GP UPDATE

VOLUME 1

EXPERIENCE • EXCELLENCE • EXPERTISE • INNOVATION

CELEBRATING

Ten Years of Excellence in Robotic Surgery

St Vincent's Private Hospital Sydney is renowned for its pioneering work in medicine.

This year, the Hospital celebrates a decade of expertise in robotic surgery with a fitting new acquisition – the da Vinci Xi, the latest generation of robotic surgical systems.

The hospital acquired the original da Vinci Standard robot in 2006. The first to implement this technology in New South Wales, it marked a new era of advancement in minimally-invasive surgery. To date, St Vincent's Private has performed over 3,700 robotic procedures, many more than any other hospital in this state.

The new da Vinci Xi, with its host of improvements, will now enable St Vincent's Private Hospital Sydney to increase the types of procedures that can be carried out robotically.

CELEBRATING 10 YEARS IN ROBOTIC SURGERY

More procedures than any other Urology Department in NSW

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Over 3,700 procedures

3,500 +
Urology procedures

150 +
Head and Neck procedures

100 +
Cardiothoracic procedures

ST VINCENT'S PRIVATE HOSPITAL SYDNEY
CONDUCTED BY THE SISTERS OF CHARITY OF AUSTRALIA

Welcome

A message from the CEO

Welcome to the first issue of our newsletter, *GP Update*, designed especially for GPs and health professionals.

We hope that this publication will provide you with information, affirmation and inspiration.

In this issue, we showcase the exciting advances in surgical robotic technology as we celebrate ten years of robot-assisted surgeries. We also share a handy diagnostic resource and a recent case study on nerve entrapment syndromes.

You will also find enclosed in this envelope the VMO Specialist Directory for 2016/17 which lists our specialists by department and includes their contact details and special interests.

We have adopted the Magnet framework for nursing excellence – the highest international credential a healthcare organisation can achieve. We are one of only three hospitals in Australia to be recognised, and the only Private hospital – we have just been redesignated.

We are also proud to be the recipient of the 2015 Press Ganey AU/NZ 2015 Success Story Award Winner for Targeted Improvement Interventions Improving Patient Experience Through Stronger Staff/Patient Engagement.

We hope that these publications are a useful resource.

Robert Cusack
Chief Executive Officer

The Xi model has a wider application than ever before and St Vincent's Private utilises the da Vinci robot system for different specialties such as urology, transoral surgery and cardiothoracic surgery. It has a greater range of motion and flexibility, with four robotic arms that are longer and thinner than its predecessors, and features the same wristed instruments, intuitive motion, and ergonomic design available in all the da Vinci systems. It is easier to drive the patient bed and fluorescence imaging capability provides the surgeon with real time, image-guided identification of key anatomical landmarks using infrared technology.

"We are really impressed with the potential the Xi robot will bring to our surgeons," says Mr Robert Cusack, CEO of St Vincent's Private Hospital Sydney.

"While they will continue to be 100 percent in control of the robot, like the previous systems, their hand movements translate into more precision of the tiny instruments moving inside the patient's body."

Some of the exciting upgrades include crystal clear 3D-HD vision that lets surgeons virtually-extend their eyes and hands inside a patient. Surgeons will also be able to view vessels, tumours and tissue perfusion through a projected fluorescence image.

"What's also important for St Vincent's Private, as well, is that the new Xi robot utilises an expandable technology platform designed to accommodate and integrate a range of technologies the hospital currently utilises, as well as future innovations, in areas such as imaging, advanced instruments and anatomical access," Mr Cusack says.

While the current rate of technological advancement is swift, the convergence of laparoscopic and robotic technologies has been over half a century in the making.

Device Technologies, the distributors of the da Vinci Xi, were the first in Australia to harness the potential. They are Australasia's largest privately-owned medical device company and provide access to some of the world's best medical systems.

"This vision can only be achieved through fostering partnerships with hospitals that are progressive by nature," says Michael Trevaskis, Director of Device Technologies Australia.

