

Nutritional Implication of Chronic Pancreatitis

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Chronic Pancreatitis

- A progressive inflammatory disease that results in the irreversible deterioration of exocrine and endocrine function.
- Result in high risk of malnutrition and sometimes poor bone health due to
 - > Maldigestion
 - > Malabsorption
 - > Vitamin deficiency

PERT

(Pancreatic Enzyme Replacement Therapy)

- Used in Pancreatic Enzyme Insufficiency (PEI)
 - > Diagnostic testing includes Faecal fat (Steatocrit) and Faecal elastase
 - > Vitamin D deficiency can also suggest PEI
- Caution when doses exceed 10,000units of lipase per kg per day. i.e. <28 capsules for a 70kg person

Nutritional Management

- Appropriate dose and timing of Creons
 - > Dietitians now prescribers
- Regular screening for micro and macro nutrients deficiencies at least every 12 months
 - > In particular vitamin A, D, E, K and B12, folic acid and thiamine
 - > Mg, Se, Zn, Iron
- Low fat diet is not recommended provided malabsorption is resolved/treated

Nutritional Management

- Consider the use of MCT oil based supplement if malabsorption continues to occur when adequate enzyme supplementation is achieved and bacterial overgrowth is excluded
- Adequate enzyme therapy should also be given for additional nutritional supplement

Case A

- ◉ 57 year old female lives with husband and dog
- ◉ European
- ◉ Diagnosed with chronic pancreatitis due to previous alcohol abuse. It's also complicated by recurring pseudocyst needing EUS.
- ◉ Multiple medical background including CKD, HTN, Barrett's oesophagus
- ◉ Minimal appetite due to bloating, abdominal pain. Denies loose bowel motions

Case A

○ Nutritional Assessment:

- > Weights: 45.6kg on 28.02.20, 35kg on 27.12.20
- > Height: 170cm
- > BMI: 12.1
- > Biochemistry: Na 128, K 4.5, PO₄ 1.73, Alb 28, Mg 0.56, CRP 27
- > Minimal appetite, complains bloating, abdominal pain and intolerance of most oral nutritional supplements due to milkiness
- > Prescribed creon one capsule TDS. And it's blister packed, taken together with her omeperazole and other medications. Was not aware that creons needs to be taken with food

Case A

○ Nutritional treatment:

- > Asked for faecal elastase
- > Commenced on high dose of B vitamins including thiamine
- > Monitored for refeeding syndrome
- > Eat and drink to continue orally, advised to try non milky high protein supplement
- > Re-calculated the dose of creons required and increased to 25,000units 2 capsules for main meals and 1 capsule for snacks/oral supplement
- > Advice given on small and frequent oral intake with high protein food and fluids
- > Advice given on creons and how it should be taken with meals and snacks

Case A

○ Outcome:

- > Slowly picking up oral intake and tolerating non-diary nutritional supplements
- > Improved gastrointestinal symptoms such as minimal abdominal pain and bloating
- > 70% compliant with her PERT regime
- > No further weight loss when seen in a month but no weight gain
- > Advised to take broad range multivitamins

Case B

- ◉ 70 yr old male lives with wife
- ◉ Asian
- ◉ Referred to Failure to Thrive Clinic due to ongoing weight loss
- ◉ Medical history: Myelodysplastic Syndrome but otherwise well and independent with ADLs

Case B

○ Nutritional Assessment:

- > Weight history: 53.9kg on 3.10.19
55.5kg on 21.08.20
Height: 164cm, BMI: 20.6
- > Has been on a very low fat diet (wife does all the cooking now and rarely eats out)
- > Complains of loose bowel motions as soon as fatty foods/fluids were consumed. Described the poo to be smelly and tricky to flush
- > Was given Ensure powder previously but intolerant to it due to abdominal pain and loose bowel motion afterwards

Case B

○ Treatment:

- > Asked GP for a faecal elastase
- > Started creons: 2 capsules of 25,000units with each main meals
- > Commenced ensure powder drink again and adviced to take 1 capsule of 25,000units with it
- > Adviced to go back onto a “normal” diet, i.e. can have some fatty food if desired
- > Referred the patient to a gastroenterologist for diagnosis

Case B

- Outcome at one month follow up:
 - > Gained 3.5kg in a month
 - > Tolerating Ensure
 - > Energy is back
 - > Can have normal food and fluids now and no more “low fat diet”
 - > Both patient and wife very happy
- Seen by a gastroenterologist and confirmed early chronic pancreatitis. CT showed pancreatic atrophy but without features of chronic pancreatitis. Awaiting further test
- Faecal elastase has come back low: 3 ug/g (reference range: >200)
- GP is now doing regular monitoring for micronutrients including iron, Vitamin B12/folate

Questions

