LUNA: a randomised controlled trial to assess the efficacy of laparoscopic uterosacral nerve ablation in the treatment of chronic pelvic pain

Background

Chronic pelvic pain remains a huge problem with a dramatic effect on womens lives. Surgical destruction of nerves in the uterosacral ligaments, thought to carry pain signals from the uterus to the brain, by laparoscopic uterosacral nerve ablation (LUNA) was thought to be a treatment option for these patients.

What was the LUNA trial?

This multicentre, single blinded, trial randomised 487 women with chronic pelvic pain to either receive the LUNA procedure (bilateral pelvic denervation) or not (laparoscopy with no pelvic denervation) and assessed the effectiveness of this procedure in alleviating pain. Women with chronic pelvic pain lasting longer than 6 months with or without minimal endometriosis, adhesions, or pelvic inflammatory disease were recruited by gynaecologists from UK hospitals between February 1998 and December 2005. Follow-up questionnaires were sent out to patients at 3 and 6 months, and 1,2,3,5 and 10 years after randomisation.

The primary outcome measure was the worst type of pain reported (pain during periods, pain during intercourse, non-cyclical pain), which was assessed using the visual analogue scale (a 0 -100 scale). Quality of life was a secondary outcome, measured using EuroQoL EQ-5D. Information on sexual activity and resource usage was also collected

What did the study find?

The trial showed that on average, LUNA did not improve pain, compared to only having a diagnostic laparoscopy (camera investigation). All women in the trial reported that their pain dropped from about 8 out of 10 (where 10 is worst pain imaginable) to about 5 out of 10 by 6 months after surgery. There was no difference between the LUNA and NO LUNA group though.

Remember, this is the average result. Some women will have had much greater reduction in pain, and in some women unfortunately their pain may have got worse. We look at the average because obviously that is the most likely outcome. Reported pain in both groups remained at about 5 out of 10, on average up to 5 years after surgery. This suggests it doesn't get worse and worse, but also neither does it give hope that the pain might go away in a few years. Again, this is the average situation. It would be impossible to say what will happen for an individual from this trial.

The trial concluded that the LUNA procedure was **not** effective in treating women with chronic pelvic pain.

What impact will this study have?

Gynaecologists have stopped using the LUNA technique, reducing the risk of operative injury. Women are not given false hope that LUNA will alleviate pelvic pain. We are now looking at whether **certain symptoms can predict whether women need to have a diagnostic laparoscopy (/research/activity/mds/trials/bctu/trials/womens/medal/index.aspx)** .

Publications

- **Individual patient data meta-analysis of randomized evidence to assess the effectiveness of laparoscopic uterosacral nerve ablation in chronic pelvic pain. (http://www.ncbi.nlm.nih.gov/pubmed/20634210)** Daniels JP, Middleton L, Xiong T, Champaneria R, Johnson NP, Lichten EM, Sutton C, Vercellini P, Gray R, Hills RK, Jones KD, Aimi G, Khan KS; International **LUNA** IPD Meta-analysis Collaborative Group. Hum Reprod Update. 2010 Nov-Dec;16(6):568-76. Epub 2010 Jul 15.
- **Laparoscopic uterosacral nerve ablation for alleviating chronic pelvic pain: a randomized controlled trial. (http://www.ncbi.nlm.nih.gov/pubmed/19724042)** **Daniels J**, Gray R, Hills RK, Latthe P, Buckley L, Gupta J, Selman T, Adey E, Xiong T, Champaneria R, Lilford R, Khan KS; **LUNA** Trial Collaboration. JAMA. 2009 Sep 2;302(9):955-61.
- **Meta-analysis using individual patient data from randomised trials to assess the effectiveness of laparoscopic uterosacral nerve ablation in the treatment of chronic pelvic pain: a proposed protocol. (http://www.ncbi.nlm.nih.gov/pubmed/17995500)** Xiong T, **Daniels J**, Middleton L, Champaneria R, Khan KS, Gray R, Johnson N, Lichten EM, Sutton C, Jones KD, Chen FP, Vercellini P, Aimi G, Lui WM; International **LUNA** IPD Meta-analysis Collaborative Group. BJOG. 2007 Dec;114(12):1580, e1-7. Review.
- **Variation in practice of laparoscopic uterosacral nerve ablation: a European survey. (http://www.ncbi.nlm.nih.gov/pubmed/15369938)** Latthe PM, Powell RJ, **Daniels J**, Hills RK, Gray R, Gupta JK, Khan KS. J Obstet Gynaecol. 2004 Aug;24(5):547-51.

The LUNA study was funded by **Wellbeing of Women (http://www.wellbeingofwomen.org.uk/research/grants-awarded/2002-grants/?art=73)**

For more information

Long-term pelvic pain: information for you (http://www.rcog.org.uk/womens-health/clinical-guidance/long-term-pelvic-pain-information-you)

Pelvic Pain Support Network (http://www.pelvicpain.org.uk/)

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