Specialist CPD for the medical insurance sector

a presentation by Cardiff University

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&
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Content

- Overview of the relationship between Cardiff University and Legal & General
- Introduce the courses developed and delivered for Legal & General
- Gastroenterology talk taken from the Specialist Medical Modules
- Discuss the scoping study and how you can be involved in developing future courses for the insurance sector

The early days

- Since 2002, L&G have had a successful partnership with Cardiff University
- Cardiff have developed and delivered bespoke professional development courses for medical underwriting – the L & G ‘academy’
- Initial courses were the result of L & G’s fast paced recruitment in Cardiff, the re-deployment of staff from non-medical underwriting and new business

The early days

- The Business Development Team at the centre for Lifelong learning is the gateway for businesses into the University's range of expertise from the 29 schools within the University,
- The initial course, the **first** of its kind in the UK, was managed by a project team, commenced in November 2002 and filled a gap in the medical underwriting market
- This course, **MEDICAL FOUNDATIONS FOR UNDERWRITING**, was designed to provide underwriters with an established grounding in medical knowledge to facilitate and improve their risk assessing performance

The first Medical Foundations for Underwriting Course
(Nov 2002 - May, 2003)

The Essential Elements

- 20 x 3½ -4 hour sessions

- Format: Classroom lectures; interactive sessions, revision and examination In-house follow-up to topics

- Presenters: 18 Nationally recognised experts (within and external to Cardiff University)

- Accreditation : 30 credits at level 1 (first year undergraduate study)

-Certificate of successful completion (Work Assignment & Examination performance)

-Accessibility to students for in course feedback between sessions

Timeline

2002

Medical Foundations for Underwriting

- half-day (3hrs)
- Once a week for 20 weeks
- 20 students
- Cardiff

2003

Medical Foundations for Underwriting

- half-day (3hrs)
- Once a week for 25 weeks
- 26 students
- Cardiff

2004

Health Claims Management Course

- half-day (3hrs)
- Once a week for 30 weeks
- 28 students
- Brighton

2005

Medical Intermediate for Underwriting

- half-day (3hrs)
- Once a week for 25 weeks
- 28 students
- Cardiff

2007- present

Specialist Medical Modules

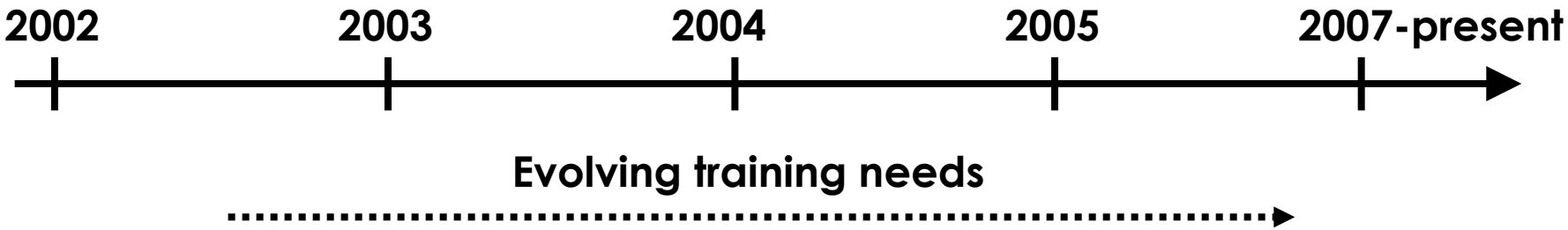
- 12 Mod's: include Oncology, Cardiology
- 4-6 day modules
- Once a fortnight
- 10 students per module from across the UK
- Cardiff

Overview

Moving on

- Following refinements to the initial course a second course for more advanced underwriters was developed - **MEDICAL FOUNDATIONS FOR UNDERWRITING (II)**
- The success of these initial collaborations with underwriting led to an expansion to the Claims Department within L & G and the development of a **HEALTH CLAIMS MANAGMENT** course for staff engaged in medical insurance claims based in Brighton but delivered by Cardiff University

Evolving training needs



Initially - Courses were designed to provide underwriters with an established grounding in medical knowledge to facilitate and improve their risk assessing performance.

Now – Specialist training in specific medical areas. This enables each L&G office around the UK to have an expert who is able to give support and guidance to colleagues on difficult cases.

