Tamsulosin or nifedipine for ureteric stones: Results from the SUSPEND trial

Ureteric colic is the pain felt when a stone passes down the ureter from the kidney to the bladder and is a frequent reason for people to seek emergency health care. Treatment with the muscle-relaxant drugs tamsulosin and nifedipine as medical expulsive therapy (MET) improves the likelihood of spontaneous stone passage and lessens the need for interventional procedures. However, there remains considerable uncertainty around the effectiveness of these drugs for routine use.

SUSPEND (Spontaneous Ureteric Stone Passage Enabled by Drugs) was an NIHR-funded, double blind, pragmatic randomised controlled trial designed to compare tamsulosin and nifedipine with placebo in the treatment of ureteric stone disease.

Urology departments in 24 UK hospitals recruited 1,167 participants aged 18-65 years, presenting as an emergency case with a single ureteric stone <10 mm. Participants were randomised to receive tamsulosin (400 µg), nifedipine (30 mg) or placebo daily for up to four weeks. The primary effectiveness outcome was the proportion of participants who spontaneously passed their stone.

In the placebo group, 80% (303/379) of participants did not need further intervention by four weeks, compared with 81% (307/378) in the tamsulosin group and 80% (304/379) in the nifedipine group. No statistically significant difference was noted between active treatment and placebo, or between tamsulosin and nifedipine. There was no evidence of a difference in quality-adjusted life years gained or in cost between the trial groups. These findings were unchanged by extensive sensitivity analyses around predictors of stone passage, including sex, stone size and stone location.

The study concluded that tamsulosin and nifedipine did not increase the likelihood of stone passage and use of these drugs are unlikely to be cost effective to the NHS.

For further information, please contact Sarah Cameron, sarah.cameron@abdn.ac.uk, 01224 438120.

Professor Adrian Grant: a tribute

It was with great sadness that we heard of the passing of our friend, colleague and former Director, Professor Adrian Grant, on the 16th of August 2015, from ocular melanoma.

Following an early career obstetrics post in Queen Charlotte’s Hospital London, Adrian was recruited to Oxford in 1980 to set up the National Perinatal Trials Unit – which would become one of the most productive perinatal trials research group in the world. Following a very successful 14 years in Oxford, Adrian was recruited to become Director of the Health Services Research Unit (HSRU) in 1994, a post which he held until 2006. Under Adrian’s leadership, HSRU doubled in size and became one of the leading health services research units in the country.

Adrian was passionate about evidence-based healthcare and championed the use of systematic reviews and randomised controlled trials. Under his leadership, HSRU established two Cochrane Groups and became one of the national evidence review groups providing the evidence underpinning NICE guidance, and (with Sheffield) became the evidence review body for the UK Intervventional Procedures Committee. Through these initiatives, HSRU now has one of the largest evidence synthesis and health technology assessment groups in Europe.

Under Adrian’s leadership, HSRU’s ability to design, conduct and analyse large scale randomised controlled trials was also transformed. Early in Adrian’s tenure, he initiated the development of our fully automated 24-hour, 7-day computerised randomisation service – the first such service to be provided in the UK. He also drove the development of a fully professionalised trials service, culminating in the launch of our formal clinical trials unit – the Centre for Healthcare Randomised Trials (CHAART) – in 2004.

In everything, Adrian’s hallmark was excellence and his contribution to the success of HSRU was immense. He was an opinion leader in his field and known all over the world for his razor-sharp mind, his strategic vision and his attention to detail. He was wise, generous and a steadfast colleague and friend to us all. We will miss him greatly.

http://twitter.com/hsru_aberdeen
**Early Detection of Neovascular Age-related Macular Degeneration (AMD): The EDNA Study**

“Wet” or neovascular age-related macular degeneration (nAMD) is a leading cause of sight loss in older people. It is caused by leaky and fragile blood vessels in the macula (the back of the eye). Managing nAMD presents an enormous burden to the NHS. If detected early, injections into the eye can stop eyesight deteriorating further. Around one quarter of patients will develop nAMD in the second eye within 3 years of the first eye being diagnosed. So, early detection of nAMD could mean that sight could be better preserved in the longer term.

The EDNA study aims to determine the best diagnostic test or tests for the early detection of nAMD and is funded by the National Institute for Health Research Health Technology Assessment Programme (project 12/142/07). We are evaluating five non-invasive diagnostic tests which are easily performed and routinely carried out in the NHS and which fall into two groups; functional and morphological. The functional tests are visual acuity (measured using a standard sight chart), Amsler test (a standard grid pattern used to mark areas of damaged vision) and self-reported quality of sight. The morphological tests are fundus examination and optical coherence tomography (OCT). We will compare these test results with a reference standard measurement of a fluorescein angiogram (FFA), an enhanced imaging technique which uses a fluorescein dye to highlight the blood vessels.

