

# ENDOSCOPY UPDATE

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#2

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## ESOPHAGEAL VARICES

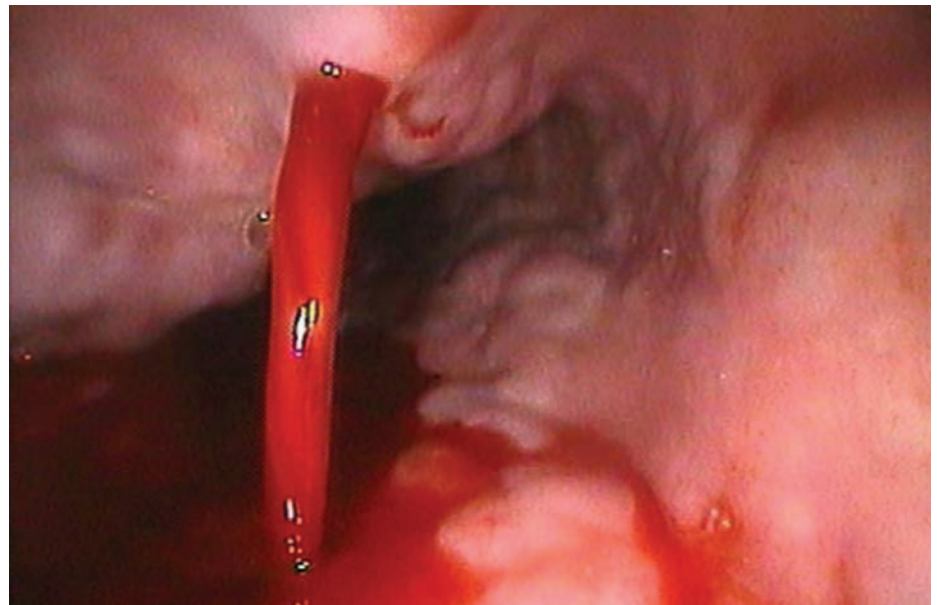
*The management of oesophageal varices is the most important component of managing portal hypertension. This is most commonly a consequence of liver cirrhosis from any cause (alcohol, hepatitis B or C, haemochromatosis etc), but is also frequently caused by portal or splenic vein thrombosis (intra-abdominal sepsis, pancreatitis, portal lymphadenopathy etc). Upper GIT endoscopy and banding is the cornerstone of varices management*

### Primary prophylaxis

Routine endoscopy of patients with cirrhosis or portal vein thrombosis is recommended to identify varices. This forms part of the assessment of the severity of liver disease and the varices are not treated at this stage. Treatment is directed at controlling the underlying cause of the portal hypertension. There is no evidence to support the prophylactic banding of varices that have never bled.

### Control of acutely bleeding varices

Endoscopy and banding are the primary measures used for bleeding control in the emergency setting. This is usually performed in theatre, as active haematemesis is often combined with hepatic encephalopathy, further compromising airway safety. Banding



is combined with administration of a somatostatin analogue such as Octreotide, to help lower portal pressure.

### Secondary prophylaxis

Serial elective banding of varices in the months following a variceal bleed reduces the risk of a recurrent bleed. This is usually combined with a non-cardiac selective Beta blocker (Propranolol) to reduce portal pressure. Band application results in scarring of the superficial venous columns in the distal esophagus. Blood is then diverted to deeper venous channels, thereby preventing recurrent bleeds. As

the mucosa becomes more fibrotic the varices reduce in size and the bleeding risk reduces. The intervals between bandings are then gradually lengthened. Elective banding is performed safely as a day case in the rooms with conscious sedation, and involves no more preparation or time for the patient than a routine gastroscopy.

### TAKE HOME MESSAGE

In all patients with portal hypertension, oesophageal banding is the cornerstone of variceal management, both in the elective and emergency setting.



Fig 1: Oesophageal Varices

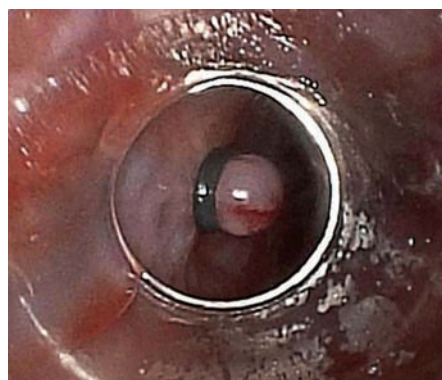


Fig 2: Band on Varix

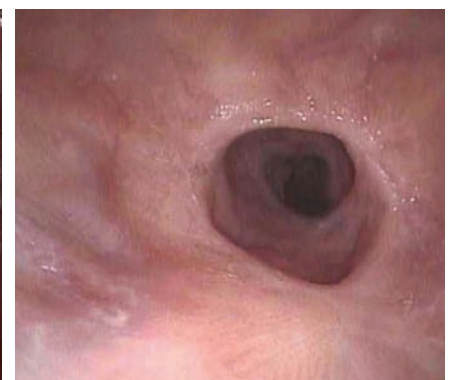


Fig 3: Post Eradication

# THE PRACTICE TEAM

Our most recent "Training morning" in June. Nine endoscopists, six endoscopy nurses and two administrative staff.



