DC01 - DISORDERED EATING PATTERN OF A PAEDIATRIC PATIENT WITH EATING DISORDERS IN THE OUTPATIENT SETTING

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Assessment: NS is an independent 15-year-old student with type 2 diabetes (T2DM) diagnosed with ED not otherwise specified. She presented to dietitian with a BMI-for-age >97th percentile. She has gained 17.4kg since she started bingeing a year ago. Her HbA1c is 12%, with an average fasting blood glucose (FBG) of 16mmol/L. She binges 3-4 days/week, averaging 2700kcal/day. Triggers include comments about her eating and certain foods. Guilt follows binges, compensated by 2 restrictive days where she drinks 6-8L of water. On non-binge days, her intake is ~2000kcal. All meals are consumed rapidly and alone. NS plays netball 4 days/week. Family support is low. NS has insight but low self-esteem plus poor body image.

Diagnosis: Disordered eating pattern RT to weight preoccupation influencing self-esteem AEB consuming large amounts of food when not physically hungry and extreme guilt after overeating.

Intervention: The aim is to normalise her eating pattern, whilst promoting weight maintenance and a stable blood glucose profile. Her prescription is 1800kcal/day, 65g protein/day with 15 carbohydrate exchanges. NS was educated on the binge-restrict cycle and advised on regular, portioned meals. Strategies to manage binge urges were explored using Cognitive Behavioural Theory (CBT). Goal setting was achieved using the Acceptance-Commitment Theory. Positive reinforcement given for her insight. Advised patient to keep a binge-trigger journal and all appointments with counsellor.

Monitoring and Evaluation: Her intake, eating behaviour, weight and blood glucose levels were monitored. In 3 weeks, her weight increased by 1kg, although FBG reduced to 13mmol/L. NS reported compliance to the nutrition recommendations. Binges were fewer. Social support remains poor. NS was reluctant to involve family in treatment. This case emphasizes the importance of counselling in dietetic care, consistent monitoring, plus the support of a collaborative treatment team.

DC02 - Challenges in Managing Severe Failure to Thrive (FTT) Pediatric Patient with Symptomatic GERD: A Case Study

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Assessment: Patient is 8 months 2 weeks old premature baby boy who was diagnosed with symptomatic GERD and severe FTT, admitted due to inability to tolerate feeding and presented with congenital heart problem. This is his third hospitalization and referred to a dietitian for ryles tube feeding (RTF) initiation. Patients weight and height both showed a big gap from the lowest point of WHO growth chart (

Diagnosis: Illness related pediatric malnutrition (undernutrition) related to inadequate intake due to feeding intolerance as evidenced by anthropometric data (stunted and wasted) and diet history.

Intervention: Goal: to achieve energy and protein intake and reaching the target weight. RTF was initiated with strict monitoring of feeding toleration. Modular product was used to provide additional energy but feeding optimization was hampered by fluid restriction.

Monitoring and Evaluation: It takes a series of follow up to increase the provision of nutritional prescription in view of patient had several aspiration episodes despite being prescribed with triple anti-reflux. Throughout the dietetic care, patient was able to achieve the target daily weight and prescribed regime. Lesson Learnt: Pediatric patients represent a vulnerable population with specific nutritional requirement. Enteral nutrition (EN) is the option for nutrition optimization when diet is used as a treatment in managing the disease-related consequences of malnutrition.

DC03 - Case Study: Nutrition Management of Chronic Malnourished Elderly with Depleted Muscle Glycogen Store

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Assessment: Presented with low BMI and had bilateral deafness with no caregiver to assist oral feeding. Prolonged inadequate regular oral intake which reflected in his biochemistries with frequent hypoglycemia. NFPE showed severe malnutrition.

Diagnosis: Inadequate energy intake related to decreased ability to consume sufficient energy as evidenced by estimated energy intake from diet less than requirement and limited ability to independently consume foods/fluids (need feeding assistance).

Intervention: To provide adequate energy and protein through hospital diet and enteral nutrition support to improve nutritional status and associated outcomes. Energy prescription of 1260kcal/day and 1.24g protein/kg/day delivered enteral nutrition via nasogastric feeding.

Monitoring and Evaluation: Improvement in energy and protein intake through receiving and tolerating well enteral nutrition infusion indicated success in meeting nutritional needs. Anthropometric measurements changes, biochemical data and NFPE should be monitored continuously.

DC05 - Optimizing Nutrition Provision for Tube Fed Critically ill Obese Patient with High Nutrition Risk: A Case Study.

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1. UPM

Assessment: Early and aggressive feeding is suggested to patient with high nutrition risk and should be achieved within 3 days. This case presents the nutrition management of critically ill obese patient. Patient is a 69 years old Malay lady. She was mechanically ventilated, sedated and presented with septic shock secondary to infection, with several underlying diseases such as T2DM, HTN and dyslipidemia. Her estimated BMI was 33 kg/m2 with abdominal adiposity and persistent high blood pressure but normal glucose level. Serum urea and creatinine values were high. Patient presented with hyperphosphatemia and hypoalbuminemia. CRP and ESR were elevated but patient was afebrile. Energy intake achieved 20% of requirement via intravenous drip D5% with only clear fluid given via Ryles tube. Patient was screened by using NUTRIC score and recognized as high nutrition risk.

Diagnosis: Inadequate enteral nutrition infusion related to feeding was not started as evidenced by no energy intake via Ryles tube.

Intervention: Energy and protein prescribed were 1316 kcal/d (14 kcal/kg ABW) and 74-93 g/kg IBW (1.2-1.5 g/kg IBW) and should achieved within 3 days. Protein provision will be further increased in a week. Renal formula was chosen as patient presented with hyperphosphatemia.

Monitoring and Evaluation: In 3 days, patient achieved 100% of energy and 0.9 g of protein requirement. As urea and creatinine improves, protein intake were gradually increased until 1.3 g/kg IBW in a week, and further increased to 1.5 g/kg IBW on day 9 of admission, via modular protein product incoporation. Renal formula was changed to diabetes formula in view of resolved hyperphosphatemia and impending hyperglycemia. Dietitian plays a vital role in ensuring optimized nutrition that suitable to critically ill obese patient, while managing other nutrition related issue such as electrolytes abnormalities and hyperglycemia. High protein hypocaloric feeding is suggested in order to minimize metabolic complication of overfeeding, preserve lean body mass and mobilize adipose stores.

