CHAPTER 4 - THE DIGESTIVE SYSTEM

1 INTRODUCTION

Abdominal disorders can be acute or chronic and vary greatly in severity. In most cases applicants with any acute presentation or exacerbation of a chronic condition will be assessed as temporarily unfit until satisfactorily recovered. The most commonly reported cause of in-flight air crew incapacitation is acute gastrointestinal upset, however, even symptoms which are rather less severe can distract or may disable a pilot at critical stages in flight. Even when conditions appear to be in remission, it is essential to remember the volumetric changes of intra-abdominal gases due to altitude and that these may precipitate further symptoms. Because of such risks it is often necessary to confirm recovery or healing by additional testing of an apparently asymptomatic and recovered individual.

2 OESOPHAGUS

The oesophagus is the first part of the alimentary tract, as such, any expanding gases associated with altitude can equalise through the mouth and are unlikely to cause discomfort. Any restriction or discomfort associated with food transit however, will require a temporarily unfit assessment until fully investigated. Associated conditions are:

a Peptic oesophagitis/Oesophageal hiatus hernia with reflux oesophagitis are both associated with gastric or acid irritation of the oesophageal tissue, which usually present as pain. Symptoms and/or treatment require a temporarily unfit assessment until satisfactorily recovered. Minor prophylactic treatment may be considered.

b Oesophageal stricture may result from long term inflammation and cause regurgitation. It is disqualifying unless successfully treated.

c Oesophageal varices are associated with advanced cirrhosis of the liver and are disqualifying.

d Sliding hiatus hernia requires individual evaluation but if particularly mobile will require surgical treatment before any fit assessment can be made.

3 STOMACH

As the second stage of the alimentary canal, the stomach has sphincters above and below. This makes it subject to barometric pressure change, particularly if motility is affected by inflammatory reaction. The acid produced in the initial digestive process can lead to inflammation and/or ulceration of the gastric mucosa. Gastric discomfort which persists, despite occasional treatment with simple antacids, requires investigation.

Any gastritis or definite ulceration requiring treatment, means a temporarily unfit assessment until recovery has been demonstrated. Endoscopic or radiological confirmation of healing must be shown and only minimal dosage of prophylactic treatment can be acceptable to the AMS for issue of a certificate. If surgical treatment of a bleeding or perforated ulcer is required, the individual must be asymptomatic three months later with demonstrated healing before flying may be considered. Recurrent peptic ulceration may require detailed evaluation before certification or re-certification can be considered. Any malignancy demonstrated will be assessed according to the notes regarding oncology and malignant conditions. Post-surgical conditions such as ‘dumping syndrome’ will be disqualifying until satisfactorily controlled.

4 DUODENUM

The third stage of the alimentary canal with entry of the bile duct and pancreatic duct can also be subject to inflammation and/or ulceration. Peptic duodenal disorders are treated in a similar fashion to the gastric conditions outlined above. All demonstrated disease must be shown to have healed before returning to flying. All medication must be minimal and approved by the AMS before returning to flying.

Recent research has associated the organism Helicobacter pylori with peptic ulceration. In such cases specific treatment may clear the condition for an extended period.

For any abdominal surgery see JAR FCL Part 3 Appendix 3 para 3 before considering recertification.

2, 3 and 4 – these assessments apply to Class 1 and Class 2

5 SMALL INTESTINE

This is the longest part of the intestine and is again subject to barometric pressure changes. However, the intrinsic elasticity of the normal small bowel allows any expanded gas to pass without symptoms:

a Gastro-intestinal upsets. Acute gastro-intestinal upsets may be infective or reactive to certain foods and may pass with minor symptomatic treatment. Flying should not be undertaken until the condition has recovered.

b Crohn's disease. Acute and chronic small intestinal inflammation diagnosed as Crohn's disease is of concern due to its unpredictable nature. Initial applicants for Class 1 medical certificates with a confirmed history of Crohn's disease are unfit. Re-certification may be considered if in full remission on low doses of acceptable medication. Close follow-up and supervision by the AMS will be required. A Class 2 certificate may be issued to individuals who are in remission, fully stable, and with no sign of complication (adhesion/obstruction).

c Coeliac disease (non-tropical sprue), tropical sprue and galactose intolerance. Dietary intolerance conditions, such as listed above, should be assessed individually by the AMS. Although such individuals may be well controlled by dietary means any initial applicants should be considered against the difficulty of maintaining such control, given the peripatetic lifestyle of air crew.

6 LARGE INTESTINE (COLON)

The primary function of this region of intestine is fluid and mineral absorption. In aviation, chronic discomfort may be caused by expansion of gases causing colic and may be associated with diarrhoea, haemorrhage or even perforation.

Conditions which give rise to chronic colonic symptoms are disqualifying. Individual cases should be assessed by the AMS to ensure full recovery before certification or re-certification can be considered. Colonic conditions of note are:

a Irritable bowel syndrome. This may be incompatible with certification. Individuals with symptoms controlled by diet or acceptable medication may be considered for certification.

b Diverticular disease. This may be a single episode of diverticulitis, chronic inflammation, or associated with haemorrhage. Each case should be considered individually by the AMS.