The study is a multi-centre prospective cohort diagnostic accuracy study with 3 year follow-up. Participants are those who have recently been diagnosed with nAMD in one eye and have an unaffected second eye. Once enrolled into the study, the participants will be monitored following standard clinical practice in the diseased eye. Abnormal test results in any of the diagnostic tests will trigger a reference standard measurement to confirm the presence of nAMD. All patients will be followed-up according to standard clinical practice until confirmed treatment for nAMD in the unaffected second eye or until 3 years from enrolment, whichever is sooner. A health economic model will be developed to evaluate the cost-effectiveness of the alternative tests or test combinations.

The EDNA study started in January 2015 and is currently recruiting participants with newly diagnosed nAMD from around 20 UK hospitals.

**For further information, please contact Katie Banister, k.banister@abdn.ac.uk, 01224 438092.**

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**PhD theses submissions**

Two PhD candidates who have been based in HSRU, Nicola McCleary and Brian Power, have recently submitted their theses, and both have passed the subsequent oral examination.

Nicola’s PhD aimed to use patient scenarios (clinical/case vignettes) to explore three aspects of General Practitioners’ (GPs’) clinical decision-making: how difficult decisions are perceived to be; the time taken to make decisions; and the appropriateness of decisions relative to evidence-based clinical guideline recommendations. The PhD involved four studies: a systematic review; a secondary analysis of scenario studies; an online study where GPs made antibiotic prescribing decisions for upper respiratory tract infection (URTI) scenarios; and a Think-Aloud study where GPs verbalised their thoughts while making prescribing decisions for URTI scenarios. Inappropriate prescribing was associated with greater decision difficulty and longer decision time; decisions made using a more effortful cognitive process may therefore be less likely to be appropriate. Illness durations of four or more days and, in otitis media (a specific URTI type), unilateral ear examination findings were related to inappropriate prescribing. Based on these results, suggestions have been made for informing the design of interventions to support GPs in making appropriate decisions. Methodological recommendations for scenario studies have also been developed.

Brian’s PhD aimed to develop recommendations for a workplace intervention to change nurses’ eating and physical activity behaviours. The PhD involved (a) a systematic literature review, (b) qualitative interviews to identify factors that may influence nurses’ eating and physical activity behaviours, (c) a survey of nurses, and (d) development of intervention recommendations in terms of (i) intervention functions and policy categories using a Behaviour Change Wheel and (ii) theory-based behaviour change techniques using a behaviour change technique taxonomy.

The systematic reviews showed that workplace interventions are effective in decreasing nurses’ body weight. The qualitative interviews and survey identified that key determinants included: environmental context and resources; behavioural regulation; emotion; beliefs about consequences; and knowledge and optimism. Based on this behavioural diagnosis, 24 behaviour change techniques were chosen and combined into a potential workplace intervention, which is now ready to be formally evaluated.

**Award of funds to Dr Heather Morgan**

Dr Heather Morgan has recently been awarded funds through the Institutional Strategic Support Fund (ISSF) at the University of Aberdeen to develop her research on the use of wearable technologies and apps to support people with chronic conditions.

The ISSF is a competitive scheme which was awarded to the University of Aberdeen by The Wellcome Trust. The strategic remit of the Aberdeen ISSF includes Applied Health Sciences, particularly through the Chief Scientist Office-funded Health Services Research Unit. It is designed to support the preparation of fellowship applications within The Wellcome Trust’s remit and within the context of the University’s highly successful fellowship management scheme and as part of its commitment to recruiting and retaining the highest calibre Early Career Researchers.

Heather was delighted to receive this prestigious award and said “These funds will enable me to undertake an evidence synthesis in this underexplored area from which to identify and develop questions for further research to take forward in applications for fellowships. The project also involves knowledge exchange with key stakeholders and promotes networking with colleagues, enhancing research impact through its translation and dissemination and facilitating interdisciplinary research within and beyond the University.”

**For further information, please contact Heather Morgan, h.morgan@abdn.ac.uk, 01224 438192.**
Dupuytren's disease is a benign, slowly progressive condition of the hand, where one or more fingers bend (contract) into the palm (referred to as Dupuytren's contracture) and cannot be straightened fully. Usually, Dupuytren's contracture is not painful and often the contracture remains mild and does not require treatment. When it becomes more severe or the fingers cannot be used properly, surgery is the treatment of choice but many people experience complications and/or recurrences. Injections of collagenase clostridium histolyticum (a new substance that can weaken the contracture in the palm) may be used as an alternative to surgery in some patients.

This NIHR funded research systematically reviewed the current evidence on effects of collagenase clostridium histolyticum compared with those of surgical interventions for the treatment of adults with Dupuytren's contracture with a palpable cord.