DC06 - Early Enteral Feeding and Targeted Nutrition Prescription Improves Nutrition-related Problem with Patient Having High NUTRIC-score in Critically Ill Patient

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Assessment: Background : Patient is 59 years old Indian lady with underlying of DM, Hypertension and Chronic Lung Disease was transferred to GICU after 20 days in ward. Patient was diagnosed with septic shock secondary to HAP & parapneumonic effusion and right DFU and develop oliguric AKI. This patient was referred to dietitian for RTF initiation. Initially patient was admitted due to infected DFU and underwent WD on right foot. Patient already has hypoalbuminemia since at ward and serum Albumin upon review was 8g/L. Patient anthropometry was normal with BMI of 18.8 kg/m2. Patient was intubated with SIMV mode (FiO2 0.4 ; PEEP 10) due to hypoxemic failure. BP was supported with double inotropes and NUTRIC-score was 7 which indicate high nutrition risk. Feeding was already started within 24-hour of GICU admission with Glucerna RTD 75mls/hr which provide 11.3kcal/kg of energy and 0.45g/kg of protein and tolerating well

Diagnosis: Inadequate enteral nutrition infusion related to feeding regime has not yet established as evidenced by feeding history 45% of energy and 30% protein intake

Intervention: Nutritional intervention aimed to achieve 80% of energy requirements with 25-30kcal/kg and protein requirements 1.2-2.0g/kg in 3 days.

Monitoring and Evaluation: Patient achieved the energy and protein requirements within 3 days with several changes of enteral product were made to address the patients condition. While patient with high NUTRIC-score required higher protein requirement, increasing patients protein intake was done exponentially as not to worsen AKI . Patient was discharged to general ward after 16 days in GICU with albumin level able to be maintained. Lesson learnt : Initiation of early feeding and achieving targeted nutrition prescription for patient with high NUTRIC-score within 3 days was feasible leading to improvement in functional outcome, and decreasing infectious complications. Maintaining albumin level with targeted protein requirement was found associated with reduced mortality in GICU admissions.

DC07 - COLLAGEN PEPTIDE SUPPLEMENT: BRIDGING THE GAP BETWEEN PROTEIN INADEQUACY AND WOUND HEALING

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2. UiTM

Assessment: A 31 years old, Malay gentleman was referred to dietician for nutrition optimisation post day 1 burn injury. Patient was diagnosed with alleged flame burn, sustained with 30% superficial partial and deep dermal burn over trunk and bilateral upper limb. Upon referral BMI was 27.8 kgm^{-} and patients actual weight is 85kg. Patient was alert and conscious and able to tolerate orally. Due to loss of appetite secondary to pain post burn injury, oral intake was compromised. Dietary intake was only 2.9% of target energy needs, and protein intake was only 4 % of targeted requirement.

Diagnosis: Inadequate protein energy intake related to decreased ability to consume sufficient protein and energy due to loss of appetite and pain post burn injury as evidenced by estimated protein intake of 4.5 g/day (4% of target protein needs) and estimated energy intake of 70 kcal/day (2.9% of target energy needs).

Intervention: Oral nutritional supplement fortified with glutamine, arginine and fish oil provided to optimize energy intake supporting 70% of target needs. Additional collagen peptide supplement was given to achieve the minimal target protein requirement.

Monitoring and Evaluation: Nutrition intervention monitored over 20 days of admission in the ward. Energy and protein requirement re-evaluated upon every follow up sessions and protein and energy provision revised to meet at least 70% of target needs. As the nutrition intervention progressed, serum albumin level and total white blood cell improved. The objective of the nutrition intervention for optimal wound recovery achieved.

DC08 - Empowering Self-monitoring in Weight Management Case

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Assessment: A 24 years old Malay female was diagnosed with PCOS and underlying mild hypertension. She was referred for weight management. BMI indicated obesity class 3 and she experienced insignificant weight loss through self-prescribed intermittent fasting and exercise prior to first visit. Her usual intake was 1900 kcal and 600 kcal when practising intermittent fasting. She faced gastric pain and food craving while practising intermittent fasting. She had not been seen by dietitian and concerned on the appropriateness for weight loss strategies from online reading. She was motivated to learn accurate information on weight loss strategies and calories counting.

Diagnosis: Food & nutrition related knowledge deficit related to lack of exposure to accurate information as evidenced by patient verbalised unsure of accurate ways for weight management.

Intervention: The objectives were to empower patients knowledge on weight management strategies and reduce weight 5% within 3 months. Calories deficit diet was prescribed (1200 kcal/day). Intervention was focused on education on content relevant to weight management including physical activity guidance, collaboration with patient in choosing weight management strategies, weight loss goal setting and self-monitoring tool. Technical nutrition education was conducted on increase ability to use mobile apps (MyFitnessPal) for dietary self-monitoring.

Monitoring and Evaluation: Phone follow up was conducted after 1 month. With good adherence and consistent use on MyFitnessPal, energy intake was controlled and increased exercise, greater weight loss was shown (2.2% in 1 month). Diet recall showed 1500 kcal intake which approximately similar to MyFitnessPal analysis as patient verbalised. She satisfied with self-monitoring and outcomes. During follow up at the clinic, she showed behaviour relapsed in diet and exercise due to lack of social support in changed environment which led to poor motivation. Poor adherence to mobile apps self-monitoring after 1 month and weight was regained. Nutrition Counselling was conducted to support patients self-efficacy and relapse prevention.

SC01 - Lesson Learnt from Provision of Dietetic Care during Transition Feeding in Patient with Whipple Procedure for Distal Cholangiocarcinoma

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Assessment: Background: Pylorus-preserving whipple procedure is done by removing the head of pancreas, duodenum, distal bile duct and gallbladder, preserving both the gastric antrum and pylorus thus, may cause nutrition related problems such as dumping syndrome. Client History: A 66-year old Malay male, diagnosed with distal cholangiocarcinoma on December 2018, not on chemo or radiotherapy, was admitted due to yellow discoloration of eye and body, alongside tea-coloured urine and pale stool. Nutrition Assessment: Patient experienced reduced appetite and unintentional weight loss of 9% for the past one month, with BMI 21.3kg/m2. Presented with low albumin, total protein and haemoglobin, as well as high bilirubin. Oral intake was persistently inadequate, [energy 20kcal/kg/day (68% adequacy) and protein 0.6g/kg/day (30% adequacy)], exacerbate by frequent kept NBM.

Diagnosis: Nutrition diagnosis: Inadequate protein-energy intake related to frequent scheduled medical procedure that is predicted to limit protein and energy intake as evidenced by feeding history (patient was kept NBM).

Intervention: Nutrition Intervention: Prescription: Energy: 1740 kcal/day (30 kcal/kg/d), protein: 116 g/day (2.0 g/kg/d). Goal: To optimise patients energy and protein intake via enteral feeding. Nutrition care provision included continuous and bolus feeding. Approximately 40% ONS was prescribed after patient was allowed orally.

Monitoring and Evaluation: Monitoring & Evaluation: Patient achieved 88% of energy and 60% protein adequacy via enteral feeding. Protein intake declined to 45% of requirement during transition to oral intake. Frequent follow up and multidisciplinary approach eventually managed to increase intake to 91% energy and 50% protein requirement with resolved symptoms. Biochemical data showed improvement in terms of albumin, total protein and bilirubin. Learning point: Frequent follow up in leveraging dietetic care during transition feeding and interdisciplinary communication is paramount to prevent malnutrition in hospitalised patients. In addition, continuation of follow up can assist in resolving nutrition-related symptoms.

