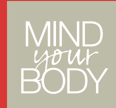

Relieving that pain in the butt

Doctors are offering two new surgical procedures that close an anal fistula without affecting patients' faecal continence

JOAN CHEW

The painful swelling at the side of his left buttock struck him like a bolt of lightning one day years ago.

Whatever treatment the 59-year-old businessman, who wanted to be known only as Mr Ng, tried, the pain just would not go away.

He went under the knife to excise the swelling five times in five years. For three to four weeks after each operation, he would return to the hospital each day to have his wound cleaned and dressed by a nurse.

But each time, the pimple-like swelling, as hard as an apple, would resurface.

He recalled: "On a scale of zero to 10, my pain score was a nine. It was so unbearable that sometimes I could not sleep."

He finally found relief when his general surgeon referred him to a colorectal surgeon last year. Dr Charles Tsang, a senior consultant surgeon at Mount Elizabeth Novena Specialist Centre, saw that the previous operations had removed Mr Ng's pus but not the root of his problem – an anal fistula.

This was an abnormal channel that had formed between the anal canal and the skin surface of the buttock, caused by an infection within an anal gland. The wound on Mr Ng's buttock closed when it healed but reopened each time bacteria entered the fistula opening inside the anal canal, causing an infection.

Last October, Mr Ng was treated with a relatively new procedure, which dissected the fistula to sever the connection that led to repeated infections.

Such a ligation of the intersphincteric fistula tract (Lift) is not unlike a tubal ligation, a sterilisation method that surgically closes the fallopian tubes in women.

To Mr Ng's relief, it required only day surgery with no need for daily trips back to the clinic. His wound healed completely within a month and he has now resumed his regular schedule of travelling at least once a month. He had cut this by 90 per cent during his illness.

Checks with eight colorectal surgeons showed that several hundred patients such as Mr Ng have undergone Lift since 2006.

Another even newer type of surgery for such patients is the video-assisted anal fistula treatment, now being offered at two hospitals.

PRESERVING FAECAL CONTINENCE

An anal fistula is classified based on the pathway it takes and its proximity to the sphincter muscles, which open and close the anus and are needed for bowel movements.

A simple fistula crosses less than a third of these muscles, while a complex fistula may consist of multiple branches that intrude into substantial muscles, Dr Tsang said.

Doctors agree that fistulotomy is the way to treat a simple fistula. This involves cutting open the entire fistula from the internal opening to the external opening, and draining its contents so it can heal into a flat scar.

But this is not ideal for treating a complex fistula as it could sever too much muscle and affect continence, which is often more debilitating than the fistula itself, doctors warned.

With no standard treatment for complex fistulas, doctors offer patients whatever techniques they do best.

The Lift, for one, is gaining traction among colorectal surgeons here.

Introduced here in 2006 by its inventor, Thai colorectal surgeon Arun Rojanasakul, it has since been performed at National University Hospital (NUH), Singapore General Hospital (SGH) and Raffles Hospital. At NUH, it is the procedure of choice for complex fistulas.

All three hospitals have performed slightly more than 400 such procedures in total to date.

The anal fistula is snipped and stitched somewhere in its middle, so that debris no longer collects in it to cause infections. Tissue scarring will close the two ends of the tract over time.

Studies by Dr Tsang and Dr Dean Koh, a senior consultant surgeon at Mount Elizabeth Novena Specialist Centre, have shown that Lift results in overall improvement in patients.

A review of 93 NUH patients from April 2006 to September 2010 found that a year after their procedures, 78 per cent of patients did not have a recurrence of the fistula. They had a median healing time of four weeks.

In seven patients, the wound did not heal. Another six patients needed another operation after a tract reopened from the original internal opening.

The study was published in the journal Diseases Of The Colon & Rectum in 2011.

Lift can fail if the sutures break and infection occurs in the tract, Dr Koh said.

