

SURGICAL UPDATE

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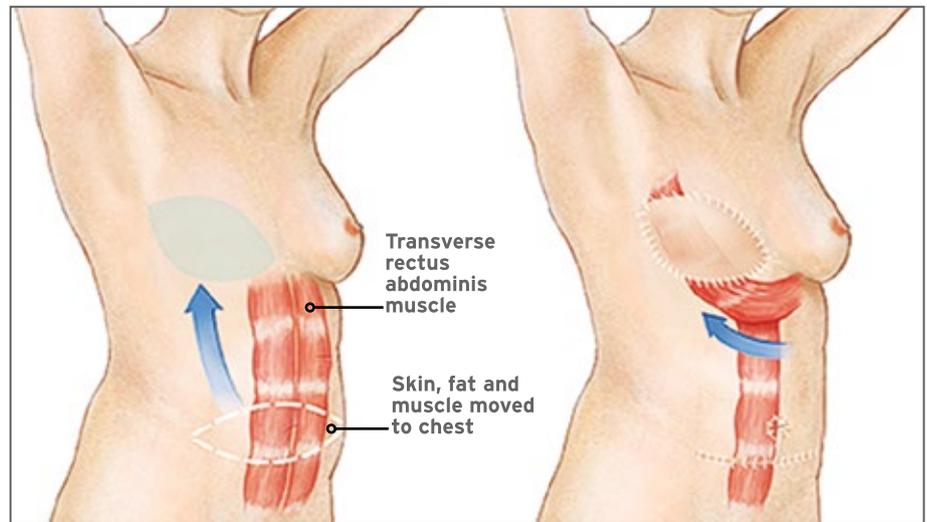
BREAST RECONSTRUCTION

There are a number of options for breast reconstruction following a mastectomy for breast cancer, providing there are no contra-indications such as advanced stage of disease or other significant co-morbidities..

SILICONE IMPLANTS

Breast reconstruction using silicone implants is a relatively straight forward operation that takes 60-90 minutes. Silicone implants do not replicate normal breast tissue perfectly. Silicone is firmer and harder, and although the reconstructions look very good on photographs and in a bra, the breast does not feel the same, move in the same manner as a normal breast or sag out under the influence of gravity. This is more noticeable if only one breast is operated on and in order to minimize the asymmetry between the two breasts, a breast lift procedure of the opposite breast is often needed.

Capsule formation around the implant causing hardening of the breast and distortion of the implant due to capsular contraction have also been a concern, but significant improvements in the design of the implants have decreased the incidence of capsule formation, and



have also brought about improvements in the shape and texture of the reconstructed breast.

FLAPS

A flap is tissue taken from the patient's own body and can consist of fatty tissue or fatty tissue and the overlying skin. The patient must have excess fat and skin to be able to reconstruct a breast. Typically these areas of excess are from the lower abdomen, the buttocks, the inner thigh and the back. This tissue is moved to the breast site and needs a good blood supply to survive. There are two ways of ensuring a good blood supply to the flap: **1. The pedicled flap** is where the excess tissue remains attached to a muscle. Examples include the TRAM flap where fat from the lower abdomen is kept attached to the rectus abdominis muscle and transposed to the breast site, and the latissimus dorsi flap where the fat from the back is pedicled on the latissimus dorsi muscle. These operations are long (between 3-5 hours) and there are additional scars where the flap has been taken from. Recovery time is also longer because of a more extensive operation.

2. The free flap is harvested with its own blood vessels (arteries and veins) from the areas such as the lower abdomen, the buttocks, the inner and

outer thigh and the back. Instead of sacrificing the underlying muscle, the blood vessels are dissected out from in-between the muscle fibers. The artery and veins are connected to vessels in the chest and this requires microsurgical skills. The benefit is that there is no muscle function loss and the breast and fatty tissue is replaced with similar fatty tissue and skin. The breast not only looks and feels more like a normal breast it also behaves like a normal breast.

It is a very intricate procedure taking between 4 to 6 hours, and the operating time and the necessary skills are not widely available. There is also the potential that the flap might fail. The failure rate in a good unit that does many of these procedures is between 2 and 4%. Examples of these flaps are the deep inferior epigastric artery perforator flap (DIEP) and the thoracodorsal artery perforator flap (T-DAP).

The nipple areola complex is reconstructed at different stages following the mastectomy using various techniques. Most surgeons would wait for 6-9 months before they would do this part of the procedure.