Overview

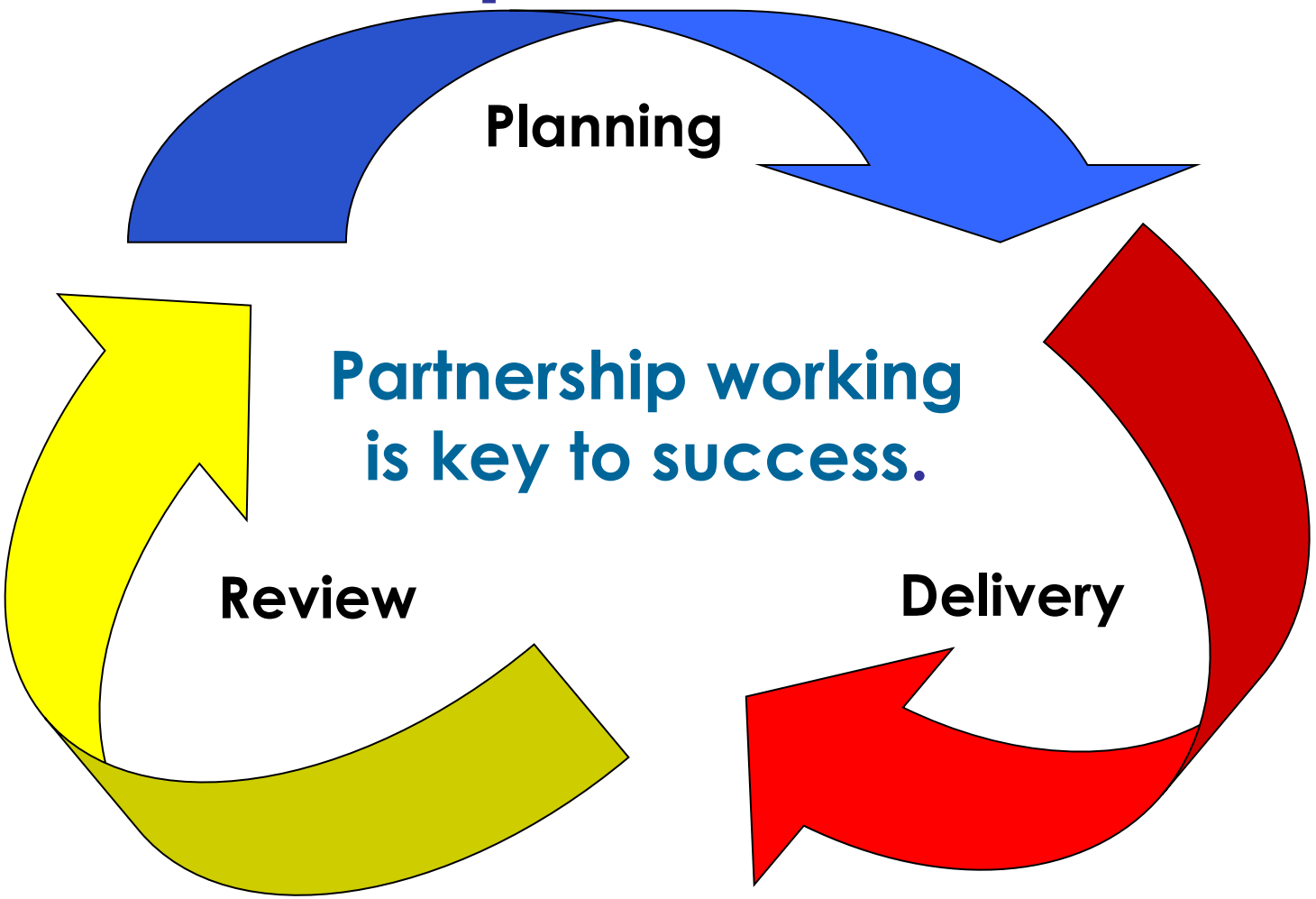
Collaboration

We worked with L&G through each step of the learning and development process

To:

- **Understand the organisation**
- **Define learning outcomes**
- **Agree content and specification (following a training needs analysis)**
- **Identify evaluation topics & methods**

Our learning development process



Awards & recognition

- Cardiff University Innovation Network (CUIN) award for Innovation, 2003
- Winner of the regional Award at the Wales Training Awards 2004
- Featured in the Council for Industry and Higher Education (CIHE) report 'Employer Demand and It's Influence on Higher Education' 2008
- Featured in the CBI/Qineiq report 'Excellence in Service Innovation'
- Short-listed for a Personnel Today Award 2009: Excellence in Training. Winner to be announced November 2009

Specialist Medical modules

(2007 – to date)

Eight specialist modules on 8 separate topics and an introductory day

Modules:

- Cardiology
- Endocrinology
- Oncology
- Diseases of the joints and psychosocial influences on capacity with particular reference to musculoskeletal disorders
- Mental Health
- Major Urogenital and Kidney
- Neurology
- Gastroenterology

Specialist modules

Common features

- Medicine and the Law
- Lifestyle Risks
- Financial underwriting
- Claims assessment

Methods

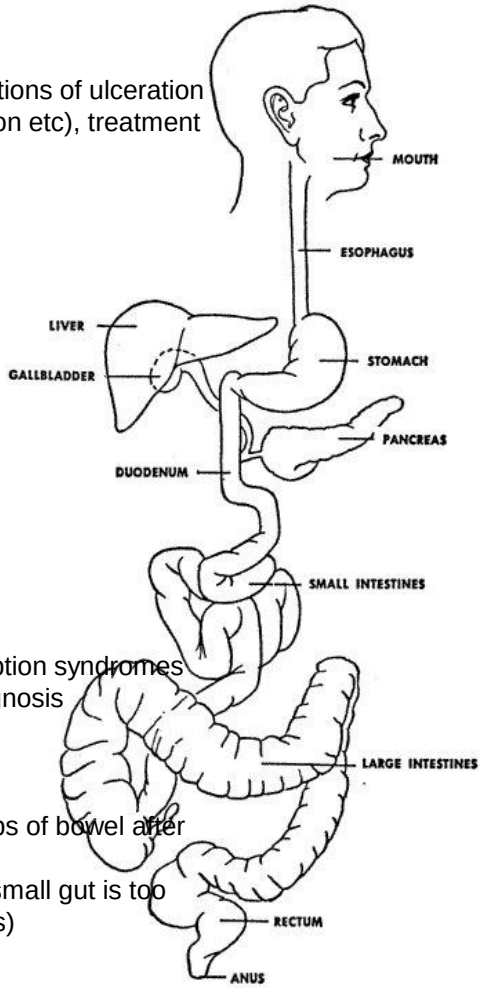
- Lectures/talks
- Workshops/visits
- Using scientific papers, Websites & textbooks

Gastroenterology

Module 8 – Gastroenterology – Syllabus content for 6 day course
Each day will also include workshops/discussion groups about insurance cases and where appropriate a visit, video or demonstration
The course will include either a visit to an oesophageal laboratory or similar or a practical session e.g. liver dissection
Basic introduction to the anatomy and physiology of the gastro-intestinal tract including the liver & pancreas
a. Summary of essential aspects of metabolism (digestion & absorption)
b. Basic structure of the alimentary canal including:
Mouth/salivary glands
Oesophagus
Stomach
Small intestine
Large intestine (colon, rectum)
Pancreas
Liver (and biliary tract)

Introduction to diagnostic (and therapeutic) G I procedures
Introduction
Endoscopy
Manometry
X-ray contrast studies
Scans

Diseases of the stomach & duodenum
Pyloric stenosis (congenital)
Gastritis & peptic ulceration including complications of ulceration (haemorrhage, perforation, long-term obstruction etc), treatment etc.
Nausea & vomiting
Duodenal ulcer
Pancreatic disorders
Acute pancreatitis
Chronic pancreatitis
Pancreatic abscess
Pancreatic cyst
Zollinger-Ellison syndrome
Inflammatory bowel disease
Introduction (epidemiology and aetiology etc)
Crohn's disease
Ulcerative colitis
Irritable bowel syndrome
Constipation & diarrhoea as symptoms
Malabsorption syndromes
Overview of commonly encountered malabsorption syndromes with particular emphasis on treatment and prognosis
Celiac disease
Infection & infestation
Carbohydrate intolerance
Bacterial overgrowth syndrome (from blind loops of bowel after surgery or jejunal diverticulosis)
Post-surgical, e.g. short bowel syndrome (the small gut is too short to provide an absorptive area for nutrients)
Whipple's disease
Hepatic (liver) & biliary disorders
Introduction



Gastroenterology

- Six day course
- Each day included lectures, workshops & discussion groups (about insurance cases) and where appropriate a visit, video or demonstration
- The course in 2008 included a practical session of liver dissection
- Student assessment included written assignments and a presentation

GIT Day 2 lecture outline

Day 2 - morning

Upper GI problems

Mouth & salivary glands [with workshop]

- Infections (bacterial, viral & fungal)
- Benign neoplasms, cysts, and developmental and inflammatory lesions of the soft tissues
- Carcinomas
- The function of the salivary glands and associated problems

Day 2 - afternoon

Oesophagus [with workshop]

- Oesophageal motor and sensory disorders including:
- Dyspepsia - indigestion-like symptoms arising from the oesophagus (gastro-oesophageal reflux disease GERD etc)
- Barrett's oesophagitis & oesophageal cancer
- Haematemesis (and melaena)
- Oesophageal varices
- Mallory-Weiss syndrome
- Hiatus hernia
- Dysphagia (oesophageal obstruction)
- Chronic/recurrent abdominal pain
- Functional GI problems (IBS?)