## CONSCIOUS SEDATION AND SAFETY

This practice has performed in-rooms endoscopy with conscious sedation for more than thirty years and has an impeccable safety record. The estimated number of scopes in this time is probably about 90 000.

All patients have a formal consultation prior to and after the procedure. We have stratified criteria to identify a high-risk group who need to be seen for a formal consultation to assess the patient's suitability for endoscopy. These are patients with:

- > Cardiac failure
- > Respiratory failure
- > Renal failure
- > Age >75 years
- > Sleep apnoea
- > Prior adverse reaction to sedation

The patient is assessed as to whether they are fit to undergo bowel prep and/or whether an alternate investigation would be more appropriate. A few selected high-risk patients will be sedated by an anaesthetist, either in our facility or in theatre.

Patients and their accompanying family or friend are given clear post procedure instructions on discharge.

We have a dedicated endoscopy and recovery suite in each of our rooms. These are managed by trained nurses. Each suite has an emergency resuscitation trolley, stocked under an anaesthetist's advice, and is checked regularly.

Our standard protocol is to use only **midazolam (Dormicum)** for gastroscopy, with the addition of **pethidine or fentanyl (Sublimaze)** for colonoscopy. In our practice these have proved exceptionally safe and predictable. The endoscopist carries out the sedation and the patient is monitored by the nurse. The patient's vital signs are checked and monitored before, during and after the procedure. We have recently introduced new monitors that combine pulse oximetry and continuous BP measurement. **Flumazenil (Anexate)** and **naloxone (Narcan)** are reversal agents used for oversedation. In 2012, only a single ampoule of Anexate was used in over 4000 endoscopies, reflecting the predictability of our dormicum and pethidine based sedation, and our familiarity with them.

## SCOPING PRIVATE ENDOSCOPY UNITS

*Endoscopy services are offered either in private endoscopy units (in-rooms), or within a hospital setting (in-hospital). Patients generally prefer in-rooms scopes because they are cheaper and more convenient (more flexible times, superior waiting areas for patients and their accompanying persons, familiar reception and nursing staff). In-rooms scopes receive preferential funding compared to in-hospital scopes, from major medical aids like Discovery, who waive their in-hospital endoscopy co-payment (R2000-3000) for in-rooms scopes.*

*Discovery Health explain their reasons for preferring in-rooms endoscopy services.*

Discovery Health and the South African Gastroenterology Society (SAGES) have long been in discussion to identify areas of collaboration based on the following principles:

- > Continued quality improvement for patients
- > Ensuring the ongoing financial security of Gastroenterologists
- > Sustainability of the health care system
- > Right intervention, right place, right time

Among a range of issues, a key area of joint focus is the appropriate place of service for diagnostic upper and lower GIT endoscopy. The data demonstrates that in excess of 85% of all scopes funded by Discovery are performed in an in-hospital setting. On a risk adjusted basis, the cost of the scopes performed in an in-hospital setting is between 3 and 4.5 times higher than those performed in the doctors' rooms, with the

increased cost being driven by the hospital admission.

In line with international best practice, by performing scopes appropriately in an out-of-hospital setting, without in any way compromising quality of care, significant savings can be generated to the benefit of the patient, the profession and the sustainability of the system.

To support those gastroenterologists who choose to do their diagnostic upper and lower GIT endoscopy, where appropriate, in their rooms, Discovery currently funds these scopes from the scheme risk pool, rather than from the patient's savings account, and waives the co-payment which applies to the hospital admission for these procedures.

Discovery and SAGES will continue to collaborate based on the principles described above to optimise the funding of these procedures in the appropriate setting.