However, the study also showed that even when the procedure failed, it would usually convert a complex fistula into a simple one because of the surgical incision made. That made subsequent treatment simpler, the authors noted.

On the advantage of Lift, Dr Quah Hak Mien, a colorectal surgeon at Gleneagles Medical Centre, said: "Nothing is sacrificed if the procedure is not successful."

This is not so for an older technique called the advancement flap procedure.

In this procedure, a piece of tissue from the rectum, comprising the inner lining of the anal canal (mucosa) and some internal anal sphincter muscles, is partially detached and then pulled down to cover the internal opening of the tract. This is then sutured in place.

But if the covering fails, the opening becomes even larger and the procedure is unlikely to be attempted again, doctors said.

The success rate of flap procedures is equivalent to that for Lift, at about 80 per cent.

But it is technically harder to perform than Lift and causes greater inconvenience to patients, doctors said.

Dr Koh said patients who have undergone a flap procedure are put on a liquid diet for a week post-surgery to delay their bowel movements, which can dislodge the flap.

The flap takes at least a month to heal fully, so in the interim, patients are told not to put excessive pressure on their anal canal by squatting, swimming or having sex. There are no such restrictions for patients after Lift.

Dr Betinna Lieske, an associate consultant at the division of colorectal surgery at NUH, said patients are usually hospitalised for two to three days after a flap procedure, but Lift is commonly done as day surgery. This means Lift patients save on hospitalisation fees, which can come up to $428 a night for a single-bed Class A ward in NUH.

The costs for a flap procedure and Lift are similar. In NUH, this comes up to about $2,600 for a private patient.

In SGH, a Lift procedure costs between $2,100 and $2,600 for a private patient. For a private patient undergoing a flap procedure and staying in a single-bed ward for five nights, the total bill may come up to $17,900.

Six months ago, SGH embarked on a study to compare Lift with older surgical techniques. Associate Professor Tang Choong Leong, head and senior consultant at the department of colorectal surgery at SGH, said 120 patients will be recruited to be randomly assigned to two groups.

One group will be treated with Lift, while the other will undergo techniques that involve cutting through the anal muscle. These include fistulotomy and cutting seton, which is a thread applied tightly to the fistula tract to cut through it slowly.

VIDEO-ASSISTED PROCEDURE

Any type of surgery to treat an anal fistula faces the challenge of finding the internal opening.

The body's healing mechanism prompts a layer of epithelial cells to grow over the internal opening. It is not completely fused shut, but may become difficult to find.

The fistula can sometimes be felt as a hard, cord-like structure beneath the skin. Ultrasound or magnetic resonance imaging scans before surgery can help determine the exact position of the anal fistula.

At Fortis Colorectal Hospital and Khoo Teck Puat Hospital (KTPH), doctors have used video-assisted anal fistula treatment (VAAFT) during surgery. This allows the surgeon to use a probe with a camera to view the inside of the tract to help him find the opening. Four in 30 patients from Fortis who underwent it have had a recurrence.

Dr Francis Seow-Choen, the medical director at Fortis Colorectal Hospital, has used VAAFT in 21 cases. He said the camera eliminates blind probing of the tract and cuts the risk of false tracts being accidentally created by the surgeon. It also makes it easier to scrape out the contents in the tract.

After the internal opening is identified, it is then closed with a special stapler. The external opening stays open for the secretions to drain out. The video-assisted day surgery costs about $7,000.

Dr Tan Kok Yang, head of general surgery at KTPH, said it is using this technique to treat complex fistulas.

The technique was invented by Italian colorectal surgeon Piercarlo Meinero. His study, published in the journal Tech Coloproctol in October 2011, tracked 136 patients who were operated on with VAAFT from May 2006 to May 2011. It showed nearly three-quarters of the patients healed within two to three months, while the remaining patients needed another procedure.

However, most doctors here who are offering Lift are not keen to use the camera probe. Dr Eu Kong Weng, a senior consultant surgeon and chief of Pacific Surgical and Colorectal Centre, thinks it is challenging for surgeons to insert the scope through an anal fistula, which has a diameter of 1 to 2mm.