Specialist Medical Modules 2008 - 2009
Gastroenterology

Oesophageal disorders

Dr Nick Niven-Jenkins

Achalasia

- Occurs in young adults
- Peristalsis of lower oesophagus is impaired
- LOS* fails to relax during swallowing
- This causes, dysphagia, regurgitation and
- Sometimes aspiration pneumonia
- The oesophagus becomes dilated & the muscular layers hypertrophy
- Autonomic nerve supply to the muscle is abnormal but the cause is unknown

LOS = lower oesophageal sphincter

Normal lower oesophagus

- An acid (pH <4) contact time of 1-2 hours per day is considered normal in the distal oesophagus
- This level of reflux occurs in completely asymptomatic individuals
- The oesophagus has local means of protection against acid etc
- It is composed of a thick epithelial layer, with cells joined by tight junctions with lipid-rich intercellular spaces
- This arrangement resists the diffusion of noxious substances by limiting entry of H+ into both cells and intercellular spaces
- In addition, scattered submucosal glands in the lower end (distal) oesophagus secrete bicarbonate to maintain tissue acid-base balance

Reflux oesophagitis (GERD)

Mechanism

- The stomach produces hydrochloric acid after a meal to aid in the digestion of food
- Normally, a ring of muscle at the bottom of the oesophagus, called the lower oesophageal sphincter, prevents reflux of acid from the stomach into the oesophagus
- This sphincter relaxes during swallowing to allow food to pass. It then tightens to prevent flow in the opposite direction
- With GERD, however, the sphincter relaxes between swallows, allowing stomach contents and corrosive acid to well up and damage the lining of the oesophagus.

Reflux oesophagitis - causes

Factors or conditions that may increase a person's risk of developing reflux oesophagitis include the following:

Pregnancy
Obesity
Scleroderma
Smoking
Alcohol, coffee, chocolate, fatty or spicy foods
Certain medications
etc

Complications of reflux oesophagitis*

The vast majority of people with reflux disease experience no more than the symptoms of heartburn which are usually easily controllable with the antacids or acid-reducing drugs that are available

However the following do occur:

- Ulceration
- Anaemia
- Barrett's oesophagitis
- Benign strictures
- Oesophageal cancer

*Taken from: Dr Mark L Wilkinson Consultant Gastroenterologist, Guys & St. Thomas's Hospital NHS Foundation Trust,

Ulceration

Although redness and sometimes superficial or shallow ulcers of the lower oesophagus are common features seen at *endoscopy/gastroscopy* in people with reflux disease, occasionally the ulcers can be deeper or more extensive

If the ulcers are not treated they
can rarely extend beyond the gullet
into surrounding structures in the chest,
and may, rarely, be associated with
bleeding or perforation

These are both serious and potentially
life-threatening complications requiring
immediate admission to hospital,
and sometimes emergency surgery

Anaemia

- Anaemia, due to the slow leakage of blood from an ulcerated area of the oesophagus, is generally found in patients with large oesophageal ulcers or oesophageal cancer
- Usually the loss of blood is so slow as not to be noticeable in the stools, (*occult bleeding*) and the person will simply feel tired, or breathless etc
- Anaemia is readily found by a routine blood count, - there are many other causes of anaemia - but the new appearance of *iron deficiency anaemia* in a middle-aged or elderly person will always raise the suspicion of a cancer somewhere in the GIT
- More rapid blood loss leading to a bloody vomit (*haematemesis*) or dark, altered blood in the stools (*melaena*) is uncommon in oesophageal reflux disease (common with oesophageal varices)

Barrett's Oesophagitis

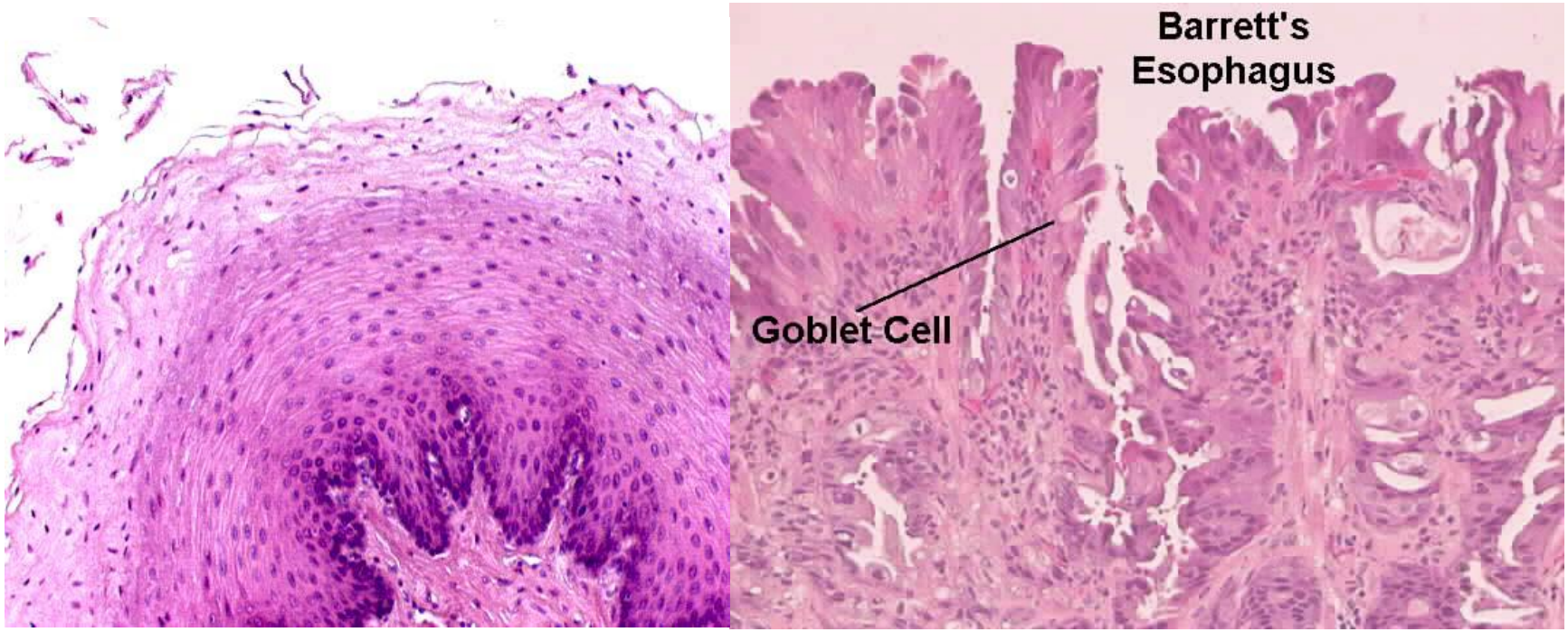
- The best-known complication of long-term oesophageal reflux* is 'Barrett's oesophagus', *first described in the 1950's by Norman Barrett, a surgeon at St. Thomas's Hospital in London*
- The lining of the lower oesophagus changes to an intestinal type of lining due to long-term exposure to acid reflux
- This is called *intestinal metaplasia* and is the characteristic feature of Barrett's oesophagus