Single episodes or isolated areas which have been treated surgically may be considered for Class 1 and Class 2 certification if the applicant is fully recovered and taking only acceptable medication.

c Ulcerative colitis. This inflammatory condition of unknown aetiology can be acute or chronic with multiple symptomatology that could incapacitate a pilot. Colitis treated surgically by colectomy with a satisfactory ileostomy may also be considered by the AMS.

Any history or clinical diagnosis of ulcerative colitis will require assessment by the AMS. A single acute episode if satisfactorily recovered for more than a year without symptoms or medication may be considered fit.

Re-certification may be considered after three months without symptoms and with minimal use of non-steroid medication. Applicants who have had surgical resection should be assessed individually at least three months following surgery and be subject to regular follow-up.

6 a, 6 b and 6 c – these assessments apply to Class 1 and Class 2 – particular consideration must be given to Class 1 initial applicants

d Crohn's disease of the colon. See Crohn's disease of the small intestine.

e All infective diseases. Applicants with any infective disease of the colon require a temporarily unfit assessment while being treated and must be free of all disease processes and symptoms before consideration can be given for flying.

6 d, 6 e – these assessments apply to Class 1 and Class 2

7 ANUS AND RECTUM

The terminal part of the alimentary tract retains the faecal mass. Aviation problems relating to this part of the bowel are caused by pain or haemorrhage and as follows:

a Haemorrhoids. Haemorrhoids may be acutely uncomfortable and can cause bleeding. Any acute haemorrhoidal inflammation requires a temporarily unfit assessment until it is asymptomatic. If surgery is required, a temporarily unfit assessment will be necessary to ascertain full recovery.

b Anal fissure or perianal abscess. These conditions require a temporarily unfit assessment while inflamed or undergoing treatment.

7 a, 7 b – these assessments apply to Class 1 and Class 2

8 PANCREAS

The pancreas' function in producing digestive enzymes may give rise to aeromedical concern if inflamed or obstructed:

a Pancreatitis. Pancreatitis caused by obstruction may be resolved surgically and so could be considered for certification, providing the damage was minimal and the individual is asymptomatic after an acceptable recovery period.

b Recurrent or chronic pancreatitis. Recurrent pancreatitis, which is idiopathic, drug or alcohol induced, is disqualifying due to its unpredictable and incapacitating nature.

c Pancreatic abscess or pseudo cyst. Conditions such as pancreatic abscess or pancreatic pseudo cyst may be considered individually if a satisfactory recovery is noted.

9 LIVER

Hepatic conditions may be acute, chronic, infective, toxic or obstructive. Applicants with any acute inflammation for whatever reason, will be assessed as temporarily unfit and may be re-assessed for certification when asymptomatic, non-infectious and with normal liver function

a Hepatitis. Hepatitis associated with drug or alcohol abuse will require this condition to be treated before certification can be considered.

b Chronic Hepatitis. Chronic hepatitis must be assessed individually but if associated with cirrhosis and reduced liver function, should be disqualifying.

c Gilbert's disease. Gilbert's disease (congenital unconjugated hyperbilirubinaemia) is acceptable for certification as may be minor liver function test abnormalities which are not supported by a clinical history.

d Liver transplant. Liver transplantation is usually a late resort and so likely to be associated with secondary conditions such as oesophageal varices. If however, transplant function is normal, immunosuppressive medication minimal and there is no increased risk from secondary conditions, certification (Class 2) and re-certification for multi-pilot operations (Class 1 'OML') may be considered by the AMS.

9 – these assessments apply to Class 1 and Class 2

10 GALL BLADDER AND BILIARY TRACT

Biliary secretions are collected in the gall bladder and assist in the digestion of fat. Aeromedical concerns arise in association with calculus formation which can cause sudden painful incapacitation:

a Biliary calculi. A single, large, asymptomatic gall stone which has been discovered by chance may be acceptable. However, multiple gall stones, whether symptomatic or asymptomatic, are potential causes of incapacitation and require treatment. Individual cases must be considered by the AMS at Class 1 and Class 2 level.

Gallstones small enough to enter the bile duct are potentially incapacitating and require specialist assessment. While awaiting assessment or treatment a multicrew 'OML' or safety pilot 'OSL' limitation may be appropriate after consideration by the AMS.

b Cholecystectomy. Cholecystectomy, whether performed via intra-abdominal or laparoscopic surgical procedures, requires adequate recovery appropriate to the procedure before certification can be considered. Individual cases should be reviewed at the discretion of the Aeromedical Section.

11 TUMOURS OF THE GASTROINTESTINAL TRACT

Malignant tumours of the oesophagus, stomach, small intestine, colon and rectum may be disqualifying. An applicant who is considered to be fully recovered may be assessed against the criteria outlined in the malignancy and oncology section of these guidance notes. The primary

criteria are whether recurrence at the primary site or via secondary, distal tumours will be incapacitating. All cases should be assessed by the AMS with full reports including histology, from the treating physician.

12 HERNIAE

Herniae require assessment against the possibility of barometric pressure changes and subsequent strangulation giving rise to incapacitating symptoms. Hernial sites are inguinal, femoral, umbilical and incisional. Any that may be associated with strangulation are disqualifying until repaired. Certification may be considered after full recovery, which would normally be 30-days following surgery.

12 – this assessment applies to Class 1 and Class 2

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