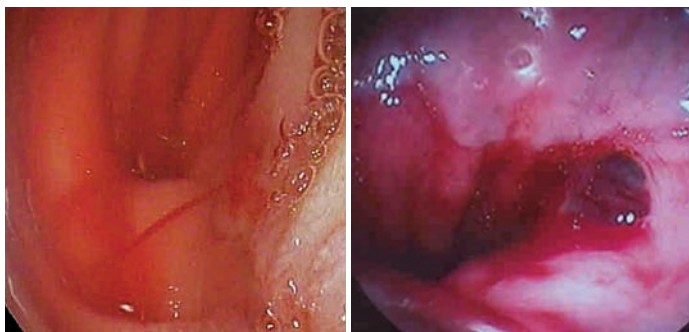


# ENDOSCOPY ATLAS

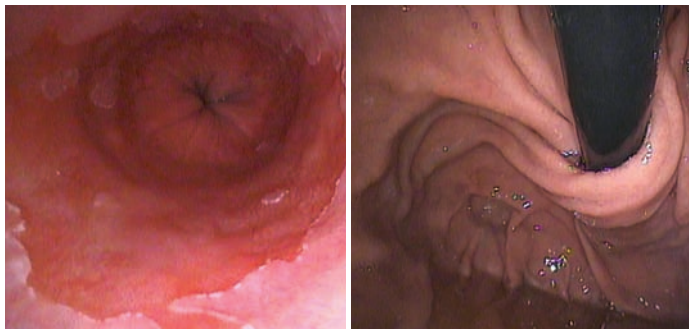
## OF UNUSUAL CAUSES OF ANEMIA



**NSAID duodenal ulceration** from cardio aspirin. An unusual miliary pattern with single deep ulcer with blood clot



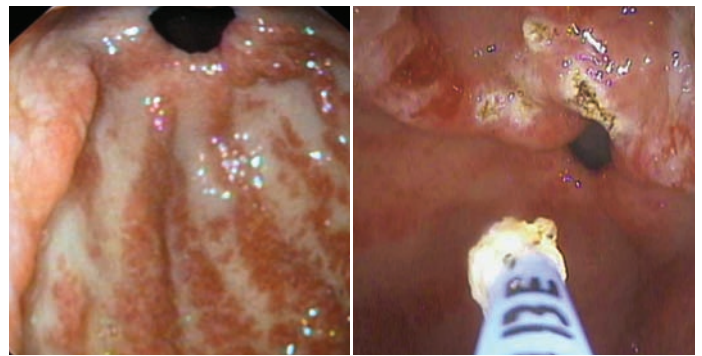
**A Dieulafoy lesion** at the OGJ, and a duodenal one captured while bleeding. These are minute AV malformations which are often invisible unless caught while bleeding



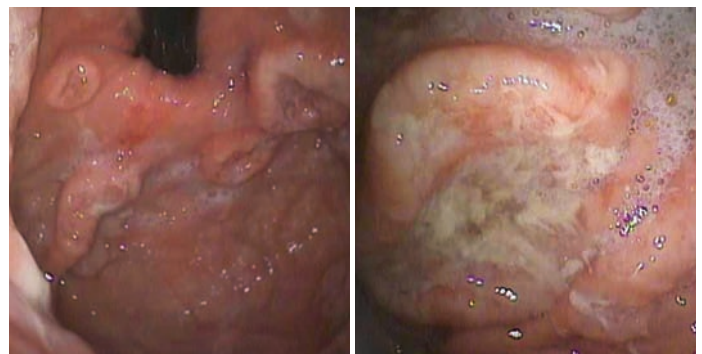
**Barrett's oesophagus** with a fundoplication (viewed from the stomach) below it, preventing acid reflux.



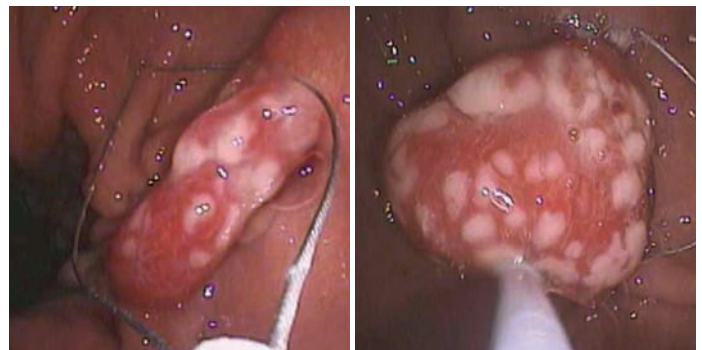
**Radiation proctitis** caused by prostate RT. This patient has been successfully treated by several applications of dilute formalin, which is the most effective therapy available



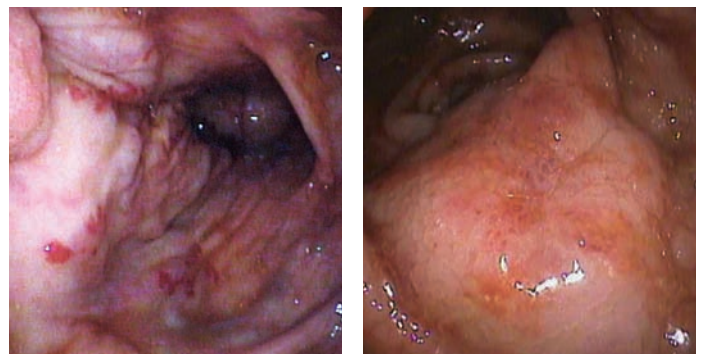
**Gastric Antral Vascular Ectasia (GAVE)** or "Watermelon Stomach". This is a rare cause of recurrent chronic anaemia, frequently misdiagnosed as gastritis. It is insensitive to medication and requires argon plasma coagulation (APC) which is usually curative.