*40-65% of the UK population suffer oesophageal reflux at least monthly

Barrett's Oesophagitis

- *Biopsies* are taken at endoscopy to show the metaplasia to make the diagnosis
- The significance of Barrett's oesophagus, which has no additional symptoms compared with reflux oesophagitis, and is in fact often associated with mild or absent symptoms, is that it greatly increases the risk of ***oesophageal cancer (adenocarcinoma)***

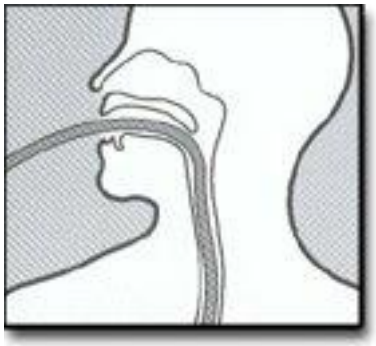
Barrett’s Oesophagitis

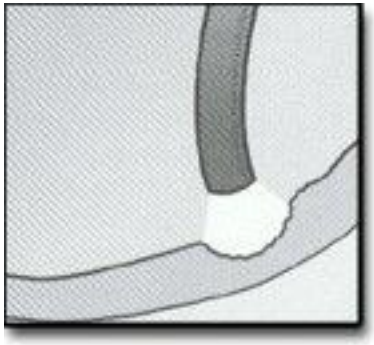


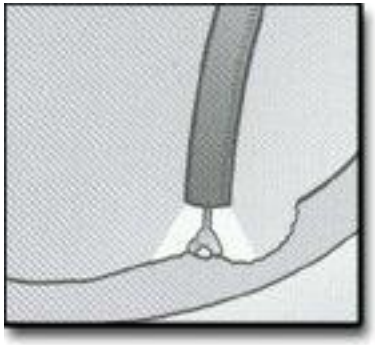
Screening in Barrett’s oesophagitis

- Screening and surveillance of Barrett's oesophagus is a matter of discussion in the current world literature due to uncertainties concerning its cost-effectiveness
- In the UK surveillance using repeated endoscopies with/without multiple blind biopsies are widely practiced by individual gastroenterologists
- The aim of screening is to identify histological markers for increased cancer risk (dysplasia) or cancer that is at an earlier stage and is amenable to therapy
- Preliminary data suggest that surveillance endoscopy does just that
- Age and comorbidity are important factors to consider (fitness)

Endoscopy



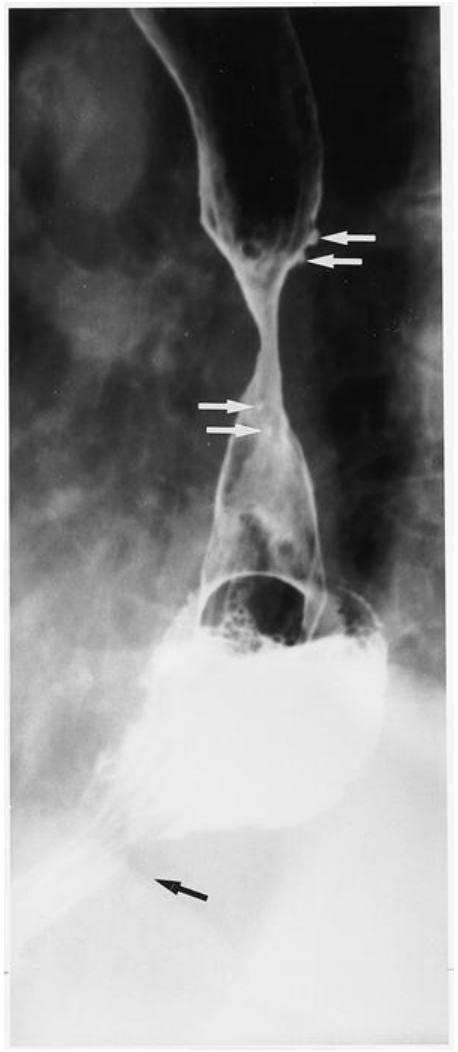




Benign oesophageal stricture

- Extensive and advanced oesophagitis involving the deeper layers of the gullet and goes all the way round its circumference may cause swelling and scarring leading to narrowing
- This causes the distressing symptom of *dysphagia*, a difficulty with swallowing, especially of solid foods
- Dysphagia is also a feature of uncomplicated reflux disease as well as of oesophageal cancer it is therefore **investigated urgently** with an endoscopy or a barium swallow
- ‘Benign’ strictures may be treated with a variety of methods to stretch the narrowed part of the oesophagus, and sometimes with surgery

Benign oesophageal stricture



Oesophageal cancer

- While it may be an incidental finding on endoscopy/biopsy the majority of cases of cancer are found because the person has symptoms:
  - **dysphagia,**
  - **weight loss and**
  - **anaemia**