SC02 - Nutrition management of septic shock secondary to perforated terminal ileum with gross contamination, poor GCS recovery and gut atrophy.

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Assessment: Mrs.Y, 76-year-old Chinese woman, admitted due to sudden onset and progressively worsening epigastric pain. Initial impression was upper gastrointestinal bleeding but patient denied history of hematemesis/rectum bleed/melena, postmenopausal bleeding or taking traditional medicine. Patient has normal BMI of 23.8 kg/m2. Urea, sodium, and white blood cell were all above normal range while red blood cell, haemoglobin, total protein, and albumin were below normal range. Current GCS was 5T/15 since past 8 days and planning for tracheostomy for poor GCS recovery. Patient was on 160 ml Ensure Gold via intermittent pump feeding, giving only 880 kcal energy and 35 g protein which were inadequate.

Diagnosis: Inadequate enteral nutrition infusion related to infusion volume not reached as evidenced by estimated energy intake of 880 kcal/day as compared to recommendation, 1500 kcal/day.

Intervention: To achieve adequate energy and reduce infection, 30 kcal energy/kg body weight/day and 1.5 g/kg body weight/day was prescribed. Feeding was increased using Ensure Gold with addition of Myotein in the final step.

Monitoring and Evaluation: With presence of caregiver in ward, intermittent pump feeding was changed to bolus feeding. However, bolus feeding was then stopped due to new medical diagnosis of gut atrophy and total parenteral nutrition was initiated at 50 ml/hour SmofKabiven Peripheral 1.9 L and later on gradually increased up to 80 ml/hour. During next review, patient was concurrently tolerating 50 ml/hour parenteral nutrition (SmofKabiven Peripheral 1.2 L) and 50 ml bolus feeding. Parenteral nutrition was suggested to be stopped once patient achieve 60% energy of bolus feeding. Discussion: Achieving adequate nutritional intake is important for patient with gut atrophy by using parenteral nutrition. Enteral nutrition should be restarted and parenteral nutrition should be tapered down when gut condition improved to maintain normal gut physiology. Learning point: Suitable feeding route is prescribed considering patients gut condition.

SC03 - Creativity in Provision of Dietetic Care for Paediatric Patient with Avoidant Restrictive Food Intake Disorder: A Case Study

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Assessment: Background: Avoidant Restrictive Food Intake Disorder (ARFID) is defined as persistent feeding or eating disturbance leading to avoidance of food, resulting in nutritional deficiency and impairment in psychosocial functioning. Client History: An 8-years 6-months old Malay boy was referred to outpatient clinic, who was diagnosed with obsessive compulsive disorder (OCD) and ARFID three months ago. Nutrition Assessment: The patients weight was maintained at 33.8 kg for a month with BMI-for-age at 97th percentile, indicating obesity. Patients usual dietary intake was 1800kcal (56% CHO; 7% protein; 37% fat). Patient avoided protein-based food, fruits and vegetables for five years, and he would vomit or run away from the foods that were considered as fresh or came from water based on his perception which may put him at risk for micronutrients deficiency. Patient was physically active.

Diagnosis: Nutrition Diagnosis: Limited food acceptance related to self-limit of food due to food aversion as evidenced by diet history, patient can only accept few foods (French fries, biscuits, certain junk food and varieties of fluid).

Intervention: Nutrition Intervention: Goal: To achieve balanced nutrients intake for optimal growth. Nutritional counseling deployed creativity elements such as playing a checkpoint game with positive reinforcement, aimed to broaden the scope of foods that patient was comfortable with. Patient was encouraged to try taking foods that were similar type with his usual food intake, ready-to-eat protein-based food and to continue observing different types of foods.

Monitoring and Evaluation: Monitoring and Evaluation: Patients calorie intake was reduced by 22% and his food acceptance has broadened. Positive reinforcement using checkpoint game was effective for patient as he was willing to explore trying little amount of certain new foods. Lesson Learnt: Accepting new foods is a process that requires patience, time and creativity of the dietitian. Multidisciplinary team communication is paramount to ensure successful treatment for ARFID children.

SC04 - Challenges in the Provision of Nutritional Care in Post-surgical Patient with Physical and Behavioural Difficulties: A Case Study

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1. UPM

Assessment: Background: Gastrointestinal perforation occurs when there is a hole in the stomach, colon or small bowel. The symptoms may include severe abdominal pain, nausea and vomiting. Client History: A 49-year-old Indian lady with two children was referred due to poor oral intake, day-5 post salpingectomy and salpingo-oophorectomy for left tubo-ovarian abscess. Patient also had uncontrolled diabetes. She had 60 cm of the area after the duodenojejunal-junction resected upon discovery of perforations. Nutrition Assessment: Two weeks prior to admission, she claimed to have no appetite. She had severe abdominal pain and persistent watery, greenish vomiting almost every day for 12 days of hospitalization. These symptoms caused minimal dietary intake (8.0% adequacy) and patient developed hypokalemia and hypo-magnesemia. She lost an estimated 11% of her body weight in two weeks. Patient was at risk of re-feeding syndrome.

Diagnosis: Inadequate oral intake related to decreased ability to consume sufficient energy due to suspect of paralytic ileus as evidenced by abdominal pain, persistent vomiting and 8.0% energy adequacy since admission.

Intervention: Objective & Nutrition Prescription: Nutritional intervention aimed for at least 75.0% of the energy requirement, and 1.2 g/kg/d protein. At first, enteral feeding regime according to re-feeding protocol was given but was not established due to high aspiration and vomiting. After the second surgery, TPN was administered. Transition to oral feeding included ONS, but the patient refused any drinks resembling milk and hospital diet. Nutritional counselling focused on educating patient about the importance of increasing intake and correcting nutritional misbeliefs. Outcome and Follow-up: Patient increased oral energy intake by 60.0% and protein intake by 1.1 g/kg/d and the symptoms had resolved after two weeks of follow-up. A discharge plan on high protein diabetic diet was given.

Monitoring and Evaluation: Monitor energy and protein adequacy; feeding tolerance; electrolyte and blood glucose

SC05 - Nutrition Management in Post Distal Pancreatectomy Without Splenectomy, Surgical Site Infection (SSI).

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Assessment: 61 years old Chinese gentleman, lives in Kampar with wife. He is a pensioner previously working as a supervisor in a construction site. He is an ex-smoker (stopped 11 years ago). Complained of having loss of appetite at home and poor dentition. Able to walk with the aid of walker. Patient had done distal pancreatectomy without splenectomy (24/1/2019) and was followed-up as an outpatient. Patient was referred to HSB due to pus discharge (x3/7) from laparotomy wound. Patient has underlying hypertension and hyperlipidemia. Patients height (163 cm) reported by him and actual weight (52kg) was measured. Claimed of having weight loss 9% in 6 months. His BMI was 19.6 kg/m2 (normal BMI). His haemoglobin, urea, total protein and albumin were all below normal range and white blood cell was above normal range reflecting his current diagnosis and nutritional status. Patients had an inadequate intake in ward which was only 927 kcal/day energy and 34.25 g protein

Diagnosis: Inadequate protein energy intake related to decreased ability to consume sufficient protein and energy due to loss of appetite and disease (surgical site infection) as evidenced by estimated protein intake of 34.25 g (30% of Protein Requirement) and estimated energy intake of 927 kcal/day (51% of energy requirement).

