affecting L3/4, L4/5, or L5/S1
- Modic type 1 changes (specific changes seen on MRI scanning) in the bone adjacent to the level of herniation
- Aged 18-65 years.

162 patients were selected for this 1-year study. One group was given a 100 day course of antibiotics; the other group was given 100 days of a placebo. After 1 year, statistically, the patients in the group given the antibiotics, noted improvement in the intensity of pain, night pain and pain during flexion and extension of the spine – bending forwards and backwards. In the patients who took antibiotics, 55.8% reported a reduction of constant pain, whereas only 5.9% in the placebo did, after 1 year. The difference in number of working days lost due to back pain, during that period, was similar in both groups. At the start of the study 100% of patients in the antibiotic group reported back pain, and at 1 year 67.5% reported back pain.

This research is promising, for highly selected patients with appropriate MRI findings, but the trial group is small. Further studies will need to be established before this type of treatment changes current practice.

This type of antibiotic treatment is known MAST – Modic Antibiotic Spine Therapy. Your physician or surgeon must be trained in recognising the MRI changes and distinguish this pain from that of the other causes of lower back pain.

Here at London Spine Clinic, Dr Simon Blease, Consultant Radiologist is certified with MAST in the identification of Modic changes on MRI.

What are Modic changes, and do I have them?

Modic Changes, named this after the person who first reported them, are found in the bone of a vertebral body, neighbouring a damaged disc. They are seen on MRI. Professor Michael Modic reported 3 types of Modic Changes.

Type I. An acute reaction, shows that there is marrow oedema in the bone surrounding a herniated or damaged disc.
Type II. A more chronic process, where there is fatty change in the subchondral marrow (the area near the disc). This type of change shows a more chronic condition.
Type III. Dense bone has now replaced the marrow, which takes many years.

It is only Modic 1 changes that are concerned with this trial, and it should be identified on an MRI scan.

What does MAST treatment involve?

You will need to take a particular antibiotic 3 times a day for 100 days.

Are there any side effects?

65% of patients during the trial suffered side effects. These included Gastro Intestinal complaints, loose motions, increased flatus and burping. 27% of these patients suffered from loose motion for three weeks or more. It is not advisable to drink any alcohol whilst you are undergoing this treatment. 4 patients (2.8%) had to stop taking the drugs because of this.

Is there any further evidence to support this treatment?

There have been other published papers to suggest that there may be a bacterial component to back pain, but this is the first to suggest an antibiotic treatment. This study is still in its early stages, and may need larger clinical trial sites to confirm its efficacy.

Will MAST treatment help me?

There is no guarantee that this treatment will work for you. As mentioned on the previous page, this treatment may only work for 44% of patients who have these specific MRI changes associated with lower back pain. Martin Underwood, professor of primary care research at Warwick Medical School and who has chaired National Institute for Health Care Excellence (NICE) guidelines on lower back pain, told the BMJ:-

“These are promising preliminary findings, but it is too soon to start changing practice on their basis until they have been replicated in other studies and in other populations.” He went on, “These findings are only relevant to a small minority of people with chronic back pain who have both degenerative changes and evidence of Modic changes.”

Is there an alternative?
What shall I do now?

There are many good treatments for back pain, but first you must get a diagnosis. This involves being examined and having an MRI scan, to know where the pain is likely to be coming from. Treatments include wearing a support (transiently), using medication, having injections, exercises and even surgical treatments. For more information on these, visit www.londonspineclinic.com