    (symptoms of advanced disease)
- **Small and localised tumours** can treated surgically with curative intent
- **Larger tumours** tend to be inoperable and hence cannot be cured;
- Their growth (and therefore their symptoms) can be delayed with chemotherapy, radiotherapy or a combination of the two
- In some (rare) cases chemo- and radiotherapy can render these larger tumours operable

Oesophageal cancer

Aetiology

- Occurs twice as commonly in men, with a peak incidence between 60-80 years of age with an **overall five year survival rate of less than 10%**

There are marked geographical variations in incidence and aetiological features include:

- ***Cigarette smoking,***
- ***Excess alcohol & poor diet***
- ***Barrett's oesophagitis***
- Plummer-Vinson syndrome (congenital oesophageal web, iron deficiency anaemia & glossitis),
- Oesophageal stricture and
- Achalasia

Oesophageal cancer

Anatomically

- 10-15% of carcinomas occur in the *upper third* (mostly squamous)
- 35-40% occur in the *middle third*
- 40-45% occur in the *lower third* (mostly adenocarcinomas)

Spread is by direct extension into the oesophagus and through the submucosa or via the lymphatic system

Oesophageal cancer

At presentation over 60% patients have lymphatic involvement.

Treatment depends on location

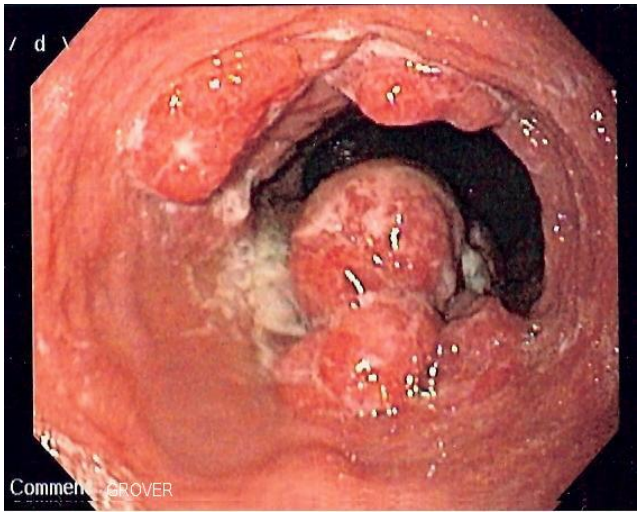
- ***Upper third*** - most are elderly patients and radiotherapy is the treatment of choice
- Radiotherapy avoids a laryngectomy, gives significant palliation from dysphagia and results suggest may have a 5-10% cure rate in the early stages of the disease

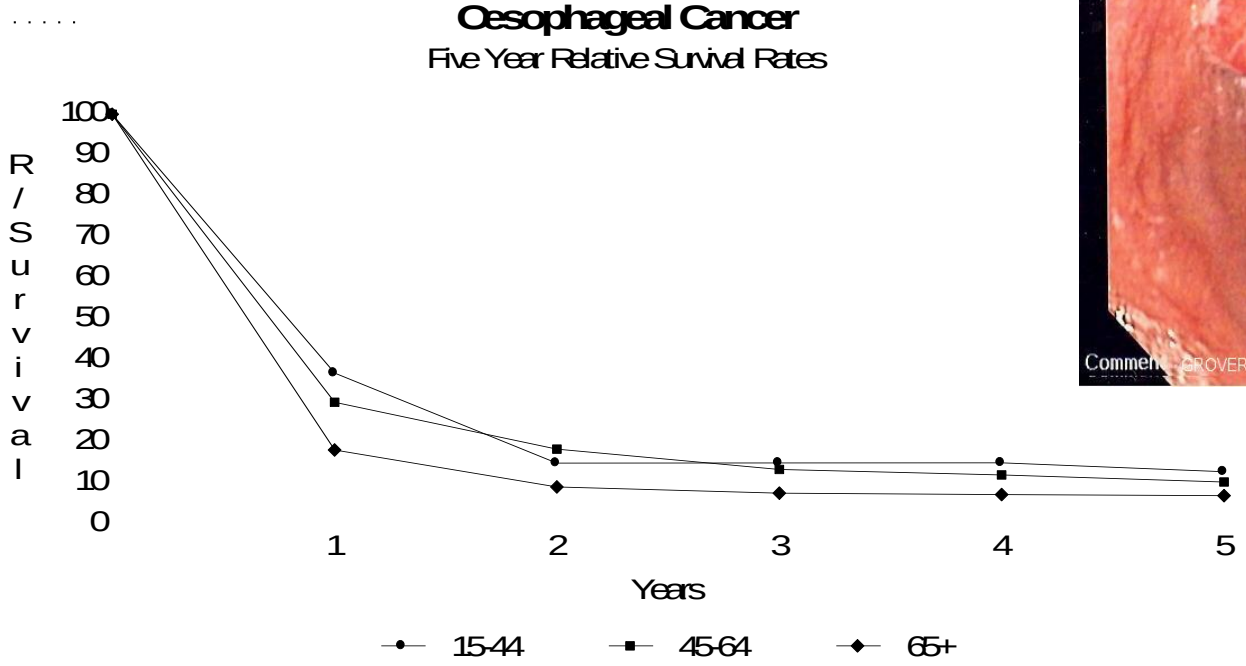
- ***Middle third*** - Surgery is the usual treatment and involves either mobilising the stomach for an oesophago-gastric anastamosis or colonic interposition

- ***Lower third*** - Surgery with mobilisation of the stomach is the usual treatment but in many cases at operation the stomach is also found to contain tumour

- **Palliative** - patients with inoperable disease obtain symptomatic relief of dysphagia from a variety of measures including radiotherapy, laser therapy, celestin tubes and other prostheses and bypass surgery.

Oesophageal cancer





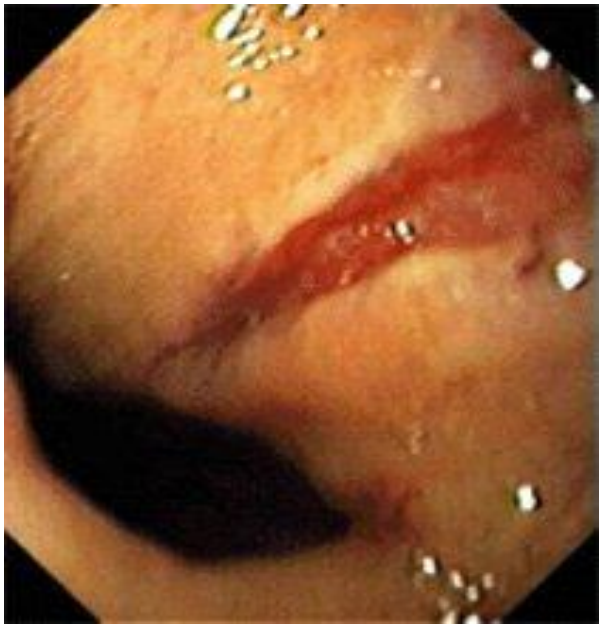
Average male & female
15-44 n = 41 45-64 n = 658 65+ n = 1626

The remainder of the talk included the following…….