Intervention: Energy of 30 35 kcal/kgBW was prescribed as patient is considered at a state of moderately hypermetabolic and protein of 1.8 g/kgBW 2.2 g/kgBW as patient has SSI, low albumin level, low Hb level and low total protein level. Patient was encouraged orally on high protein diet and was supplemented 60% energy requirement with Ensure GOLD and Myotein to meet his requirement.

Monitoring and Evaluation: Patient complied to the prescribed diet and achieved 100% of his requirement. His biochemical data were improving well and he gained some weight to 53.6 kg in 9 days.

SC06 - MEDICAL NUTRITION THERAPY FOR REFEEDING SYNDROME

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Assessment: A 58 years old Indian female was diagnosed with adhesion colic and refeeding syndrome with underlying diabetes mellitus, hypertension, end-stage renal failure. She was admitted due to intestinal collection with cocoon bowel. Total thyroidectomy was done 10 years ago. Patients BMI was 13.8 kg/m2, and she had lost approximately 25 kg (45%) in 6 months. Her ideal body weight (BMI 18.5 kg/m2) is 44.4 kg. The SGA score was 20 which indicate malnourished. Her Renal profile of urea/sodium/potassium/creatinine was 7.2/136/2.9/193 and electrolyte value of Ca/Mg/Po4 was 2.1/0.67/0.62. Prior to admission, patient can eat porridge 2-3 Tbsp, 3x/day, however vomit immediately after eating. Estimated energy intake was

Diagnosis: Chronic disease or condition related malnutrition related to alteration in gastrointestinal tract and function as evidenced by estimated energy intake 15% from ER and protein intake

Intervention: Main goal was to provide adequate intake by following the NICE guidelines 2006 of Refeeding Syndrome. Initial calories started for the first 3 days was 444 kcal (10 kcal/kgBW) through blenderized diet, followed by 666 kcal (15 kcal/kgBW) for day 4-6 in combination of diet and oral-nutrition-supplement. Lastly, provide 888 kcal (20kcal/kgBW through increment of oral-nutrition-supplement at day 7-10.

Monitoring and Evaluation: Patient able to follow guidelines recommended and tolerate well with oral-nutrition-supplement provided until 15 kcal/kg/d together with electrolyte correction done before resumed to 20 kcal/kg/day

SC07 - NUTRITION MANAGEMENT OF PULMONARY TUBERCULOSIS (PTB) WITH LEFT HYDROPNEUMOTHORAX AND UNDERLYING DIABETES MELLITUS (DM)

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Assessment: A Malay male, aged 39 years 2 months, admitted-due to community-acquired pneumonia (CAP) with left hydropneumothorax, To Rule Out (TRO) PTB, uncontrolled DM, and electrolyte imbalance. Patient-reported had shortness of breath (SOB),pain around the left chest, and poor appetite worsens 1 week before the hospital admission.The patient is a smoker for the past 20 years, 3-4 packs/day. The patient stopped smoking 1 year ago. Based on the knee height measurement, the patients height 170 cm, body weight 68 kg, and a normal Body Mass Index (BMI) 23.5 kg/m2. Biochemical data showed low in urea, sodium, creatinine, chloride,total protein,and albumin levels, but high white-blood cell level. Patient breaths spontaneously,with blood pressure-120/70mmHg,and heart-rate was high (118 bpm). The patient claimed to reduce appetite and lose weight roughly from 120kg-to-80kg in 4 months.Based on the assessment,patient energy intake 233 kcal/day and protein 4.9 g/day.

Diagnosis: Inadequate protein-energy intake related to reduce ability to consume orally well due to current general medical conditions that suppress patients appetite as-evidenced by food/nutrition related history of patients current intake(energy 233 kcal/day;protein 4.9 g/day) as compared to requirement (energy 1700 kcal/day;protein 82 g/day).

Intervention: Energy 25 to 30 kcal/kgBW and 1.2 g/kgBW protein was prescribed to prevent further lean-muscle loss, and promote better healing against infection.The patient was encouraged to eat orally (50% of Total Energy Intake TEI from oral diet) with high protein diet.Additional protein-energy was supplemented from Oral Nutrition Supplement (ONS) Nutren-Diabetik (34% of TEI from ONS).The patient was targeted to at least achieve more than 75% of TEI.

Monitoring and Evaluation: The patient tolerated well with the nutrition plan and stopped using-ONS by 5 days as he regained back his appetite.The patient had achieved the energy requirement 1710 kcal (25kcal/kgBW) and protein intake 76 g/day(1.1 g/kg BW) through oral diet by 8-days.The educational info regarding diabetic-diet given to overcome the patients inconsistent blood-sugar profile.

SC08 - Survivorship in Palliative Care of Advanced Cancer Patient: Leveraging the Role of Dietitians

Amanina Z, AishahZAA and Zulfitiri AMD

Assessment: Background: Advanced cancer patient experienced a multitude of nutritional challenges stemming from systemic inflammation, fat depletion, CNS signals anorexia, muscle wasting, and liver metabolism changes. Palliative care enhance the quality of life of patients in all aspects of cancer survivorship(not just end of life care), which thoughtfully consider lifestyle behaviors and surrounding that can positively affect health outcomes and cancer progression. Client History: A 59-years-old married Malay man was diagnosed with advanced lung cancer with metastasis to hillar, mediastinal node, liver. He was on palliative care treatment with no active chemotherapy. Patient developed severe abdominal pains, orthopnea, diarrhea and reported several episodes of vomiting and poor oral intake since the past few weeks.He was referred for high protein diet and ONS. Assessment: He experienced significant weight loss of 11% within 1 month.BMI was 19.3 kg/m2.Weight reduction reflected his poor energy(44% adequacy) and protein intake (0.15 g/kg). PG-SGA was graded as B and had poor appetite.

Diagnosis: Inadequate protein-energy intake related to physiological causes due to catabolic illness (advanced lung cancer) as evidenced by food history and physical finding.

Intervention: Nutritional intervention aimed for at least 75% of energy requirement, protein intake 1.0-2.0 g/kg. ONS was included as strategies to increase protein-energy intake (34% from requirement). Nutritional counselling focusing on tips to increase protein-energy intake towards patient and family members.

Monitoring and Evaluation: 1. To monitor protein-energy adequacy 2. To monitor weight changes Outcome and Follow-up: Patient achieved the energy and protein recommendation that increased the body weight. Discharged plan continued on high protein, energy dense diet and ONS. The patient was referred to Institut Kanser Negara for chemotherapy treatment. Lesson Learnt: Fundamental element of palliative care provision in dietetic practice is in managing issues associated with nutritional status to ensure comfort and improved quality of life, which signify the role of dietitians beyond energy and protein prescription.