Prof Tang of SGH said VAAFT may be useful for junior surgeons who are less experienced in locating an abnormal tract.

He added: "Whatever the technique, the goal is always the same. It is about how a surgeon achieves it. This is why surgery is an art as much as it is a science."

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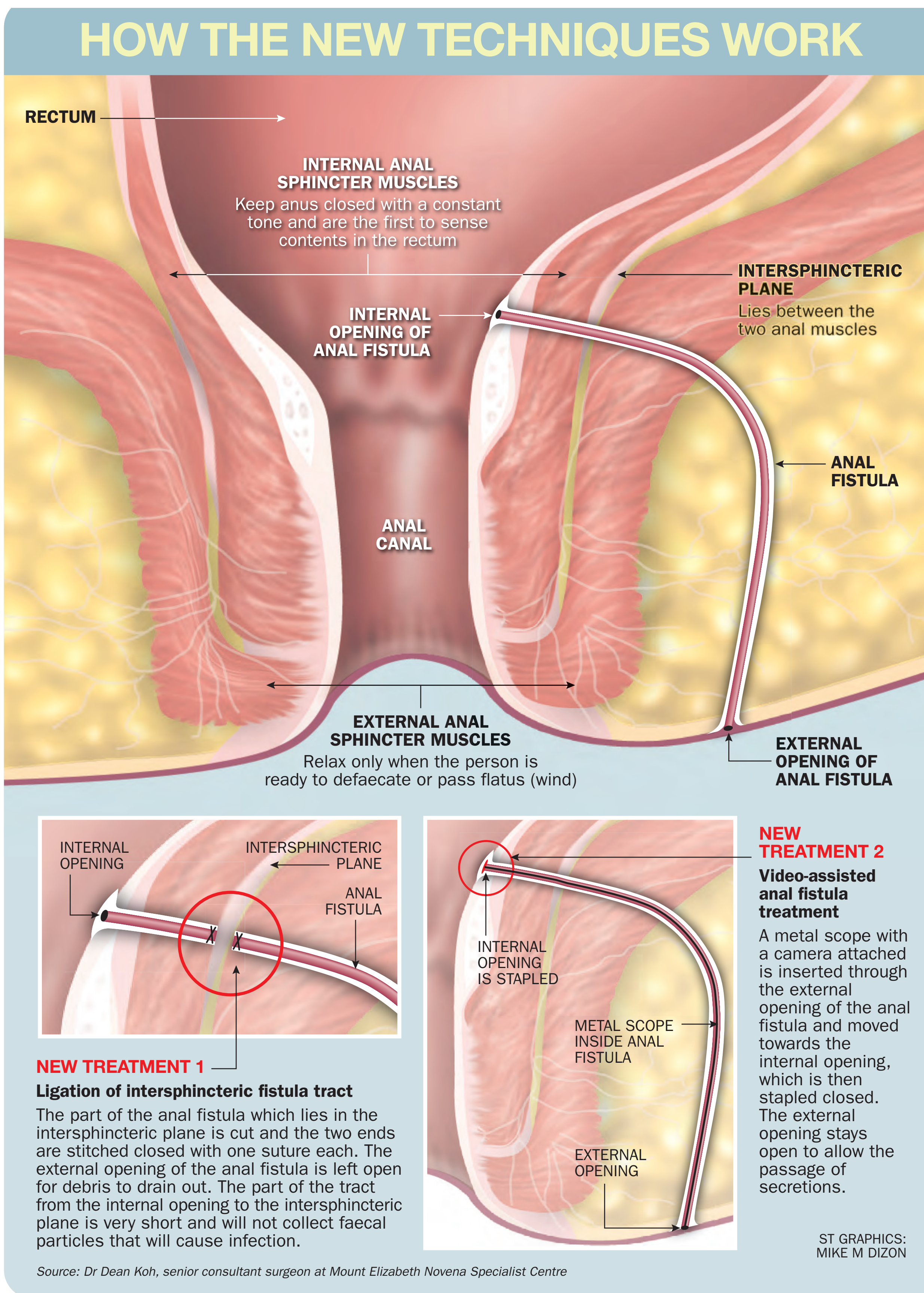