Mr Trevaskis says the investment made by St Vincent's Private 10 years ago was a significant milestone and an exceptional partnership model.

The original da Vinci Standard Robot purchased in 2006

Key features of the da Vinci Xi

New overhead instrument arm architecture – facilitates anatomical access from virtually any position.

New endoscope digital architecture – creates a simpler, more compact design with improved vision definition and clarity.

Crystal clear 3D-HD vision – provides an immersive and highly-magnified view.

The ability to attach the endoscope to any arm – provides flexibility for visualising the surgical site.

Smaller, thinner arms with upgraded joints – offers a greater range of motion.

Longer instrument shafts – provides greater operative reach.

Cover: Professor Phillip Stricker and Associate Professor Richard Gallagher

"This was a true collaboration between a medical device company, the hospital executive, and a group of world-class surgeons that has now set a benchmark for the way surgery would be performed in the future," he said.

Professor Phillip Stricker is the Chairman of the Urology Department at St Vincent's Private Hospital Sydney and St Vincent's Clinic, and the Director of the St Vincent's Prostate Cancer Centre.

"The robot has enabled the Urology department to perform operations on the prostate, bladder and kidney in a more exact technique, enabling better outcomes for patients," says Professor Stricker. "Whilst there was an initial learning curve, this is well and truly over and, indeed, I have published information showing that it is possible to shorten the learning curve with appropriate fellowship training, however the learning curve can go beyond 1,000 cases."

Robot-assisted surgeries at St Vincent's Private now account for 95 percent of radical prostatectomies, approximately 50 percent of cystectomies, and increasing rates of kidney work. In fact, the Urology Department has performed more procedures than any other Urology Department in NSW.

"Personally, I have now done over 1,600 robot-assisted radical prostatectomies," says Professor Stricker. "The complications have markedly decreased, compared to the previous open technique, and the patient stay and recovery is accelerated and the outcomes with regard to erectile functioning and urinary control have improved."

He believes the da Vinci system has changed the way he and the urology team operate for the better; a sentiment shared by Associate Professor Richard Gallagher, head and neck surgeon at St Vincent's Private. He believes the advantages to his patients are significant.

"I have always been interested in, and pursued, surgical approaches that aim to decrease patient morbidity," Associate Professor Gallagher says. "The introduction of Transoral Robotic Surgery (TORS) has taken this approach to another level. As a doctor who treats and manages patients with head and neck cancer every day of the week, this is extremely important."

Members of The Urology Department - Dr Raji Kooner, Dr Gordon O'Neill and Dr David Ende pictured with the new da Vinci Xi robot

Since the early 2000s, he has seen a widening spread of patients with oropharyngeal (tonsil and tongue) cancers and many more young people being affected. This can be linked to the Human Papilloma Virus (HPV) which confers a better prognosis. Traditional open surgical approaches are highly invasive requiring tracheostomy and mandibulotomy. This led to increased use of radiotherapy and chemotherapy which are less morbid in the short term, however patients with HPV oropharyngeal cancers are likely to survive long term which is when we see the late complications of dysphagia, aspiration, recurrent chest infections and osteoradionecrosis.

"It is an exciting advance in the management of head and neck cancer," he says. "This offers less morbid surgery to people with oropharyngeal cancer, reducing their need for radiotherapy treatment in early cancers and, in more advanced cases, the ability to de-escalate the dose of radiotherapy and use of chemotherapy."

Dr Paul Jansz, a Cardiothoracic Surgeon at St Vincent's Private Hospital performs Thymectomies – a procedure that removes the thymus in patients suffering from Myasthenia Gravis.

He too believes that robotic surgery significantly added to the treatment of this disease as Thymectomies can now be done as key hole surgery using the da Vinci robot rather than having to open the chest allowing for quicker recovery.

A decade ago, St Vincent's Private backed an emerging technology without any certainty of the improved patient outcomes and surgical efficiencies that have come about.

It will take progressive hospitals, like St Vincent's Private Hospital Sydney, to continue a pioneering spirit for even more life-changing benefits.