SC09 - Nutrition Management for Burn Patient

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Assessment: Mr. A, 58 years old Malay gentleman who owns a small business was admitted to emergency department on 3rd February 2019 by his own son due to 26% alleged flash burn over face, bilateral upper limbs and bilateral lower limbs with underlying Diabetes Mellitus. The patients height and weight were 1.75 m and 80 kg respectively with BMI 26.12 kg/m2 (overweight) and presented with low levels of blood creatinine and albumin. Thus, reflecting muscle and protein loss due to wound exudation. Patient was intubated and ventilated with CPAP post wound debridement and split-skin graft procedure. He was previously NBM throughout the day for the procedure.

Diagnosis: Inadequate enteral nutrition infusion related to feeding schedule interrupted (NBM) as evidenced by estimated energy intake 8% from energy needs and estimated protein intake 0% from needs. Increased energy needs related to open wound and prolonged catabolic illness as evidenced by medical condition (burn).

Intervention: The aims were to improve patients protein and energy intake to meet requirement through NG tube feeding using immune-modulating formula and Myotein in 3 days aside from promoting wound healing. The recommended energy intake was calculated from Toronto Equation which yield 1364 kcal while 2.0 g protein/kg/day was prescribed. The full feeding for the patient was 6 scoops Neomune and 1 sachet Myotein with 250 ml water seven times daily.

Monitoring and Evaluation: Feeding regime using immune-modulating formula (Neomune) and Myotein was prescribed and tolerated well by the patient and achieved full feeding after two days of prescription. His wound investigation showed that the wound was healing gradually with improving blood albumin levels.

SC10 - Medical Nutrition Therapy Management of Multiple Liver and Splenic Abscess with Extensive Abdominal Lymphadenopathies

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Assessment: Mrs. M, a 60 years old Malay lady, married and lives with her husband. Patient was admitted to the Hospital Selayang due to intermittent fever for 2 weeks associated with chill and rigors, and reduce oral intake. Previously patient known case of strangulated paraumbilical hernia post laparotomy, small bowel resection, and primary anastomosis. Patient has underlying disease of hypertension, diabetes mellitus and dyslipidemia. Patients BMI is 21kg/m2 (normal). Sodium, potassium, haemoglobin and albumin were all below normal range. Patient seem lethargic, have no difficulty in chewing/swallowing food and mild-moderately malnourished (SGA Score:12). Patient only eat very little amount of food, approximately less than 300kcal/day due to poor of appetite since post operation. Thus, oral supplementation is given.

Diagnosis: Inadequate protein-energy intake related to inability to consume adequate oral intake due to lack of appetite as evidenced current intake less than 300kcal and protein intake, less than 0.8g/kg compared to requirement of intake, 1650kcal and protein, 1.2g/kg per day.

Intervention: The objective of the management is to provide adequate energy and protein to prevent muscle loss and increase healing process. The energy prescribed is based on quick method, 1650kcal/day. The protein prescribed is 1.2g/kg BW. Nutrition plan is to provide oral supplementation with 3 scoops disease specialized enteral formula (diabetes mellitus) with 150ml water, 3 hourly, 6x/day. Encourage patient to eat at least half portion of hospitals diet.

Monitoring and Evaluation: Patient tolerate well with the enteral formula but has no improvement on intake from soft diet. Modular formula (protein) is later added. The tolerance towards enteral formula, dietary intake and biochemical values were monitored. Patient was frequently kept on NBM for the scheduled procedure at the hospital. Thus, patient has high risk for refeeding syndrome. Refeeding syndrome can be prevented by determining the risk factor and gradual nutrition initiation and advancement.

SC11 - NUTRITIONAL MANAGEMENT OF REFEEDING SYNDROME IN NEUTROPENIC SEPSIS PATIENT

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Assessment: Mr. S, 71 years old Malay male, admitted due to hypovolemic shock secondary to poor oral intake with symptomatic anemia and treated as URTI. He presented with fever for 1 week, multiple lump with pus discharged and poor oral intake. Patient has ischemic heart disease (done CABG in 2013) and acute leukemia since December 2018. Patients BMI is 14.4kg/m with height 174.5cm (KH:56cm) and weight 44kg (MUAC:19cm). For biochemical data, RBC, hemoglobin, phosphate, calcium and albumin level is low. Patient is ADL semi-dependent, has low appetite and poor oral intake (worsening since admitted). He has bedsore grade 2, severe muscle wasting and fat loss (SGA score: 16, Mildly-moderate malnourished). He has normal TMJ nerve function (no swallowing problem) and impaired dentition. Patients intake is less than 300kcal/day with protein intake 5.6g/day. Patient spit out the porridge eaten and drinks small amount of ONS given (100ml, 2-3x/day).

Diagnosis: Inadequate protein-energy intake related to decrease ability to consume sufficient energy and protein due to physiological-causes as evidenced by energy intake is

Intervention: To provide 5-10kcal/kg/day and slowly increase intake due to risk of refeeding syndrome. Supplement patient with 2scp ONS standard polymeric formula 6x/day and stop taking normal diet for temporarily. Discuss with Dr for correction of electrolytes.

Monitoring and Evaluation: Patient is newly diagnosed with neutropenic sepsis. Electrolytes level is corrected. However, albumin and WBC level keep reducing. Patient able to finish ONS. Nutrient delivery is increased to 10-15kcal/kg. He is then allowed to eat normal diet (neutropenic diet, mixed porridge) with 3scp ONS, 6x/day-46% of energy, 39% of protein requirement with improving intake. As albumin keep reducing and presence of grade 2 bedsore, patient is provided with semi-elemental formula as it contain 100% WHP that easily absorbed and fastens recovery.

SC12 - MEDICAL NUTRITION THERAPY FOR BURN PATIENT

Siti Zarifah AL1, Nur Hidayah G1, Murnizar M2, Nur Islami MFT1

1. UiTM
2. Hospital Tengku Ampuan Rahimah, Klang

Assessment: A 51 years-old, Indian female with underlying schizophrenia, type 2 diabetes mellitus and hypertension was diagnosed with 35% TBSA with 3rd degree burn. Based on knee height measurement, her height is 158 cm and her ideal body weight is 56 kg. Biochemical data shown low in albumin, total protein and hemoglobin level. Patient was ventilated with FmVO2, have full Glasgow Coma Scale score with attached catheter bag drainage and normal vital sign. Her heart rate is high (115 bpm) and she was lethargy. She was on Ryles tube feeding due to dysphagia. She was prescribed with 30 - 35 kcal/kg and 1.5 -3 g/kg of protein. Upon assessment, her feeding has reached 64.3% of energy and 1 g/kgIBW of protein, providing 1260 kcal and 56 g of protein by using glucose control formula. However, the preparation was not follow the standard dilution

Diagnosis: Inadequate enteral nutrition infusion related to improper enteral nutrition dilution as evidenced by food and nutrition related history of calorie intake 1260 kcal and protein 56 g less than requirement of 1680 kcal - 1960 kcal and protein 84 g 168 g.