Mallory-Weiss syndrome

- This refers to bleeding from tears in the mucosa at the junction of the stomach and oesophagus, usually caused by severe retching, coughing, or vomiting
- It is common in alcoholics, and
- Often presents as an episode of vomiting up blood (haematemesis) after violent retching or vomiting
- In most cases, the bleeding stops spontaneously after 24-48 hours, but endoscopic or surgical treatment is sometimes required and rarely the condition is fatal
- Definitive diagnosis is by endoscopy
- Treatment is mainly supportive

Mallory-Weiss syndrome



Oesophageal varices

- **Oesophageal varices** are extremely dilated sub-mucosal veins in the oesophagus
- They are most often a consequence of portal hypertension, such as may be seen with cirrhosis
- Patients with oesophageal varices have a strong tendency to develop bleeding
- Variceal bleeding is a medical emergency and there is a high fatality rate
- Responsible for 5% of episodes of GI bleeding in the UK

Oesophageal varices

The causes of oesophageal varices is anything that can increase the portal hypertension.

Pre-hepatic causes:

- Portal vein thrombosis
- Portal vein obstruction - congenital atresia/stenosis
- Increased portal blood flow - fistula

Intra-hepatic causes

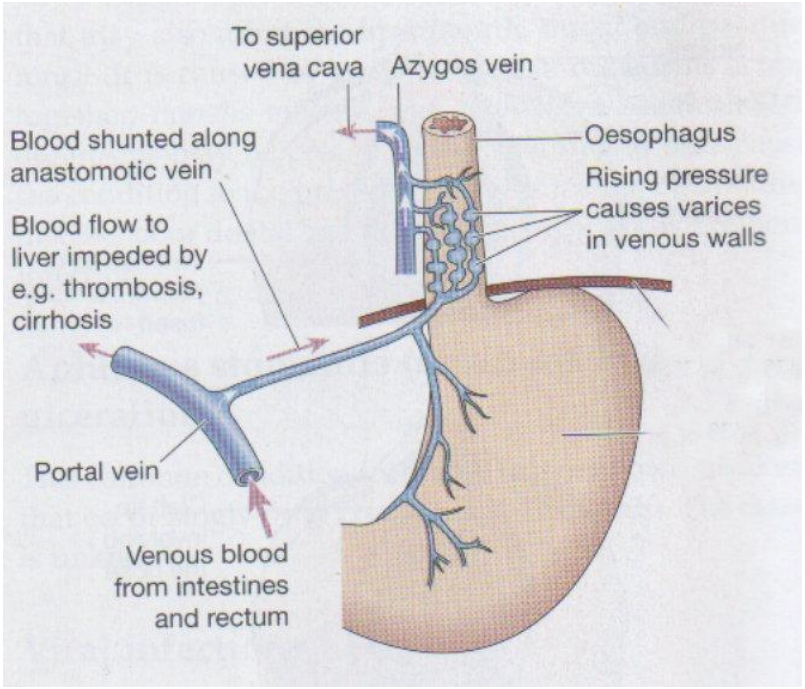
- Cirrhosis due to various causes including alcoholic, chronic hepatitis (e.g. viral or autoimmune)
- Idiopathic portal hypertension (hepatoportal sclerosis)
- Acute hepatitis (esp. alcoholic)

Post-hepatic causes:

- Compression (e.g. from tumour)
- Budd-Chiari syndrome
- Constrictive pericarditis (and rarely right-sided heart failure)

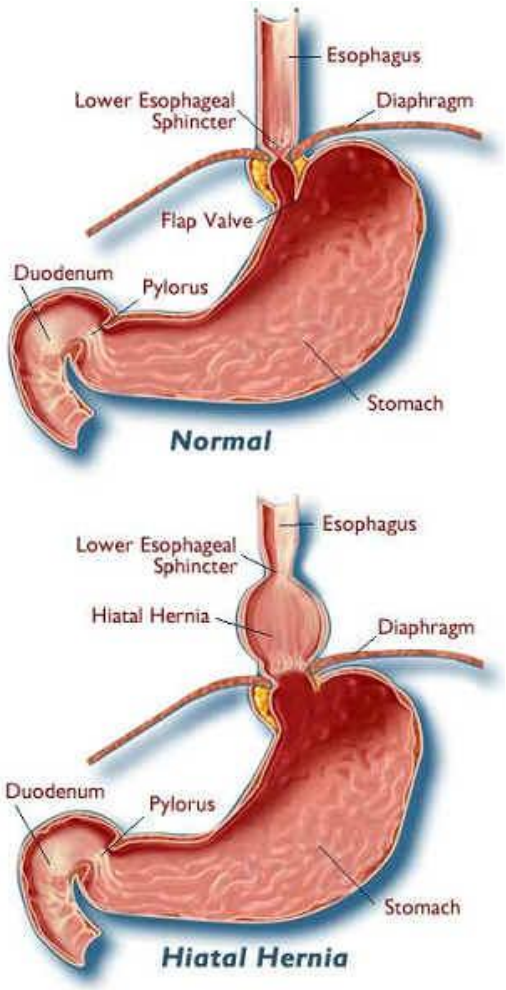
Portal Hypertension

- The commonest cause of portal hypertension is cirrhosis and it represents increased pressure in the portal system
- Portal hypertension leads to the formation of portosystemic venous collaterals in an attempt to decompress the portal venous system
- This results in dilatation of oesophageal veins from the porto-systemic



Hiatal hernia

- Two main types: ***sliding*** (99%) and ***paraoesophageal***
- Most are acquired
- Incidence increases with age
- About 1/5 of patients with a hiatal hernia, usually the sliding type, have associated gastro-oesophageal reflux (GORD)
- Most hiatal hernias are asymptomatic
- **Diagnosis** by barium swallow and/or endoscopy



