

Minimally Invasive Surgical Therapy (MIST) Approach:

Safer Prostate Treatment for High-Risk Patients

For 85-year-old Mr Chen (not his real name), what began as a memorable family holiday turned into an unexpected medical emergency when he could not pass urine. He had developed benign prostatic hyperplasia (BPH) – a common condition where the prostate gland enlarges. The condition caused his prostate to press against his urinary tract, restricting urine flow.

After an urgent catheter insertion abroad and cutting his holiday short, Mr Chen returned to Singapore to face another challenge. His enlarged prostate needed treatment, but his heart condition made him a high-risk candidate for traditional surgery under general anaesthesia.

His surgeon, Dr Lau Weida, Head and Senior Consultant of Urology at Khoo Teck Puat Hospital (KTPH), notes that such a scenario is common. "About 20% of our patients first come to us during a crisis, rather than through regular clinic visits for early symptoms,"

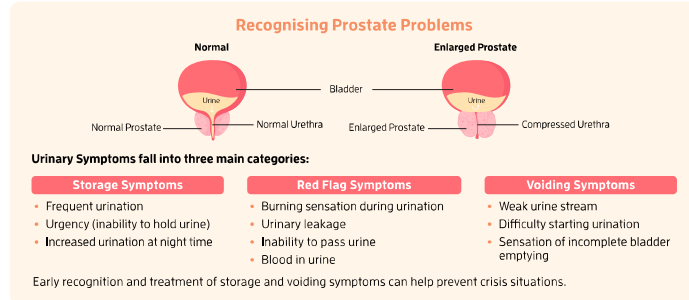
he says. "Many brush off urinary problems as a normal part of ageing, but this can lead to emergency situations that are more complicated to manage."

Safer Solutions for High-Risk Patients

Fortunately for Mr Chen, recent advancements in MIST at KTPH's Urology department offered a new solution.

Under local anaesthesia and light sedation, he underwent water vapour ablation therapy, which uses precisely controlled steam to reduce prostate tissue, relieving pressure on the urinary tract and reopening the channel.

"While traditional prostate surgery requires general anaesthesia and carries risks of bleeding, this new approach allows us to treat even high-risk patients safely," Dr Lau explains. In some cases, the procedure can be done with local anaesthetic alone. Being minimally invasive, it also shortens operation and recovery time, with most patients able to go home the same day.



Transforming Care through Technology

The department's adoption of MIST marks a significant leap in urological care. Since 2021, over 60 such procedures have been performed using water vapour ablation and prostatic urethral lift. The latter involves placing small implants to lift enlarged prostate tissue away from the urethra, creating a clear channel for urination. These techniques have proven effective, with 80–90% of patients able to discontinue their medications entirely.

For Mr Chen, it took about two months before he could be catheter-free, but he felt it was worth the wait. "The important thing was that we could offer him a safe treatment option that worked with his medical conditions, not against them," Dr Lau shares. These procedures are transforming care not just for elderly or high-risk patients but also for younger individuals seeking alternatives to long-term medication, which often causes unwanted side effects, such as postural hypotension or sexual dysfunction.

"Younger, well-educated patients often come to us specifically seeking alternatives to chronic medication," Dr Lau notes. "They prefer a one-time procedure with minimal downtime that can free

them from daily medications and their side effects."

A Comprehensive Approach to Urological Care

Beyond prostate treatments, KTPH's Urology department has developed subspecialty services led by consultants with advanced overseas training, including:

- Female urology for urinary incontinence and recurrent urinary tract infections
- Complex stone management urethral reconstruction
- Men's health, including erectile dysfunction
- Advanced chronic pelvic pain treatments

"What sets us apart is our team-based, consultant-led practice," Dr Lau explains. "Our internal referral system ensures patients receive care from specialists trained specifically in their condition – collaborating closely with geriatricians, renal physicians, dietitians, and others for comprehensive treatment."

Looking Ahead

The department remains focused on innovative solutions for complex urological problems, Dr Lau says. "Our data shows patients require shorter hospital stays and low readmission rates."

For patients like Mr Chen, these advances provide not only medical success but also the ability to maintain quality of life despite complex medical conditions. "When we can offer safe, effective treatments to patients who previously had limited options," Dr Lau reflects, "That's when we know we're making a real difference."



Dr Lau Weida is a Senior Consultant, Head of Department for Urology and Divisional Chairman (Surgical) at Khoo Teck Puat Hospital. He graduated from NUS Yong Loo Lin School of Medicine and is UK-Fellowship trained in Andrology and Reconstructive Urology. As a key opinion leader in penile oncology, genitourinary reconstruction, and male sexual dysfunction, he has introduced innovative treatments to KTPH including low-intensity shockwave therapy, Water Vapour Thermal Ablation of prostate, and Prostatic Urethral Lift.

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