Intervention: To improve the calorie and protein intake as well to increase total protein, albumin and hemoglobin level, RTF increased to 99% from ER and protein 2 g/kg/BW, providing 1946 kcal and protein 113.4 g.

Monitoring and Evaluation: Patient tolerated well with feeding regime planned. However, biochemical data remained low in TP, albumin and hemoglobin, therefore protein requirement aimed up to 3 g/kgBW and bulking agent provided after second follow up in view of patient having diarrhea. Adequate energy and protein is important for wound healing, defend lean body mass, and immunocompetence besides fluid resuscitation for burn patient.

SC13 - Nutrittional Managment in Grade IV Liver Injury with intra-abdominal sepsis and burst abdomen

Nurul Suryanie Yahaya1, Nur Hidayanti Asma Alias1

1. UiTM

Assessment: A 31 years old, Indian gentleman with no underlying disease. Patient height was 168 cm, estimated by bed length measurement and weight of 70 kg, as per record. The biochemical data showed low in hemoglobin, total protein, and albumin level. Patient has full Glasgow Coma Scale score with attached catheter bag drainage and normal vital sign. He complained pain over the abdomen, loss of appetite, lethargy, and weakness. He was on soft normal diet and finish serving of diet served. In view of poor oral intake, oral nutrition supplement (ONS) was prescribed with 6 scoops of Nutren Optimum in 200ml of water, three times/day. Upon assessment, the total energy and protein intake from soft and ONS are 716 kcal and 28.0 g. However, diet indent was inappropriate.

Diagnosis: Inadequate protein-energy intake related to reduce appetite due to pain over the abdomen during meals as evidence by estimated energy and protein intake from both diet and ONS is less than the requirement.

Intervention: To provide adequate energy and protein intake as well as to increase hemoglobin, total protein and albumin level, with energy of 25 kcal/kg and 1.2-1.4 g/kg of protein (84.0-98.0 g/day) have been prescribed. He was prescribed with soft high protein, low-fat diet, and ONS with 4 scoops of Nutren Optimum in 200ml water, four times/day.

Monitoring and Evaluation: On the 1st follow up, was on RTF with Nutren Optimum due to poor oral intake. On the 2nd follow up, patient was allowed orally, finish serving of hospital diet. In view of protein and energy intake not meet the requirement, top-up intake with ONS Nutren Optimum of 6 scoops in 200ml water, four times/day. On the 3rd follow up, patient intake improved. Adequate energy and protein are important to defend lean body mass and immunocompetence. A low-fat diet is recommended for patient with liver problem.

SC14 - Challenges in Provision of Dietetic Care for Acute Kidney Injury (AKI) on Chronic Kidney Diseases (CKD) with Multiple Infections and Fluid restriction

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Assessment: Client History: Patient is 65 years old, Malay Male who has been admitted due to fall at home and reduce consciousness. Patient was then diagnosed with aspiration pneumonia and AKI on CKD. Patient had underlying of HPT, T2DM, IDA and CVA in 2014 with right sided hemiparesis. He was referred to dietitian for enteral feeding initiation. Nutrition Assessment: His estimated weight and height was 51.3 kg and 152 cm, respectively, with BMI of 22.2 kg/m2. Biochemical data revealed abnormal reading of renal profile and full blood count and it was in fluctuating trend. Fluid restriction was prescribed at 1 litre/day. Upon review by dietitian, ryles tube was inserted and patient only received 2 pint of D10% over 24 hours. The energy and protein provided was 400 kcal/day and 0 g/day, respectively.

Diagnosis: Nutrition Diagnosis: Inadequate protein-energy intake related to enteral nutrition not yet started as evidence by patient only received D10% 2 pint/24 hours, energy adequacy (24%) and protein adequacy (0%).

Intervention: Nutrition intervention:Prescription: Energy: 1539 kcal (30 kcal/kg/d), protein: 50.9 g (1.0 g/kg/d). Goal: To improve nutritional status while limiting the complications of AKI

Monitoring and Evaluation: Monitoring & Evaluation: Patient achieved 88% of energy and 96% protein adequacy via enteral feeding. Feeding regime was revised on the second f/up in view of new issues (i.e. sacral sore grade 2, nasocomial infection, uncontrolled DM and ROF was withold due to negative IO balance). Patient was able to tolerate well with enteral feeding and no aspiration reported. Subsequent visit revealed the present of edema thus fluid was restricted to 1 litre/day, and feeding regime was adjusted accordingly. He was allowed to discharge with enteral feeding and discharge plan was made. Learning Point: Regular dietetic review and monitoring is paramount to ensure nutrition delivered is tailored to needs and clinical condition of the patients

SC15 - MEDICAL NUTRITION THERAPY FOR BURN PATIENT

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2. *Dept. of Dietetic and Food Service, Hospital Tengku Ampuan Rahimah, Selangor.*

Assessment: A 51 years-old, Indian female with underlying schizophrenia, type 2 diabetes mellitus and hypertension was diagnosed with 35% TBSA with 3rd degree burn. Based on knee height measurement, her height is 158 cm and her ideal body weight is 56 kg. Biochemical data shown low in albumin, total protein and hemoglobin level. Patient was ventilated with FmVO2, have full Glasgow Coma Scale score with attached catheter bag drainage and normal vital sign. Her heart rate is high (115 bpm) and she was lethargy. She was on Ryles tube feeding due to dysphagia. She was prescribed with 30 - 35 kcal/kg and 1.5 -3 g/kg of protein. Upon assessment, her feeding has reached 64.3% of energy and 1 g/kgIBW of protein, providing 1260 kcal and 56 g of protein by using glucose control formula. However, the preparation was not follow the standard dilution.

Diagnosis: Inadequate enteral nutrition infusion related to improper enteral nutrition dilution as evidenced by food and nutrition related history of calorie intake 1260 kcal and protein 56 g less than requirement of 1680 kcal - 1960 kcal and protein 84 g 168 g.

Intervention: To improve the calorie and protein intake as well to increase total protein, albumin and hemoglobin level, RTF increased to 99% from ER and protein 2 g/kg/BW, providing 1946 kcal and protein 113.4 g.

Monitoring and Evaluation: Patient tolerated well with feeding regime planned. However, biochemical data remained low in TP, albumin and hemoglobin, therefore protein requirement aimed up to 3 g/kgBW and bulking agent provided after second follow up in view of patient having diarrhea. Adequate energy and protein is important for wound healing, defend lean body mass, and immunocompetence besides fluid resuscitation for burn patient.

SC16 - Nutrition management for patient with Ogilvie syndrome, with diarrhea underlying Diabetes Mellitus and Hypertension.

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Assessment: Mr. L, a 65-year-old house-bound Chinese male, admitted with abdominal pain and altered bowel habits and treated as likely paralytic ileus secondary of hypokalemia. At ward, patient was taken care by his brother while his wife going to work. Patients BMI was 21.2 kg/m (underweight for elderly) with height and weight of 1.61 meter and 55 kg. Potassium, red blood cell, hemoglobin, total protein and albumin were all below normal range while white blood cell, creatinine and CRP were above normal range. Patient was also having fever and poor appetite which caused him low oral intake (608 kcal/day energy and 17 g/day protein).