Hiatal hernias

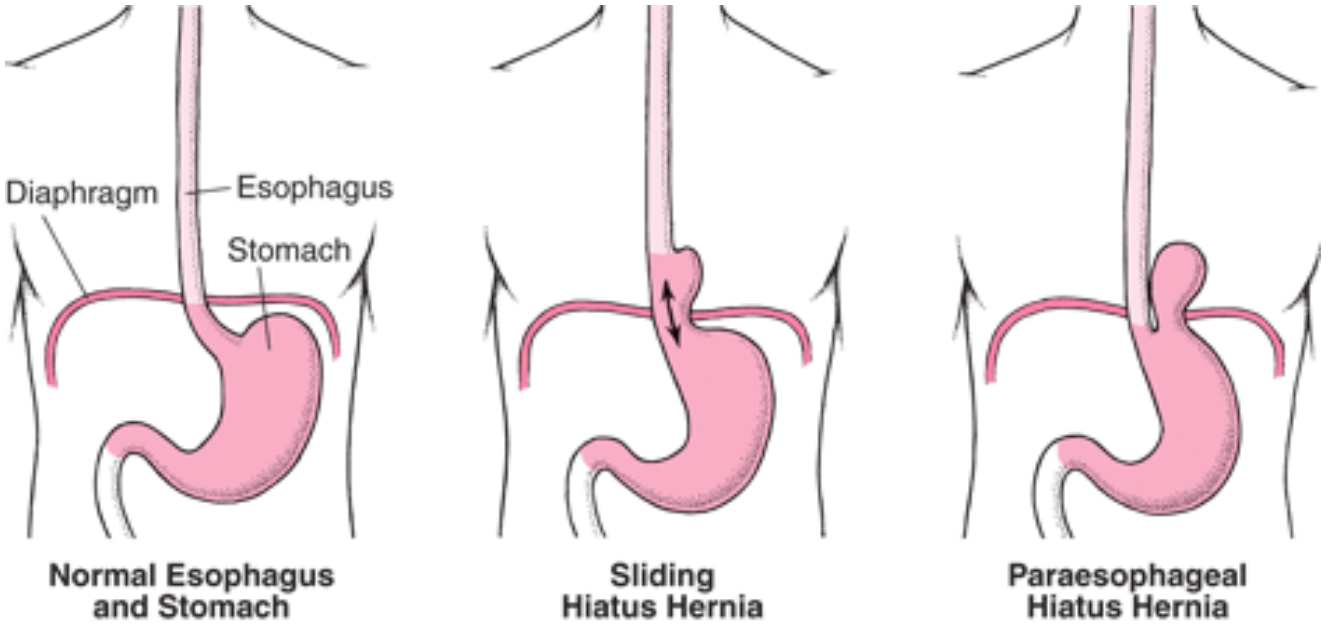
Complications

- *Large* incarcerated hiatal hernias may slowly weep blood so that patients present with iron deficiency anaemia, rather than reflux symptoms
- Oesophagitis from reflux
- Strictures

The **terminology** can be confusing

- Hiatal hernias, like any other hernias, may be ***reducible*** or ***incarcerated***
- ***Sliding*** refers to a hiatal hernia in which the oesophago-gastric junction is above the diaphragm, not to its reducibility
- A sliding hiatal hernia can be reducible or incarcerated