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Knee Replacement Checklist

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Dr Nick Vertzyas, Chair of the Department of Orthopaedics at St Vincent's Private Hospital Sydney, has developed this handy Knee Replacement Checklist.

The checklist will help GPs to grade a patient's symptoms and document their case for future consultations.

Should a referral to an orthopaedic specialist be required, the checklist provides ready background information, including patient history and the details of any medical imaging.

This is a resource that can prompt key questions and assist in decision-making about the need for surgery. For example, if a patient has had weight-bearing pain for several years, experiences discomfort at rest, and has used all available analgesics combined with cortisone injections and physiotherapy, then it is likely that the patient will require surgery.

The checklist may also help practitioners consider whether weight-bearing X-rays are needed. These scans are not routinely requested but are extremely important, particularly of the Rosenberg and Skyline views.

PAIN PROFILE

Onset of pain

- ☐ Sudden
- ☐ Gradual

Site of pain

- ☐ Medial
- ☐ Lateral
- ☐ Anterior
- ☐ Global

Duration of pain

- ☐ Weeks
- ☐ Months
- ☐ Years

Night Pain

- ☐ Yes
- ☐ No

Stairs

- ☐ Worse going up
- ☐ Worse going down
- ☐ Start up pain

JOINT PROFILE

- ☐ Swelling
- ☐ Clicking
- ☐ Locking
- ☐ Giving way

FUNCTIONAL PROFILE

- ☐ Independent
- ☐ 1 stick
- ☐ 2 sticks
- ☐ Rollator frame
- ☐ Wheelchair
- ☐ Walking distance before requires a rest, eg. 5/10/15min

ANALGESICS

- ☐ Panadol
- ☐ Digesic
- ☐ Tramal
- ☐ NSAIDS
- ☐ Narcotics/Patches
- ☐ Cortisone injection

Co morbidities_____

Previous surgery_____

EXAMINATION

Alignment

- ☐ Neutral
- ☐ Varus
- ☐ Valgus

Gait

- ☐ Normal
- ☐ Antalgic
- ☐ Varus/valgus thrust

ROM

- ☐ FFD
- ☐ Fixed deformity
- ☐ Range

- ☐ McMurrays test
- ☐ Hip Exam
- ☐ N/V exam

INVESTIGATIONS

- ☐ Weight bearing AP/Rosenberg/ Lateral/Skyline views within 6/12
- ☐ MRI if normal X-ray and suspect internal derangement

TREATMENT

- ☐ NSAID's
- ☐ Cortisone
- ☐ Physiotherapy
- ☐ Referral

Radial Tunnel Syndrome

Dr Neil Simon, Neurologist and Neurophysiologist

Figure 1: The red cross marks the point of maximal tenderness on palpation

Ultrasound diagnosis of difficult nerve entrapment syndromes

A 24 year old bricklayer presented with an eight month history of symptoms involving his trowel-using arm. He described a dull pain over the posterior forearm near the elbow associated with sharp, shooting pain radiating into the base of the thumb. The pain was worse after a long day of work and was aggravated by holding an object (such as a cup) with his forearm pronated and wrist extended.

The patient had ongoing symptoms despite physiotherapy and counterpoint bracing for lateral epicondylitis. It was necessary for him to reduce his work hours to cope with his symptoms.

On examination, his forearm musculature was very well developed. There was tenderness to palpation approximately eight centimetres distal to the lateral epicondyle, at the expected location of the supinator muscle (Figure 1), and pressure at this location resulted in radiation of sharp pain to the thumb. On muscle strength testing, there was a trace of weakness of finger extension but, otherwise, muscle strength was normal. The sensory examination was also normal.

Differential diagnosis

The clinical features suggested Radial Tunnel Syndrome, in particular, the nature of the patient's occupation which involves repetitive forearm pronation and supination, the nature and radiation of the pain, and the maximal point of tenderness. The differential diagnosis included lateral epicondylitis and other musculoskeletal complaints, such as radiocapitellar lesions, elbow osteoarthritis or muscle injury.