Diagnosis: Inadequate oral intake related to decreased ability to consume sufficient energy and protein (poor appetite and patients condition of having fever) as evidenced by estimated energy and protein intake (608 kcal/day, 17 g/day) less than recommendation (1650 kcal/day, 66 g/day).

Intervention: To provide adequate protein and energy intake, thus 30 kcal energy/kg current body weight/day and 1.2 g protein/kg current body weight/day were prescribed. Patient was supplemented with Nutren Diabetik and Myotein together with oral intake encouragement.

Monitoring and Evaluation: Feeding tube was inserted as patient continuously having poor intake with worsened abdominal distension. Feeding regime was planned with Nutren Diabetik and was later changed to Nutren Fibre as patient consistently having diarrhea, reflecting his new medical diagnosis which is Ogilvie syndrome. Patient tolerated feeding well with improved diarrhea status. Discussion: Ogilvies syndrome is a pathologic dilation of colon without underlying mechanical obstruction, with common symptoms of diarrhea. Proper selection of enteral formula is important to reduce the symptom while ensuring patient received adequate requirements. Learning Points: Nutren Fibre contains multisource fibre with prebiotics that help in decreasing the frequency of diarrhea.

SC17 - Coordination of Care with Family Promoted Delivery of Optimal Nutrition in a Patient with Compromised Functional Status and Self-Feeding Difficulties

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Assessment: A 26 year-old, Indian male suffered from multiple traumatic fractures over upper and lower limbs complicated with multiple organ injuries and bed sores. Upon admission, patient was tolerating normal diet under family assistance. As patient was intubated post-surgery, he was referred to dietitian to optimise nutrition support. Nutrition assessment revealed that patient was underweight (BMI 17.1kg/m2) with mild fat and muscle wasting. He was receiving inadequate enteral feed for 5 days, providing 436kcal and 17.5g protein as compared to estimated daily requirement of 2000kcal (30kcal/kg) and 99g protein (1.5g/kg).

Diagnosis: Inadequate enteral nutrition infusion related to feeding regime not established as evidenced by 24-hour nutrient intake meeting merely 20% of energy and protein requirement.

Intervention: To prevent further malnutrition and promote recovery, a revised enteral feeding regime with the use of standard polymeric enteral nutrition supplement was implemented. Provided 8 scoops Optimaxe Lite + 300cc H2O, 3hourly, 6 times/day (103% energy requirement, 97% protein requirement). To optimise the delivery of nutrition support, family members were trained to deliver the feed.

Monitoring and Evaluation: Within two days, targeted feeding regime was established with good tolerance and the regime continued under family support. Enteral feeding was ceased and oral feeding was permitted after one week. By coordinating the care with speech therapist and patients family, normal diet supplemented with oral nutritional supplement was prescribed and family participated in supervising mealtime. Upon patients discharge next day, a family meeting was organised to derive a high protein menu plan that ensures good nutrition and safe feeding at home. In conclusion, this case write-up demonstrates importance of coordination of care with family in assuring adequate, safe nutrition in a patient with multiple fractures compromising functional and nutritional status.

SC18 - NUTRITION MANAGEMENT FOR PATIENT WITH LIVER CIRRHOSIS AND INTAKE CHALLENGES

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Assessment: Patient was referred from Hospital Putrajaya for autoimmune hepatitis (AIH) admitted since 4/3/19 and diagnosed with liver cirrhosis secondary to AIH at Hospital Selayang with underlying of bilateral nasal polyposis, severe OSA on CPAP, obesity BMI 43, transaminitis due to fatty liver disease. Mdm. R, 51 years old, female and Malay. She is married and currently lives in Bangi with her daughter. Patient is working as administrative assistant at a government office in Putrajaya.Patients height is 152.5cm with IBW of 52 kg at 22.5 kg/m2 (normal). Abnormal results obtained from biochemical data of liver profile, renal profile and full blood count. Patient also has jaundice but no ascites or edema. Patient is mildly-moderately malnourished with SGA score of 8. Patient take minimal oral intake before administration and only half of hospital diet due to poor appetite, early satiety and feeling of abdominal distention.

Diagnosis: Inadequate protein-energy intake related to inability to consume food (low of appetite) as evidenced by food and nutrition related history of energy intake 363kcal @ 7 kcal/kg/d and protein intake of 1.7g @0.03g/kg/day.

Intervention: The objective is to achieve adequate protein-energy intake to prevent further malnutrition and muscle loss. Patient is prescribed with energy of 1800kcal(35kcal/kg) and protein 62.4g(1.2g/kgIBW). Nutrition plan is to indent high protein and oral nutrition supplement(ONS) with 5scoops of standard-product, 250cc water, 3x/day.

Monitoring and Evaluation: The 1st follow up, ONS was reduced to 3scoop with 150cc,4x/d and addition of 1 scoop of protein modular as appetite is improved.The 2nd and 3rd follow up patients intake also has improved to 60% . The management for patient with liver cirrhosis are to enhanced nutrient intake and increase high protein food. These patient are prone to protein-caloric malnutrition may due to loss of appetite or abdominal distention, thus nutrition supplement is important to avoid nutrient deficiency.

SC19 - MEDICAL NUTRITION THERAPY FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Assessment: Mr. G.,69 years old, male, Malay was presented with fever for 1 day, shortness of breath and cough for 2 days, and diagnosed with COPD.As 30% to 60% of extra energy is required for breathing and frequent recurrent respiratory infections,sufficient energy and protein is necessary to maintain a desirable weight,restore lung and muscle strength, as well as to promote immune function. Patients weight (50.2 kg) and height (1.65 m) were estimated using knee height (KH) and mid-upper arm circumference (MUAC) formula since patient could not ambulate as patient was intubated and ventilated (CPAP). Patient was underweight (18.4 kg/m) and on Ryles-tube feeding via nasogastric initially with Ensure 150cc, x3 and changed to Optimaxe Lite 200cc, x2, given 4 hourly which provides = 740 kcal of energy/day; 31.75g of protein/day.Currently, Patient was kept nil by mouth-due to plan for extubation.

Diagnosis: Inadequate enteral nutrition infusion-related to infusion interrupted as evidenced by patient was kept nil by mouth due to plan for extubation and estimated energy and protein intake was only 740kcal (58%) and 31.75g (53%) respectively which is insufficient when compared with the estimated requirement.

Intervention: The objective of the management was to improve enteral nutrition-infusion closer to the energy and protein requirement of the patient-to prevent further muscle loss and malnutrition. The energy prescribed was 1281kcal/day based on Penn-State University while the protein prescribed was 60.24g/day (1.2g/kg body weight). Hence the patient was prescribed with 1290kcal/day and 60g/kg body weight. The nutrition plan for this patient was to continue Ryles tube feeding (once allowed) with 5 scoops of Optimaxe Lite + H2O = 250cc, 4 hourly, 6x/day.