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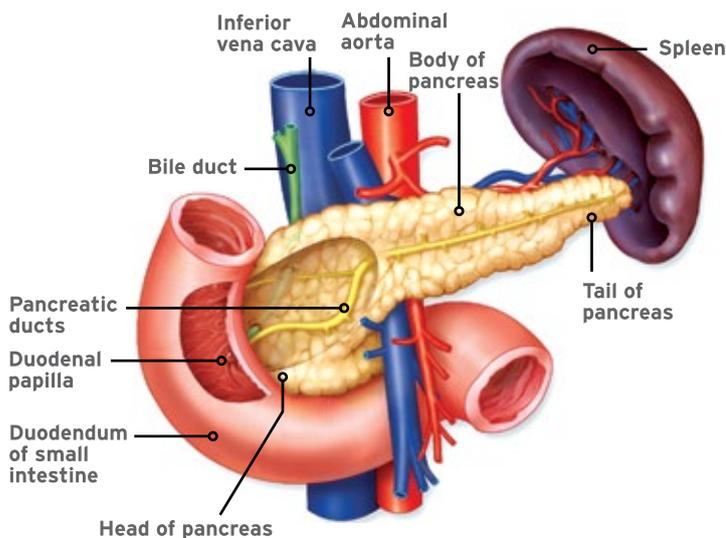
MBChB, FCS(SA) (Plast)

ACUTE PANCREATITIS

Acute pancreatitis is common and is associated with significant morbidity and mortality. It affects all racial, socio-economic, and age groups, and should be considered in all patients with acute onset abdominal pain.

TABLE 1: COMMONEST CAUSES OF ACUTE PANCREATITIS	
COMMON	gallstones
	alcohol
UNCOMMON	hypertriglyceridaemia
	hypercalcemia
	blunt trauma
	iatrogenic (post ERCP)
	drugs
RARE	The rest

Gallstones are the commonest cause internationally, narrowly beaten by alcohol in RSA. Gallstones should be actively excluded in every patient with acute pancreatitis, unless the alcohol history is extremely strong.



DIAGNOSIS

Amylase is the most commonly used blood test. Amylase >1000 is diagnostic of pancreatitis, but lower levels have a differential diagnosis that includes many of the causes of epigastric pain (eg perforated peptic ulcer, mesenteric ischaemia, etc), as well as hyperamylasaemia and salivary gland problems. Normal amylase also does not exclude pancreatitis, as the level can drop over a few days from onset of symptoms.

Lipase does not have the false positives related to the salivary glands, and stays elevated for longer than amylase, but may also be elevated in the other foregut pathologies included in the differential diagnosis. Thus the additional cost is usually not worth it.

Ultrasound is notoriously unreliable for examining the pancreas. Its use is limited to looking for gallstones. CT scanning is the gold standard for the diagnosis and evaluation of local complications of pancreatitis, and a negative CT excludes pancreatitis accurately. However CT is unnecessary in the patient with a clear clinical picture and elevated amylase.

ASSESSMENT OF SEVERITY

85% of cases of pancreatitis are mild. However the 15% that are severe (Table 2) are associated with a high mortality. Systemic organ failure occurs as a consequence of the systemic inflammatory response syndrome (SIRS). Any patient who is tachycardic, tachypnoeic, or with a reduced urine output needs urgent evaluation and fluid resuscitation. Patients with organ failure should be considered for ICU. Amylase level has no relationship whatsoever with severity.

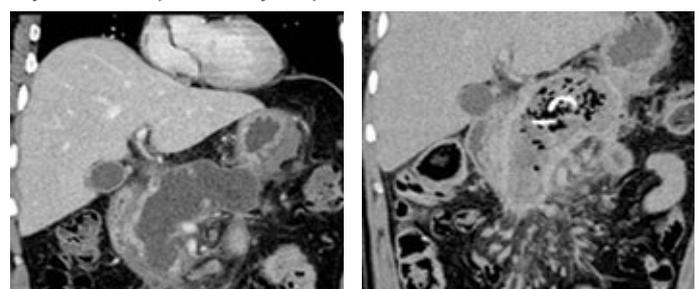
TABLE 2: DEFINITION OF SEVERE ACUTE PANCREATITIS	
PRESENCE OF ANY ORGAN FAILURE	
PRESENCE OF A LOCAL COMPLICATION	Acute fluid collection
	Pancreatic necrosis
	Pancreatic abscess
	Pseudocyst
PRESENCE OF 3 OR MORE RANSON CRITERIA	