Source: Dr Dean Koh, senior consultant surgeon at Mount Elizabeth Novena Specialist Centre

Abnormal 'tunnel' in anus

Just as the pores on one's face can become blocked and cause acne, the glands in the anus can also become infected, causing painful pus-filled eruptions on the skin.

Anal glands produce secretions that lubricate the anal canal for the smooth passage of stool. A gland can be clogged by faecal matter and infected by bacteria to form an anal abscess full of pus.

The abscess can become an anal fistula, or abnormal tract out of the body, if it forms in a deeper, intermuscular gland.

Most glands are not so deep, but are located in the submucosa, a spongy layer of tissue between the lining of the anal canal and the muscle layers, said Dr Lim Jit Fong, a senior consultant surgeon at Fortis Colorectal Hospital.

When infection occurs in a submucous gland, the resulting abscess bursts through the mucosa into the anal canal and heals spontaneously, without the patient even realising it, he said.

But 10 per cent of anal glands lie deeper, piercing the muscular layers of the anal canal.

An infection in these could track in several directions, following the fibres of the internal anal sphincter muscles that open and close the anus, said Dr Francis Seow-Choen, medical director of Fortis Colorectal Hospital.

The fistula follows the path of least resistance out to the skin of the buttocks next to the anus, appearing as a small, raised bump discharging yellow or blood-stained pus. This pimple-like swelling causes pain intermittently. It can also burst to become an open wound.

Dr Dean Koh, a senior consultant surgeon at Mount Elizabeth Novena Specialist Centre, tells his patients who have had an anal abscess surgically drained that they face a 40 to 50 per cent chance of developing an anal fistula.

This is because both conditions are triggered by infections in the anal glands which have no known risk factors, nor any way of preventing them.

In nine out of 10 cases, an anal fistula develops after an anal abscess bursts or does not completely resolve.

The rest of the time, the fistula usually has a secondary cause from digestive disorders such as Crohn's disease and inflammatory bowel disease, or from infections such as tuberculosis or human immunodeficiency virus, said Dr Yang Ching Yu, medical director and general surgeon at Raffles Hospital.

It is not known what the prevalence is here, but large-scale overseas studies show the condition affects six per 100,000 women and 12 per 100,000 men. Most patients are around 30 years of age.

Dr Charles Tsang, a senior consultant surgeon at Mount Elizabeth Novena Specialist Centre, believes the protective effects of oestrogen may be a reason for fewer women than men developing anal fistulas.

Colorectal surgeons said anal fistulas are the second most common non-cancerous condition affecting the anal canal they see, after haemorrhoids (piles), which are swollen veins in the anal canal.

Patients sometimes mistake anal fistulas for piles, said Dr Eu Kong Weng, senior consultant surgeon and chief of Pacific Surgical and Colorectal Centre.

Living with an anal fistula is usually not life-threatening, unless there is an acute infection and the bacteria enters the bloodstream to cause a more severe infection that gives rise to fever and chills, he added.

But the condition can be debilitating, warned Dr Bettina Lieske, an associate consultant at the division of colorectal surgery at the National University Hospital.

Bacteria from the anal canal keep entering the internal opening of the tract to cause a chronic phase of anorectal infection, which causes great discomfort.

She added that a simple fistula can worsen over time if left untreated. The original tract may branch out to other pathways to result in a complex fistula, where there may be two to three different bumps on the skin near the anus.

Dr Quah Hak Mien, a colorectal surgeon at Gleneagles Medical Centre, warned that an anal fistula that is untreated for more than 10 years puts one at increased risk of glandular cancer.