The findings showed that joints treated with collagenase were more likely to achieve clinical success, experienced significant reduction in contracture and increased range of motion than those treated with placebo. Participants treated with collagenase, however, experienced significantly more adverse events, although these were generally mild or moderate. Amongst people considered to be suitable candidates for surgery, surgical treatments appear more cost-effective, more specifically, percutaneous needle fasciotomy or limited fasciectomy. However, there are uncertainties in the data used for the economic evaluation and evidence on long-term effectiveness, recurrence rate, and risk of complications of collagenase is still lacking. Therefore, sound clinical studies are needed to compare the effects and costs of collagenase injections with those of current surgical treatments for Dupuytren's contracture.

For further information, please contact Miriam Brazzelli, m.brazzelli@abdn.ac.uk, 01224 438082.

New Huntington’s disease Research Training Fellowship awarded to Daniela Rae

Huntington's disease (HD) is a devastating and complex, inherited neurodegenerative disorder characterised by a progressive movement disorder, cognitive impairments, personality and neuropsychiatric changes. It is estimated that around 4-12 in 100,000 people in Europe have HD. There is currently no curative or disease modifying treatment for HD available and management strategies are aimed to alleviate symptoms and improve quality of life.

The complexity of HD and its progression over time mean that individuals with HD require the care and support of a variety of generic and specialist health, social care and voluntary services. Little is understood about how the different disciplines and agencies interact, how they are configured and whether they are indeed delivering effective services for patients. Recent research efforts have concentrated on measuring clinical outcomes whereas organisational and patient perspectives have been lacking. It is important to move beyond clinical health outcomes such as motor and cognitive functioning, and determine what matters to patients who are experiencing the care delivered by the service.

The project will draw upon a mixed methods approach and will include: 1) a comparative case study of HD care delivery networks in the UK using interviews with key stakeholders, document review and questionnaires to collect data; 2) the development of a core outcome set, which seeks opinion of stakeholders by utilizing qualitative data and consensus methods (Delphi) to establish what outcomes should be considered ‘core’ when evaluating care services in HD.

For further information, please contact Daniela Rae, d.rae@abdn.ac.uk, 01224 438154.

Staff Profile: Caroline Burnett

Caroline Burnett is HSRU’s Office Manager and joined HSRU in March 2010. Her responsibilities include providing PA support to the Unit Director, the Health Care Assessment Programme Director and the Professor of Health Technology Assessment and she oversees and supervises the activities of the general office staff and project secretaries. Caroline currently line manages 3 secretaries, 1 receptionist and 8 data co-ordinators. Caroline previously worked at the Robert Gordon University as PA to the Head of School of Nursing and Midwifery, and also gained many years’ experience in the private sector.

Staff News

We welcome the following staff to the Unit: Terry Porteous, Daniela Rae, Andrea Fraser, Heidi Gardner.

The following staff have recently left the Unit and we wish them well: Elaine Adam, Kirsty Kiezasbrink.
A Geospatial Evaluation of Systems of Trauma Care for Scotland: The GEOS Study

In 2013, the Scottish Government committed to developing a trauma system – a clinical network of trauma centres, supported by emergency medical services – in order to reduce death and disability from major trauma. A recent similar reorganisation in England has had a dramatic impact on outcomes.

The key issue for Scotland, given its geography, is how such a system should be configured. Major trauma centres require a certain case volume to justify the development of specialist trauma services. A trauma system therefore has to balance accessibility and specialist care.

The GEOS study involved a year-long prospective data collection, by the Scottish Ambulance Service, of where trauma incidents occurred, and what level of care (major trauma centre, trauma unit, or local emergency hospital) patients required. This information was then used to conduct a mathematical modelling of all theoretically possible trauma system configurations. The best-performing configurations were selected using multi-objective optimisation, a technique used to balance conflicting objectives.

More than 80,000 patients were included, around 7,000 of whom were triaged to major trauma centre care. GEOS revealed that the optimal configuration of trauma system for Scotland would have a single major trauma centre, in Glasgow, or two major trauma centres, in Glasgow and Edinburgh. Both of these configurations would ensure a sufficient institutional volume to justify specialist services, as well as reasonable access times for the majority of patients. A trauma system is not only about major trauma centres, however, and other centres, in particular trauma units, would have a key role in the initial management of patients in more remote areas, such as the North of Scotland. Such a system would require additional helicopters to retrieve and secondarily transfer patients.

The results of the GEOS study are feeding directly into the National Planning Forum’s formal deliberations on how Scotland’s trauma system should be taken forward.

For further information, please contact Jan Jansen, jan.jansen@abdn.ac.uk, 01224 552956.

Recent publications