TREATMENT

Mild pancreatitis responds well to fluid resuscitation. Adequate volume, and regular re-evaluation of fluid requirement is important. IM Morphine is usually required for analgesia. Oral feeding should be started early - there is no need for "pancreatic rest" and TPN. Antibiotics are not indicated - a raised WCC, CRP, and low grade temperature are markers of SIRS, not infection. Patients tend to respond well to fluids, tolerate full oral feeds within a few days, and are discharged none the worse for wear. All patients with stones should have a laparoscopic cholecystectomy within a month to prevent recurrence.

Severe pancreatitis generally requires ICU admission for organ support (eg ventilation for ARDS) and careful evaluation of fluid balance, especially those with renal failure. Enteral feeding (naso-jejunal tubes if required) is preferred to TPN. Antibiotics are avoided unless a specific source of sepsis is identified. ERCP is reserved for those with evidence of cholangitis and ongoing biliary obstruction. Surgery should be avoided in the first month. Thereafter local complications are addressed with the least invasive method possible, to minimise the aggravation of the inflammatory process. Pseudocysts and pancreatic abscesses may be drained endoscopically (Fig 2). Infected necrosis can be tackled via minimally invasive retroperitoneal necrosectomy. These approaches can be tedious, and require several repeat procedures, but are associated with significantly lower mortality than traditional open necrosectomy. **MH**

Fig 2: Endoscopic drainage of pancreatic abscess



Pancreatic abscess following acute severe gallstone pancreatitis

Pigtail stents placed via ERCP through the duodenal wall into the collection allow pus to drain, controlling infection.

CAN REMOVAL OF THE GALLBLADDER CAUSE ADVERSE EFFECTS?

Post Cholecystectomy Syndrome” (PCS) was first used in 1947 by Womack and Crider. Symptoms included upper abdominal pain, diarrhoea, nausea and the signs of deficiency of fat soluble vitamins A, D, E and K. Many authors are skeptical that PCS exists at all, while others report incidences of 10 - 15%, acknowledging that the symptoms may be subtle.

UMBILICAL DISCHARGE – THE WEEPING BELLY BUTTON



Umbilical discharge is an uncommon presenting symptom and can be associated with significant discomfort or pain and can be quite alarming. This should not automatically be attributed to poor hygiene. Spontaneous umbilical drainage may be caused by congenital or acquired conditions.

Infection may be due to recurrent folliculitis, carbuncle, pilonidal sinus, dermatitis, omphalitis, granuloma pyogenicum or umbilical talc granuloma. Candida infections are more common in obese patients or in the immune-compromised. Hair tufts, lint, and foreign bodies such as navel piercings should be excluded.

The 2nd most common cause after infection is congenital remnants of the embryonal anatomy. This can result in fistulas, sinus tracts, cysts, congenital bands, and mucosal remnants such as patent vitelline duct, cyst or sinus. The developing bladder may remain connected to the allantois through the urachus resulting in a patent urachus, urachal sinus, urachal cyst and umbilical polyps.

Granulation tissue may also persist at the base of the umbilicus after cord separation. The tissue is composed of fibroblasts and capillaries and can slowly grow to present later in life as a granuloma.

Very rare causes of an umbilical discharge include endometriosis and metastatic carcinoma.

Management of the weeping umbilicus should start with the diagnosis of the underlying pathology and may include swabs for microbiology, ultrasonography, CT scan, fistulogram or biopsy for histological diagnosis. Where metastatic deposits are suspected the primary site of the malignancy should be established.

Treatment includes antibiotics or surgical drainage for infection, silver nitrate cauterization or diathermy for umbilical granuloma, and surgical exploration for biopsy or excision. **DT**

CAUSES OF PCS

1. **Continuation of symptoms that had been interpreted as resulting from pathology of the gall bladder**, eg. Irritable Bowel Syndrome (IBS), peptic ulceration, gastritis, hepatic or retained cystic stump stones, bile duct strictures, stomach or pancreatic malignancies, pancreatitis
2. **Development of symptoms caused by removal of the gall bladder** eg. gastritis or oesophagitis from increased bile flow to the upper GI tract; diarrhoea from increased bile flow to the lower GI tract; wound pain and incisional hernias; Sphincter of Oddi Dysfunction (another controversial diagnosis).

