

GOOD FOUNDATIONS

Associate Professor Eric Chung is laying the groundwork for a trauma protocol that will improve outcomes for urological patients

Queensland Urological Surgeon Associate Professor Eric Chung is conducting research that could lay the foundations for the development of a comprehensive trauma protocol in Australia designed to manage patients with pelvic injuries at risk of genitourinary complications.

A/Prof Chung has used the findings of a retrospective 10-year review of the urological outcomes for pelvic injury patients to design a comprehensive trauma treatment protocol aimed at reducing complications such as urinary incontinence, urethral stricture, recurrent infection and sexual dysfunction.

This Australian-first protocol, which is in the process of being trialled at Princess Alexandra Hospital's trauma department, will streamline diagnostic imaging. It involves the input of general and trauma surgeons and emergency physicians to mandate expedient and appropriate urological referral for patients at risk of genitourinary injury and complications.

Conducting his research through the University of Queensland and the Princess Alexandra Hospital, A/Prof Chung said the six-month trial had proven feasible and successful, with pelvic trauma patients now receiving coordinated care including fast and accurate diagnostic imaging test and prompt urological service.

The Chair of the Andrology Special Advisory Group for the Urological Society of Australia and New Zealand, A/P Chung is the first urologist in Australia to complete a formal Andrology Fellowship accredited by the Sexual Medicine Society of North America (SMSNA).

He is conducting his research with funding support provided by the MAIC-RACS Trauma Scholarship established from a grant from the Queensland Motor Accident Insurance Commission (MAIC) and matched by the Foundation for Surgery to provide annual funding for research into trauma.

A/P Chung said that until now, the treatment of genitourinary injuries in the trauma setting – most commonly caused by car or motorbike accidents – had been ad hoc and never been adequately managed on a standardised basis, mainly because of a lack of research and data analysis.

“This aspect of trauma care has been overlooked because the data is missing, not just in Australia but in most parts of the world,” he said.

“This, in turn has led to a lack of widely adopted guidelines and treatment protocols and also to a lack of co-ordination

“We wanted to get this project going as soon as possible to evaluate trauma functional outcomes and hopefully prevent future pelvic trauma patients from suffering unnecessarily.”

between the various trauma unit specialists.

“While a rapid trauma CT scan provides high-resolution studies of the head, cervical spine, chest, abdomen and the pelvis, lower urinary tract injury is often missed.

“Research has shown that pelvic fracture pattern alone does not always predict the presence of lower urinary tract injury and its diagnosis is often difficult when the patient is clinically unstable and/or has sustained multi-organ trauma.”

A/Prof Chung said the retrospective study analysing the management and clinical outcomes of pelvic trauma patients admitted to Princess Alexandra Hospital indicated only half of those patients received urology input during their hospitalisation.

Of those who did not receive urological input, six per cent then required subsequent and delayed urological intervention which resulted in prolonged hospitalisation and on-going urinary and sexual dysfunction.

However, A/Prof Chung said the statistics compiled in the pilot study were likely to be the “tip of the iceberg” given that the long-term urinary and sexual complications following pelvic injury remained largely unknown.

“Our research shows that we can now say that between five and ten per cent of pelvic injury trauma patients are not being adequately managed in hospital and although many urological surgeons are aware of this, until now there has never been a standardised protocol to manage them, particularly within the first 24 to 48 hours,” A/Prof Chung said.

“Our pilot study has shown that the current clinical care provided to patients with pelvic trauma has been mostly reactive rather than proactive and that there is an urgent need for a multi-disciplinary approach.



Eric Chung

“Many medical staff are ignorant of the importance of early diagnosis and appropriate care and many patients are poorly counselled about the long-term impact of pelvic trauma on genitourinary function or, more importantly, that proper and prompt treatment may minimise and/or prevent subsequent complications.”

A/Prof Chung said a comprehensive protocol to manage such patients could not only have positive economic impacts – by saving health dollars through speedier hospital discharge and the patient's ability to return to work – but also vastly improve the quality of life of those affected.

“This is not just an anatomical issue because genitourinary health directly impacts on various functional outcomes such as psychosexual and mental health, and pelvic trauma patients who do not receive timely urological intervention can suffer urinary incontinence and sexual dysfunction, which can lead to depression and emotional distress,” he said.

A/Prof Chung used part of the funds provided by the MAIC-RACS Trauma Fellowship to support registrars and residents to gather data (for the initial part of the study) and patient input (for the clinical database) and to pay for a computer software specialist to establish the genitourinary and pelvic trauma registry.

Now in the process of drafting a best healthcare trauma practice treatment plan for such patients, A/Prof Chung also

has several research papers in various stages of submission and publication and has presented his findings at several national and international scientific meetings in the past two years.

“We initially presented our study outcome at the Trauma Grand Rounds at the Princess Alexandra Hospital and the idea of a standardised pelvic trauma protocol to streamline urological care was very well received by all attending radiologists, surgeons and emergency physicians” he said.

“Once we have refined and embedded a treatment protocol and policy here in Queensland, we will establish an audit to determine if it can improve the delivery of care for these patients and their long-term outcomes in the coming months.

“If the audit shows significant improvements – including reducing the time spent in hospital, complication rates and long-term genitourinary damage – we hope to present our findings to various stakeholders, including the RACS, in the hope that our protocol might be adopted across the country.”

A/Prof Chung thanked Professor Daryl Wall for his enthusiastic encouragement and the College for the financial support provided to advance his research.

“This funding has been very helpful and was really important due to the global decrease in research funding and increase in grant competitiveness, and also because we wanted to get this project going as soon as possible to evaluate trauma functional outcomes and hopefully prevent future pelvic trauma patients from suffering unnecessarily.”

With Karen Murphy

Career and Scholarship Highlights

- Chair of Andrology for the Andrology Special Advisory Group for the Urological Society of Australia and New Zealand
- Australia representative on the executive board of the Asia Pacific Society of Sexual Medicine
- 2015: MAIC-RACS Trauma Fellowship
- 2013: American Medical Systems Investigator Sponsored Research Grant
- 2011: Best Scientific Research Prize at the annual meeting of the Asia Pacific Society for Sexual Medicine
- 2011: Best Clinical Paper Award at the American Urological Association North-Eastern section meeting
- 2010: American Medical System Andrology/Prosthesis Fellowship Grant
- 2010: Canadian Male Sexual Health Council/Pfizer Grant
- 2009: Australian Urological Foundation/Astra Zeneca Grant