Work-up

Nerve conduction studies and electromyography were performed and returned normal results, including normal radial motor and sensory studies. Nerve ultrasound studies demonstrated significant focal enlargement of the posterior interosseous nerve (a branch of the radial nerve) just before it entered the supinator muscle in the forearm (Figures 2 and 3). This ultrasound finding is consistent with Radial Tunnel Syndrome.

Figure 2: Anatomy of the radial nerve in the proximal forearm

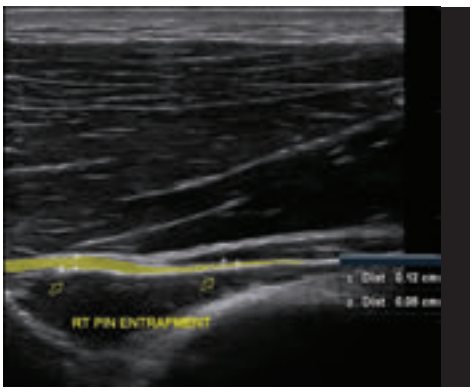

Figure 3: Long axis ultrasound image of the right posterior interosseous nerve (PIN) entering between the superficial and deep fibres of the supinator muscle. The PIN is enlarged just proximal to the point of entering the supinator muscle, suggesting focal nerve injury at this site.

The patient responded to an ultrasound-guided lignocaine/corticosteroid posterior interosseous nerve block combined with physical therapy approaches, including activity modification and splinting.

Diagnosis

The diagnosis in this patient was Radial Tunnel Syndrome, a notoriously difficult diagnosis to confirm because clinical examination and electrodiagnostic studies are usually normal. However, ultrasound provides additional diagnostic information that helps support a diagnosis. Ultrasound studies may also be useful in other difficult-to-localise nerve entrapment syndromes, and collects information complementary to standard neurophysiological investigations.

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Redevelopment Update

The long-awaited Redevelopment of St Vincent's Private Hospital Sydney has now begun

Adjunct Professor Jose Aguilera, Director of Nursing and Mr Robert Cusack, CEO

St Vincent's Private Hospital Sydney has played an important role in responding to the community's health needs since 1909.

Demand on the hospital's services has grown extraordinarily since then, and has particularly accelerated since the current building opened over 40 years ago.

St Vincent's Private Hospital Sydney strives to constantly improve its world-class patient care. This exciting project will ensure St Vincent's Private continues to meet the health needs of the community well into the future.

By building a new 13-storey East Wing along with the complete refurbishment of the existing Private Hospital, this project will provide more single rooms, more operating theatres, a new ambulatory care centre and a new inpatient and outpatient rehabilitation unit.

During the redevelopment of St Vincent's Private our patient-centred care remains our highest priority. The treatment and care of our patients on the St Vincent's Campus and the services we offer will be maintained at our usual high standard.

"After years of planning, it is exciting to see that excavation of the site has commenced in preparation for the new East Wing," said Robert Cusack, CEO of St Vincent's Private.

We anticipate minimal disruption to the day to day operations of the hospital.

"Patient comfort and care during this time is one of our key priorities and we are working hard to ensure minimal disruption throughout the course of the project."

To stay up to date with the redevelopment and for all enquiries, please visit: www.svphs.org.au/home/redevelopment

Project Milestones

Stage 1 – November 2015
Preparation and excavation of the building site

Stage 2 – 2016
Building of the East Wing

Stage 3 – Mid 2017
Complete commissioning of the new East Wing

Stage 4 – Mid 2017
Commence refurbishment of the existing building

Stage 5 – Late 2018
Complete refurbishment of the existing building

399,600
HOURS
to build the new East Wing

Correcting Iron Deficiency Prior to Joint Replacement Surgery

At St Vincent's Private Hospital Sydney, 10% of our elective joint replacement patients present with preoperative anaemia, with half of these being secondary to iron deficiency.

Another 2.5% of patients are severely iron-deficient but still have normal Haemoglobin levels.