APPROACH TO PCS

1. Counsel patients pre-op as to possible symptoms
2. Look out for IBS
3. If patient develops post-op abdominal pain, investigations include LFTs, Ultrasound, amylase and gastroscopy if not done pre-op.

DIETARY ADVICE

Lean meats, low fat dairy products, fruit and vegetables, high fibre cereals, no fast foods. **IL**

MEDICAL 10 2010

The 32nd staging of the Medical 10 took place at the Western Province Cricket Club off Keurboom Road in Newlands on Sunday 5th December. The race was 1st held in 1978 and is based on a 10km run for doctors in Finland intended to show that doctors practise what they preach about a healthy lifestyle. It is run on a handicap basis with half a minute allowed for each year over the age of 40 and in recent years, entry has been extended to include all qualified health professionals and walkers.

Life Healthcare has been

the major sponsor since 2005. Their support together with additional sponsorships by private partnerships has made it possible to make a significant donation to charity – this year about R45 000 will be donated to False Bay Hospital. There were 195 finishers this year, including 9 from Madley and Partners. As in the past, the staff of the practice organised the registration of the event.

The male winner was Elton Knight, a professional nurse at Vincent Pallotti Hospital and the female winner was Dr Jo Samsonowicz. **SC**



SISTER MARY JOSEPH NODULE



Fig 1: Excision of umbilical metastasis from a stage III rectal cancer in young male patient.

A Sister Mary Joseph nodule refers to a palpable nodule bulging into the umbilicus as a result of metastasis of a malignant cancer in the pelvis or abdomen. Gastrointestinal malignancies account for about half of underlying sources (most commonly gastric cancer, colonic cancer or pancreatic cancer, mostly of the tail and body of the pancreas). Gynaecological cancers account for about 1 in 4 cases (primarily ovarian cancer and also uterine cancer). Unknown primary tumors and rarely, urinary or respiratory tract malignancies cause umbilical metastases.

How exactly the metastases reach the umbilicus remains largely unknown. Proposed mechanisms for the spread of cancer cells to the umbilicus include direct transperitoneal spread, via the lymphatics which run alongside the obliterated umbilical vein, hematogenous spread, or via remnant structures such as the falciform ligament, median umbilical ligament, or a remnant of the vitelline duct.

Sister Joseph nodule is associated with multiple peritoneal metastases and a poor prognosis. Therefore excision of the nodule is usually palliative, for example when the mass is fungating and ulcerating, to facilitate hygiene and dressings..

Sister Mary Joseph was born Julia Dempsey on 14 May 1856 in Salamanca, New York. She entered the Catholic Order of the Sisters of St Francis of the Congregation of our Lady of Lourdes in Rochester at the age of 22. Three years later she was asked to work at the newly built St Mary's Hospital in Rochester under the direction of Dr William Mayo. Although she had no nursing experience after six weeks of training under Edith Graham she was appointed head nurse. Early in her training she was asked to assist at the examination of a male patient, and as he was fully exposed, she turned her back quivering with outrage and shame – but quickly learnt the lesson that the needs of human suffering transcend the dictates of modesty! Within three years she became first assistant to Dr Will Mayo (son of “old man” William Mayo). Under his tutelage she quickly became a skilled surgical assistant, able to anticipate his moves and her hands were so tiny she could reach into parts of the body that he could not. So skilled did she become that when Will Mayo was answering questions for the gallery she continued with the operation.

While prepping the abdomen for operations she noted the presence of an umbilical nodule as an indication of advanced intra-abdominal malignancy – usually stomach or ovary. Although mentioned in an article by Will Mayo in 1928 as

a “pants button umbilicus” it was not called the Sister Mary Joseph nodule until the 11th edition of Hamilton Bailey's Physical Signs in Surgery in 1947.

She retired from theatre after 25 years as Will Mayo's first assistant but continued as Superintendent of St Mary's

Hospital, establishing the St Mary's School of Nursing and coordinating the construction of eight additions to the hospital. When in 1938 she died, aged 82, of bronchopneumonia (not intra-abdominal malignancy as sometimes fancifully claimed) she had been in the Order for 61 years and Superintendent of the hospital for 47. The original surgical building at St Mary's Hospital has now been renamed the Joseph Hospital in her memory. **SC/BB**