**Gastric Lymphoma (Non-Hodgkins)** cured by chemotherapy



**Large polyps** of the stomach are rare. Snaring of 2 gastric polyps presenting with anaemia. They are rare manifestation of long term PPI use



**Angiodysplasia** of the colon causing anaemia, with an incidental polyp in left foreground

**Endometriosis** of the rectum causing anemia, cyclical tenesmus and PR bleeding

# A HISTORY OF ENDOSCOPY SERVICES AT THE PRACTICE

In 1972 Prof Jannie Louw arranged with Dr Solly Marks, Head of the GI Unit at GSH, for a surgical registrar to have endoscopy training. In 1975, as Prof Louw's senior reg, Peter Jeffery (our practice founder) ran a GSH endoscopy session that continued until 1988 when he turned to vascular surgery. They used a front viewing Olympus scope if a duodenal ulcer was suspected, and a side viewing scope if gastric pathology was more likely. Later, angled front viewing scopes allowed visualisation of both the stomach and duodenum.

In 1977 Syd Cullis joined the practice and he and Peter started private practice endoscopy. At this time Solly Marks was the only other private practitioner doing endoscopy. We could not afford a new Olympus scope (about R8000 at the time) and Solly Marks sold us his ACMI gastroscope for R1 300, which he had recently replaced with an Olympus. It employed a joystick control as opposed to a ratchet wheel and was 15mm in diameter as opposed to the 8mm of current scopes. We performed our first



With the practice's first ACMI scope: Peter Jeffery, Solly Marks, Syd Cullis, Philip Bornman

scope in the small kitchenette in our Wynberg rooms. Suction was provided with a manual foot pump. In early 1980's, we bought a new Fujinon scope for about R7500. At the time the scope fee was about R58.00, which meant only 150 scopes to pay off the instrument.

Confidence grew in the 1980's and slowly we became the major endoscopy practice in the Southern Suburbs, Central Cape Town and Sea Point. We offered a service to the provincial hospitals using our own equipment, Somerset, Victoria, Woodstock, Conradie and Fish Hoek Hospitals. This entailed taking our scope and accessories with us. Syd used to make a monthly trip to Swellendam to do a scope list in the local hospital.

In the early 1980's a colonoscopy service was introduced – initially at our

City Park rooms, then at Constantiaberg, Vincent Pallotti and Wynberg. In the late 1980's Syd started doing private ERCP's in the radiology suite of Dr Levin & Partners (now Dr Tuft & Partners).

The move to Harfield House enabled us to design our own endoscopy suite and this coincided with the introduction of video endoscopy. Subsequently the same happened at our Constantiaberg and Vincent Pallotti rooms.

Today, the practice is the largest private endoscopy facility in South Africa. We have three endoscopy suites, 7 scoping partners and 6 nurses. We continue to provide an ERCP service and in 2009 introduced Transanal Endoscopic Microsurgery (TEO) into the country. The current annual number of scopes across the practice is over 4000.



## SCOPE HYGEINE: QUESTIONS AND ANSWERS

**Q** Is it possible to get an infection after a colonoscopy?

Endoscopy is a safe and effective procedure, infections are extremely rare with an estimated frequency of 1 in 1,8 million, as per a recently updated guideline from ASGE (American Society for Gastrointestinal Endoscopy). A strict cleaning and disinfection routine is central to this low rate.

**Q** Is the same scope used for multiple procedures?

Yes. In all areas of medicine, complex medical devices are generally not discarded after one use but rather are reused in subsequent patients. This practise has proven to be very safe.

Scopes can have a life of several thousand procedures and cost approximately R400 000 new, with numerous expensive repairs

and replacement parts during their 3-5 years of life. An endoscope consists of a flexible tube manoeuvred by control knobs and wires which allow the endoscopist to manipulate the tip of the tube. Within the tube are the delicate electronics and the access channels that permit the passage of instruments to sample tissue, stop bleeding and remove polyps.

**Q** Can you get HIV after a colonoscopy?

The odds of acquiring HIV from a colonoscopy are effectively zero - "never say never" in clinical medicine! The virus is very fragile and cannot live outside the human body for long. The estimated risk of getting an infection from tough, resistant organisms is 1 in 1,8 million. The estimated risk of getting HIV is significantly less than that but not recorded. ■

### HOW IS A SCOPE CLEANED?

The following products are used in a cleansing protocol between all procedures.

- > Paper towel / soft cloth
- > Double sided bristle cleaning brush
- > Toothbrush
- > Fresh water (approx 5 litre)
- > Enzymatic detergent
- > Disinfectant
- > 70% Alcohol
- > Leak tester