

CASE STUDY

A 44-YEAR-OLD FEMALE WITH SEVERE ACUTE PANCREATITIS

Provided by: Mary Phillips

Specialist Dietitian (Hepato-Pancreatico-Biliary Surgery), Team Lead: ICU, NST and HPB Dietetics
Royal Surrey County Hospital NHS Foundation Trust, Guildford

BACKGROUND

This 45-year-old female presented to A&E with severe abdominal pain and was subsequently diagnosed with acute pancreatitis. She had a history of obesity (BMI 32) and asthma. Within 48 hours she had developed respiratory failure and was admitted to ITU for non-invasive ventilation (NIV). A NG feeding tube was inserted the following day and a 1kcal/ml peptide feed was commenced at 20mls/hr. NG feeds were poorly tolerated due to vomiting and parenteral nutrition was commenced. NJ insertion was delayed, as it was not possible to remove her NIV to insert the NJ, therefore parenteral nutrition was commenced on day 4. She started variable rate insulin as her blood sugars were >15mmol/l and she required high dose inotropes on several occasions.

Throughout her ICU stay, she received a combination of 1kcal/ml enteral feed via a NJ tube (passed on day 12 of admission once she was intubated) and had been filtered and required four abdominal drains to drain infected pancreatic fluid collections and necrosis. She had >95% necrosis of the pancreas, and pancreatic enzymes were added to her feed to try to manage her diarrhoea.

On day 62 she was transferred to the ward on full rate NJ feeding (1.5kcal/ml peptide feed with 50,000 units pancreatin powder added to each 200mls of feed: 1320mls feed; 1980kcal; 99g protein, plus 22g protein, 90kcal from an additional protein supplement) and regular loperamide (6mg QDS).

Time	Weight	MUAC (cm)	Hand Grip (kg)	Nutritional requirements
On admission	79kg	-	-	MSJ 1373kcal; 122.8g protein
Mid ICU stay (Month 1)	88.1kg**	31.6	8.2	PSU: 1719 - 1937kcal throughout ICU stay
ICU discharge (Month 2)	76kg ** EDW - 70kg	31.5	11.8	25-35kcal/kg; 1750 -2450kcal; 105g protein
Month 3	79kg**	30.5	10.5	
Month 4	80.7kg **	30.7	10.3	
Month 5	69.4kg	29.9	10.8	
Hospital discharge	67kg (BMI 27) EDW - 65kg	29.7	14.5	25-35kcal/kg; 1625-2275kcal; 97.5g protein
Month 8	70.2kg (BMI 28)	-	15.8	
Month 10	67.9kg (deliberate weight loss)	-	16.8	
Month 11	65kg (BMI 26)		18.4	Feeding tube removed

** Ascites and fluid collections present; EDW = estimated dry weight.

She was discharged home on 1000mls 1.5kcal peptide feed (Nutrison Peptisorb Plus HEHP: 1500kcal, 75g protein) overnight on day 186. She was managing small meals with pancreatic enzyme replacement therapy (PERT) and insulin.

RATIONALE AND USE OF NUTRISON PEPTISORB PLUS HEHP

Pancreatic necrosis results in loss of pancreatic tissue and causes both endocrine and exocrine failure. The management of exocrine failure is complicated by the lack of a reliable function test in the acute setting, and difficulty assessing the absorption of both oral and enteral nutrition.

In this case >95% necrosis of the pancreas resulted in almost complete pancreatic failure and the need for a peptide feed was not in question. In order to support a wean back onto oral diet and to support the patient to return to a relatively normal pattern of eating a high energy feed was selected as it would reduce the time on the feed, allowing small increases in oral diet as tolerated.

RESULTS

Over the next 4 months, she made slow steady progress, fully engaging with our rehabilitation programme. Her feeding tube was removed a total of 11 months after her initial presentation. She continued to make progress, had a cholecystectomy and returned to work 18 months from the onset of her illness. She remains on pancreatic enzymes and insulin, and has made many positive lifestyle changes to improve her health.

SUMMARY

In this complicated case, there was clear rationale for a peptide feed, tolerance was assessed primarily using functional assessments, as weight was a poor marker of nutritional status. Diarrhoea was multifactorial, complicated by small bowel oedema, antibiotic related diarrhoea and malabsorption. This was successfully managed with pancreatic enzymes and loperamide.



HEAVY ON PROTEIN LIGHT ON THE GUT

Nutrison Peptisorb Plus HEHP is a new peptide-based option for tube-fed patients with GI intolerance symptoms. The high energy, high protein formulation has been shown to improve patients' tolerance, increase their compliance and may even help to lighten their mood.¹

1. Green, B, Sorensen, K, Phillips, M. et al. *Nutrients* 2020; **12**: 3538. <https://www.mdpi.com/2072-6643/12/11/3538>

Accurate at time of publication, April 2021.

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Nutrison Peptisorb Plus HEHP is a Food for Special Medical Purposes for the dietary management of disease related malnutrition in patients with malabsorption and/or maldigestion and must be used under medical supervision.



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