At St Vincent's Hospital Sydney (public hospital) anaemia rates have been found to be 25%, and preoperative anaemia associated with an approximately 3.4 day longer length of stay. Transfusion rates in anaemic patients were measured as 36% versus 12% in non-anaemic patients.

A campus-wide initiative is attempting to identify and treat iron deficiency in those patients having elective joint replacements in order to reduce perioperative morbidity and transfusion rates.

Preoperative anaemia is associated with higher rates of red blood cell transfusion, and is independently associated with increased morbidity, mortality, delayed wound healing, pneumonia, acute lung injury, acute renal failure, stroke, myocardial infarction, increased hospital and intensive care length of stay. A red cell transfusion is also independently associated with higher perioperative infection rates for elective total hip replacement (THR) or total knee replacement (TKR). There are recent indications that even iron deficiency without anaemia may increase infection rates perioperatively.

St Vincent's Private Hospital Sydney Plan

St Vincent's Private Hospital is making the following pathway available to orthopaedic surgeons.

Pre-op Tests

Full blood count
Iron studies including ferritin

Ferritin < 30 mcg/L	Ferritin <100 mcg/L Hb <130 g/L (male) Hb <120 g/L (female)	Ferritin <100 mcg/L
⬇	⬇	⬇
Iron infusion	**Iron infusion**	**No iron infusion**

Steps

1. Full Blood Count and Iron studies will occur as part of the preoperative routine screening and the preadmission clinic nurses will check results.
2. Iron infusion will be arranged through the Same Day Centre at St Vincent's Private for anaemic patients with a ferritin <100mcg/L or non anaemic patients with a ferritin <30mcg/L. Maximum reduction in perioperative morbidity and in blood transfusion rates are obtained if iron infusion occurs four to six weeks prior to surgery but benefits are still present if the window is shorter.

Iron supplementation

Oral preparations of iron are often poorly tolerated due to gastrointestinal side effects such as nausea, flatulence, abdominal pain, diarrhoea or constipation, leading to variable compliance. Post-operative oral iron supplements have also been demonstrated to be ineffective in multiple studies, thought to be due to the upregulation of hepcidin in inflammatory states leading to decreased iron uptake from the gastrointestinal tract.

IV supplementation provides rapid replacement of iron stores, but has traditionally been limited due to the prolonged infusion time and risk of hypersensitivity, especially with Iron Dextran. Ferric Carboxymaltose (FCM) has lower reported incidences of hypersensitivity and anaphylactoid reactions, and 500mg can be given as a bolus or 1000mg given over 15 minutes. Preoperative IV iron is very effective at rapidly replenishing iron stores and increasing Haemoglobin levels preoperatively to minimise iron deficiency or transfusion-related morbidity.

Dr John Males is Chair of the Department of Ophthalmology at St Vincent's Private Hospital Sydney. He recently returned from volunteering at the Vietnamese National Institute of Ophthalmology (VNIO) in Hanoi, Vietnam.

The trip was organised as a part of Sight For All, a foundation that aims to improve the eyesight of people in several Asian countries. Dr Males is one of a number of doctors that offer their expertise – pro bono – to these developing countries, improving the education of local doctors in their sub-specialty areas.

During his time in Hanoi, Dr Males taught ophthalmologists at the local corneal unit, performed corneal transplant surgery, and saw a large number of patients with challenging eye conditions.

Fungal corneal infections are one of the most common external eye complaints in developing countries like Vietnam, yet little is known about their cause.

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Friends of St Vincent's Private Hospital Sydney

St Vincent's Private Hospital Sydney has been delivering healthcare to the community since it was founded by the Sisters of Charity in 1909. Philanthropic support is critical for a not-for-profit health care provider that receives no government funding.

To find out how you can support us, visit the website at: https://svphs.org.au/home/support-us

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If you would like to receive our e-newsletter, be kept up to date with GP events or make general enquiries, please email your contact details including name, practice name, address, telephone number and email address to:

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