Single-incision mini-slings versus standard synthetic mid-urethral slings for surgical treatment of stress urinary incontinence in women: The SIMS RCT

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The SPFN provided an educational grant funding the principal investigator at the highest-recruiting site to attend the International Continence Society annual scientific conference in Brazil in 2014. He receives travel sponsorship and occasionally speaker's fees from numerous national and international conferences and non-profit organisations when invited as guest speaker and/or expert surgeon. In 2019, and at request from NHS Grampian, he attended two educational meetings for setting up a sacral nerve stimulation service partially funded by Medtronic plc (Dublin, Ireland). He is chief investigator for four NIHR HTA-funded studies. He does not hold (and never held) any shares (or similar) in any of the industrial companies (medical or non-medical). To the best of his knowledge, none of the above has influenced his research or clinical practice.

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Plain English summary

The SIMS RCT

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Plain English summary

Stress urinary incontinence, the involuntary leakage of urine, is a common and distressing condition, particularly for women aged > 40 years. In the UK, it is estimated that 6 million (40%) of this age group have symptoms bothersome enough for doctors to investigate. It causes embarrassment, low self-esteem and even social isolation.

Standard surgical treatment used to be a mid-urethral sling made of mesh, inserted, in most cases, under general anaesthetic. Recently, a single-incision mini-sling, using less mesh, has been available under local anaesthetic. A number of small studies have shown that mini-slings have similar success rates to those of standard slings, necessitate shorter hospital stays and are less painful immediately after surgery. However, these results were uncertain and the potential longer-term benefits and disadvantages of both types of sling treatments were unknown.

We compared the two types of sling treatments in a randomised trial of 600 women to see if they were equally effective. Success was measured by asking women to report on their symptoms and experiences. We also collected information on safety, quality of life, sexual function, and costs to women and the NHS. Every participant had an equal chance of starting treatment with the standard sling or the mini-sling. Participants were followed up for 3 years.

Women allocated to each treatment reported similar success rates, quality of life and sexual function at 3 years. Women who received the new mini-sling had more mesh exposure (3% for the mini-sling vs. 2% for the standard sling) and were more likely to report pain during intercourse (12% vs. 5%) than women who received the standard sling. Both treatments had similar costs. Follow-up to 10 years is under way to establish the long-term benefits and disadvantages.

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This report

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