



# The power of partnerships

CLOSE ALLIANCES BETWEEN PATHOLOGISTS AND OTHER MEDICAL PROFESSIONALS CAN DO MUCH TO IMPROVE PATIENT CARE, WRITES YURE PAVIC.

PHOTOGRAPHER: ANDREW PORFYRI

It is late Friday evening. Brisbane ophthalmologist Dr Tim Sullivan is in the operating theatre dissecting a tricky tumour from the lower eyelid of his patient. Waiting in the corner of the theatre is Dr Kevin Whitehead, an Anatomical Pathologist from Sullivan Nicolaides Pathology.

Dr Whitehead's role tonight is to perform a frozen section on the dissected tissue to determine if all the cancer has been removed. Before he looks at the lesion under the microscope, it will be frozen in a medium, then sliced and stained.

"Not all facial tumours require frozen section control, but the anatomy of the lower eyelid is very complex," he says. "We are trying to save as much tissue as possible so we do not disturb the drainage system of the eye."

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Through their partnership tonight they determine that there is no spread to delicate small channels known as canaliculi and successfully remove the tumour, with the drainage of the eye spared.

The surgery is highly specialised. Dr Sullivan's training in the sub-specialty of ocular plastics allows him to perform such operations. “The technique requires close co-operation of pathologist and surgeon,” says Dr Whitehead, who became involved after Dr Sullivan advertised for interested pathologists.

“He (Dr Sullivan) wanted to work closely with one or two pathologists, and I had an interest in dermato-pathology and felt quite lucky to offer my services. It was a steep learning curve initially and requires an understanding of what each clinician is doing. For the past eight years, I have averaged 300-400 cases a year, as we are a large referral centre.”

The two doctors have a system whereby Dr Whitehead has the case list sent to him the day before, and then calls the theatre on the day of the surgery.

“I then drive, often in peak-hour traffic, and arrive mostly on time. Leaving the path lab can lead to a back-up of work, and sometimes your colleagues doing more. Financially, it has poor remuneration compared to looking at slides for the same time in the office, but it's an important service to provide.”

In theatre they both see the patient and look at the skin tumour that will be removed. “Having the specimen orientated in your mind makes it easier. Knowing where the margins are, I can concentrate on the frozen sections under the microscope to see if there is any spread,” Dr Whitehead says. “In the eyelid, the name of the game is to have the tumour removed and sacrifice the least amount of anatomy.”

Dr Whitehead has a technician with him, and it takes 15-30 minutes to freeze the sample and stain it for a diagnosis, all performed in the theatre complex. “If the tumour still spills out of the margin, then you obtain more tissue. Depending on the size of the tumour, the surgeon may just wait or start creating the skin flap that will fix the defect.”

Before the technique was developed, the surgeon took as much tissue as was thought necessary, without the use of a microscope. The dissected lesion was then sent for pathology review and if the tumour went to the edge of the dissection, the patient would need to come back for more surgery.

This often left patients with larger scars and increased loss of function. Many of the patients were from rural areas and were required to travel long distances.

With frozen section control, the answers are given during the surgery and patients can be confident that they will not get a phone call to return to Brisbane. “From all our studies we get about a 1 per cent reoccurrence rate, which is far less than previous methods,” says Dr Whitehead.

He enjoys theatre work. “I get a real buzz working closely with surgeons in theatre, especially if the tumour is in a threatening position, like near a nerve, and you are able to use the technique to remove the tumour and not the nerve.”

His relationships with the surgeons are very close. “You also get to catch up with your colleagues and follow up cases. I often ask how patients are going after tricky cases.”

Dr Sullivan and Dr Whitehead have published up to 20 research papers together. “There is a cross-fertilisation of



*Dr Kevin Whitehead reviewing a case*

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ideas between surgeon and pathologist," Dr Whitehead says.

He also works closely with other surgeons, including Brisbane plastic and reconstructive surgeon Dr Paul Millican. "For difficult or recurrent lesions on the face, I have the pathologist present in theatre. The lesion is reviewed before

dissection and we can discuss any concerns we may have," Dr Millican says. "We would not have the good outcomes without the close liaison."

"I'm not sending the sample to a pathologist in a distant room with them not knowing what areas I am concerned about and what margins are important for

difficult lesions. I have been doing the procedure for 10 years and I am very happy with the results, and I will not do it any other way."

All cases have their challenges. Says Dr Whitehead: "ENT (ear, nose and throat) surgery can be especially demanding when chasing tumours in the nose. You often have an ENT surgeon and a neurosurgeon waiting for your answers before directing the next surgical advance. We are all concerned about whether the tumour has spread to the brain."

General surgeons also use frozen sections in operations for breast lumps (lumpectomy) that have not had a core biopsy. Surgeons concerned about spread will remove lymph nodes in the armpit if the lump is cancerous. This procedure can sometimes cause lymphoedema (swelling of the arm) so before removing the lymph nodes it is important to be certain that there is disease present. The frozen section technique can answer the question of whether a lump is cancerous.

The close relationship of surgeon and pathologist is not the only partnership pathologists have. In the public hospital system, the hospital pathologist plays a large role in many areas of clinical care.

Associate Professor Catriona McLean, head of the Anatomical Pathology department at Melbourne's Alfred Hospital, says that "in the public hospital setting there are broad areas of diagnostic evaluation, from surgical cases to transplant medicine". She strongly believes that pathologists are not viewed as a service provider but as a consultant providing consultant-to-consultant referrals for specific diagnostic questions.



*Left: Dr Kevin Whithead checks a slide as surgeon Paul Millican looks on  
Above: Working together to achieve a successful result*



Communication plays a role in all cases referred to a pathologist. “When looking at a slide, if there is any extra clinical history I require, I just get on the phone and call the treating team,” Associate Professor McLean says. “The best surgeons will sometimes even come down to discuss difficult cases.”

“There are times when a simple skin biopsy is urgent, like in a transplant patient,” she says. “If not referred correctly by the medical team, it may end up being routinely handled and not done in three hours, missing an opportunity to treat an important infection or graft versus host disease.”

In the public hospital system, cases are reviewed in weekly meetings. “Clinical meetings in the hospital provide a time for discussion of all cases,” Associate Professor McLean says. “You have face-to-face discussion with clinicians, and meetings give an opportunity to raise issues and discuss unusual findings in the clinical context.”

New studies and theories on patient management methods are reviewed between clinicians and pathologists in these meetings.

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Discussing the slide with the surgeon provides an opportunity to know how the dissection was orientated in the patient. This has led surgeons to often mark the orientation by placing a stitch during the dissection.

Associate Professor McLean feels most rewarded when she receives phone calls from interested residents to discuss cases referred for her opinion. “When you only get a small core of tissue and then you get a phone call from an interested resident about the case, it puts the biopsy into its correct context and makes it easier to interpret the findings.”

In pathology there are many examples of partnership and good communication, and their importance in clinical care. “To achieve the best for patient care, it is a team effort,” Associate Professor McLean says. 📌

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