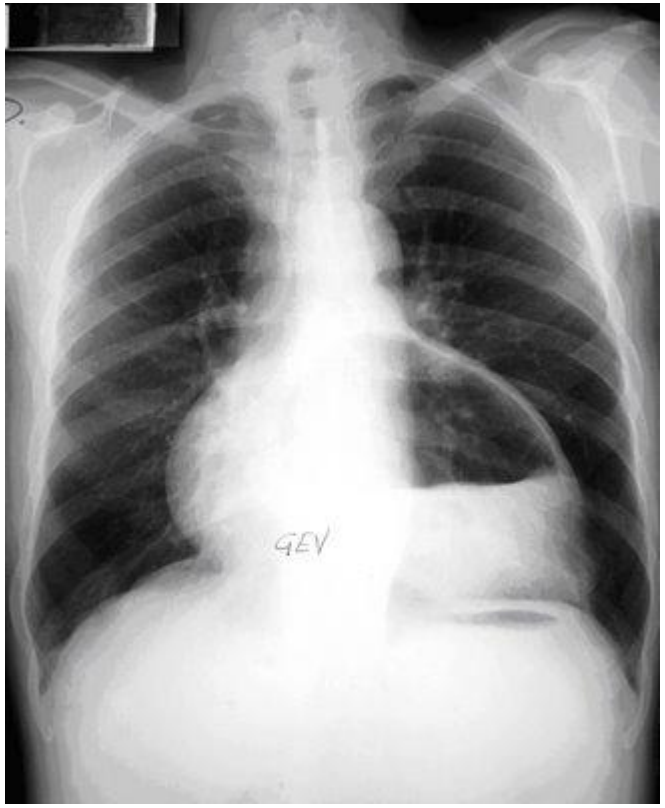
Hiatal Hernia

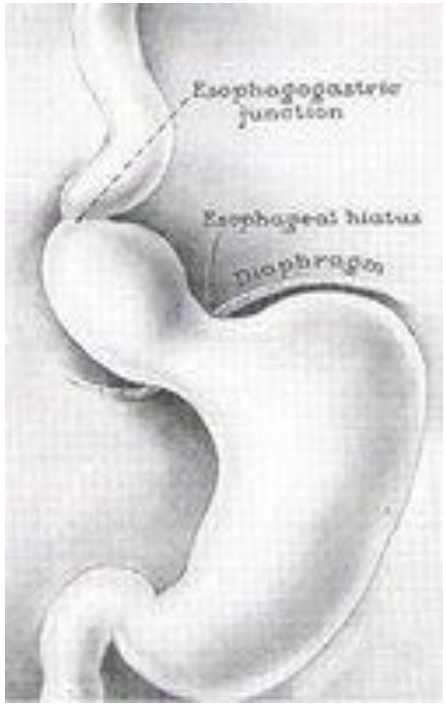


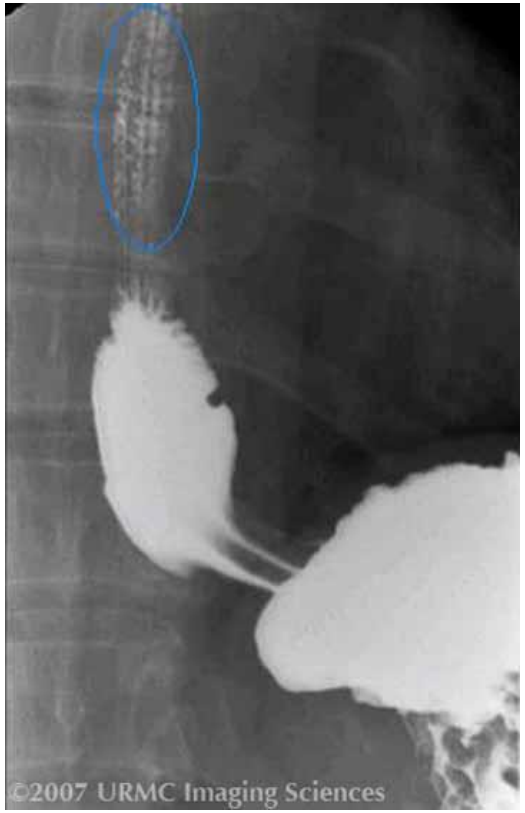
Paraoesophageal Hiatal Hernia

- A portion of stomach herniated through oesophageal hiatus and comes to lie above diaphragm but
- The oesophago-gastric junction continues to be sub diaphragmatic
- Usually incarcerated
- Not associated with gastro-oesophageal reflux and its complications

Hiatal hernia







Sliding oesophageal hernia – the gastro-oesophageal junction is above the diaphragm

Hiatal hernia

Treatment

- Life-style changes
- Antacids
- Acid-reducing medication (H2 antagonists)
- Surgery which involves pushing the stomach back into the correct position and securing it in place, before repairing any gap in the diaphragm
- The procedure can usually be done by laparoscopic surgery although open surgery (through an incision in the abdomen) is sometimes needed

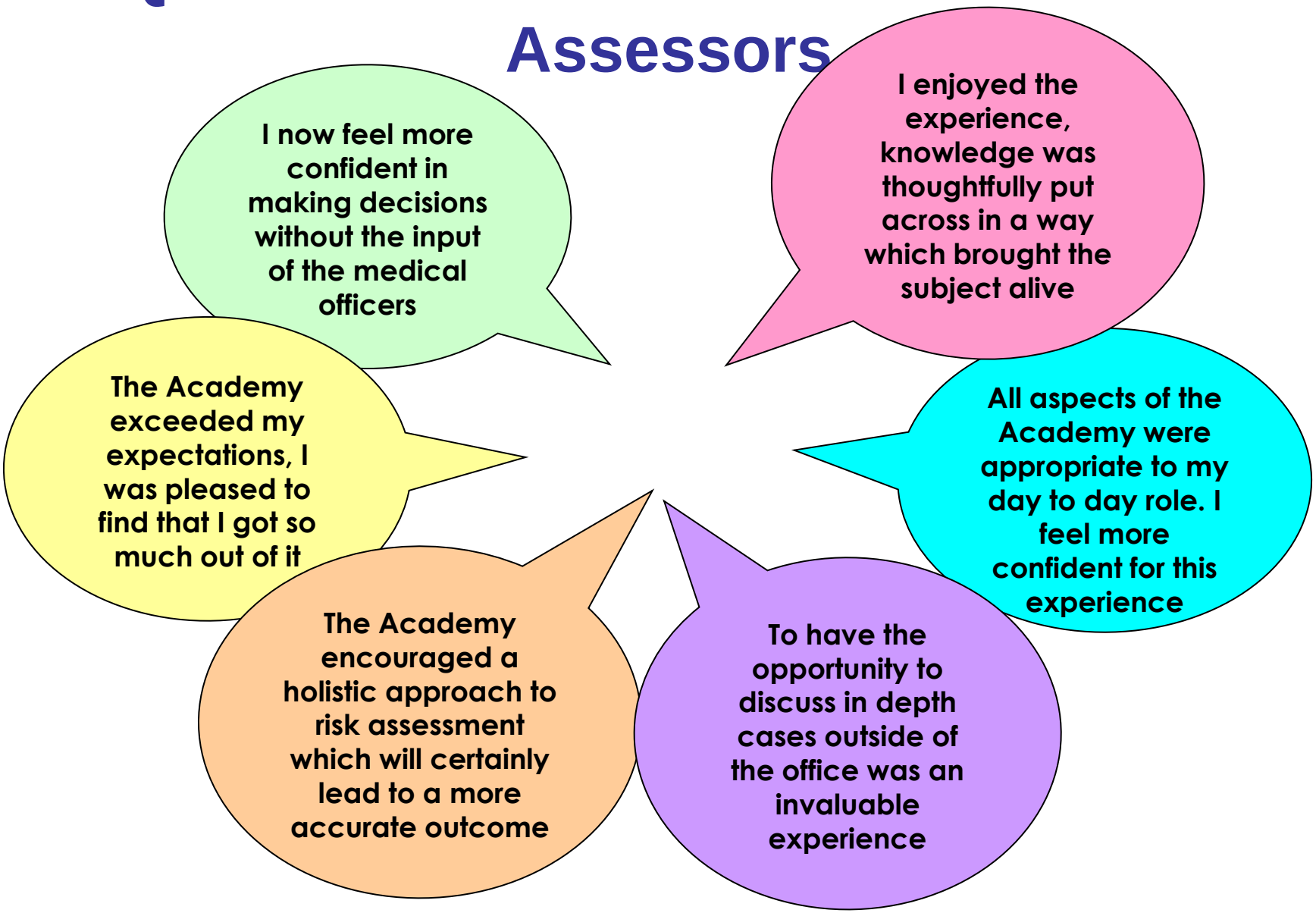
Case study

Gregory a 36 year old computer programmer went to see his GP complaining of heartburn which was not relieved by large doses of ‘over the counter’ ranitidine. He was sent for an endoscopy and this showed that in the lower oesophagus columnar cells replaced the normal flat, squamous cells. He was given dietary advice, advised to continue with an H2 antagonist and that he required regular follow-up endoscopies.

He has just become self employed and applied for income protection and life insurance.

Comments

Quotes from Underwriters & Claims Assessors



Scoping study

Background

- Enquiries from several insurance companies
- Knowledge that not all companies have the resources to have a bespoke course developed
- Experience and knowledge at Cardiff University

Scoping study

Purpose

- To establish the demand for ‘open’ medical courses for the insurance sector
- To establish what the content, structure, duration, level... of potential courses
- To develop medical courses that meet the demands of the sector

Scoping study

Be involved

- Leave your contact details to stay informed
- Complete an on-line questionnaire www.surveys.cardiff.ac.uk/medicalmodules
- Take part in our focus groups or one-to-ones meetings

Questions...

Thank you

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