Monitoring and Evaluation: Patient tolerated tofeeding well.Since Dr. has-plan for extubation, there is a need to revise the energy requirement for the patient.As time goes by,patient was changed to venturi mask and was allowed orally on soft diet.

SC20 - MEDICAL NUTRITION THERAPY FOR HYPOVOLEMIC SHOCK

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Assessment: Mr. R, 74 years old, Malay male, married and blessed with 1 child. He is a retired army officer and currently lives with his wife. He is non-smoker and currently bed-rest. Patient was admitted on 1st March 2019, due to right arm swelling which progressively increasing in size. He was diagnosed with hypovolemic shock 2 to spontaneous abdominal hemorrhage with over warfarinazation complicated with non oliguric AKI . Infection was caused by spontaneous abdominal hemorrhage due to coagulopathy-related from warfarin. Patients height (171 cm) and weight (61 kg) were estimated using knee height (KH) and mid-upper arm circumference (MUAC) formula. Patient was underweight (BMI 20.9 kg/m2). Patient was KIV for ONS, since patient was just initiated feeding on clear fluid. Previously patient was NBM due to OGDS (esophagogastroduodenoscopy).

Diagnosis: Inadequate energy-protein intake related to inability to consume sufficient energy as evidenced by patient who is currently on clear fluid only.

Intervention: The objective of the management was to provide adequate energy and protein. Energy was prescribed using Quick Method (25kcal/kg) and Schofield Equation (1711 kcal). Hence the calorie estimation is (1525 kcal to 1711 kcal). A range of calorie was estimated to help patients toleration towards feeding regime. Protein was prescribed in a range of 1.2 to 1.5 g/kg BW due to malnourished. The nutrition plan is to start the patient on ONS with Novasource (100ml/3hourly) which will provide 1600 kcal, 72 g/protein.

Monitoring and Evaluation: Patient develop hospital-acquired pneumonia (HAP) with fast atrial fibrillation after 3 weeks, hence the calorie and protein were changed to 1601 kcal/day and 60 g/protein/day. Patients INR reading was normal while, Hb and total protein values were closer to expected range.

SC21 - MEDICAL NUTRITION THERAPY FOR NON-INFECTIVE AECOAD (GOLD D) WITH CHRONIC TYPE II RESPIRATORY FAILURE

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2. *Dept. of Dietetic and Food Service, Hospital Tuanku Ampuan Najihah, Negeri Sembilan.*

Assessment: Mr. L., 57 years old, Chinese male was diagnosed with non-infective AECOAD (GOLD D) with chronic type II respiratory failure. Patients height (169 cm) and weight (76.6 kg) were estimated by using knee height (KH) and mid-upper arm circumference (MUAC), referring to Ross Lab/Lin et al (2009) since patient was bedridden was not able to ambulate. Patient is overweight with BMI 26.8kg/m2. Currently, patient is on nasogastric tube feeding with Ensure Gold 50 ml (2 times/day) and 100ml (4 times/day) resulting in a total intake of (440 kcal/day;17.5 g/protein/day). Patient tolerated feeding well and no aspiration or diarrhea.

Diagnosis: Inadequate enteral nutrition infusion related to feeding regime is not optimized as evidenced by estimated energy intake of 440 kcal/day (only 35% of energy requirement) and protein intake is 17.5 g/day (only 19% of protein requirement).

Intervention: The objective of the management is to achieve adequate energy and protein to prevent muscle loss and further malnutrition. The energy prescribed for this patient is 1784 kcal/day based on Ireton Jones formula while the protein recommendation is 1.2 -1.5 g/kg/body weight based on MNT Critically Ill (2017). The enteral formula was changed from Ensure to Glucerna as patient had high CO2 level. The new feeding regime prescribed was 5 scoops Glucerna, 3 hourly, 8 times/day which contribute to 1800 kcal/day and 81.2 g/ kg /day (1.0 g/kg).

Monitoring and Evaluation: Patient had continuous CO2 distention and few episodes of vomiting that resulted in switching the enteral formula from Ensure to Glucerna. After 3 days, patient PCO2 level reduced. Patient tolerated feeding well till full feeding.

SC22 - HYPOALBUMINEMIA, ANEMIA IN ACS

Mas Hanisah A1, Nur Hidayanti AA2.

Assessment: Mr. T, 82 years old, male and Chinese. He is married and had 7 children. All of them are married and he lived with one of her daughter. Patient was not working. He was admitted (24/3/19) present with shortness of breath, abdominal distension, low blood pressure, fresh blood and blackish stool. GCS 15/15; BP: 82/51; HR:103 and T:37; Patient estimation height was 158cm and his weight was 60kg by using ideal body weight 24kg/m. Patient currently underlying hypertension, diabetes mellitus, ischemic heart disease, left lower leg deep vein thrombosis. Patient currently on SIMVPC, ryles tube feeding (RTF), bolus feeding but nil by mouth (NBM).

Diagnosis: Predicted inadequate enteral nutrition infusion related to physiological causes that increase need as evidenced by patient currently (NBM).

Intervention: is to provide adequate amount of energy and protein based on patient's requirement and condition as to prevent occurrence of muscle loss and malnutrition. The energy prescribed was 1228-1535kcal as patient currently intubated and sedated while 1.2g/kg to 1.5g/kg for protein as patient had low total albumin and referring critically ill. Nutrition plan for this patient is to indent peptamen as referring the GI bleed, hypoalbuminemia with maximum feeding 5 scoops and 1/2 sachet of myotein in every feeding for 8 times per day.

Monitoring and Evaluation: For the first follow up (27/3/19), patient was suggested for mixed porridge and then changed to minced low salt diet once allowed orally as there is a plan to start orally once tolerated with clear fluid. Then, on second follow up (3/4/19), patient's daughter claimed his father appetite become with estimation energy 313.1kcal and 10g of protein. The plan for the patient is to provide ONS that had more calorie compared with peptamen which was glucerna triple care and encourage orally with diabetic diet, food high in iron and LSD at the same time.

SC23 - Dry gangrene of right 3rd toe

Nadia Izzaty Y1

Assessment: Mr I, 56 years old, Malay,stays with family. Patient has underlying Diabetes Mellitus for 24 years, hypertension for 7 years, ESRF for 7 years (on regular HD 2,4,6), IHD and parkinsonism that has been newly diagnosed since admission. Patients height is 1.64 cm based on calculated knee height of 48cm. Weight reported is 66kg. BMI is 24.5 kg/m2. Upon assessment, patients blood pressure was 98/57, heart rate 126 beats/min, respiratory rate 20 breaths/min, temperature 37 oc, ventilator mode SimV+Pc and GCS E4VTM6.Patient was on nasogastric (NG), was allowed for feeding however, patient is kept NBM due to aspirate of coffee ground.

Diagnosis: Inadequate enteral nutrition infusion related to schedule for infusion interrupted due to aspirated coffee ground as evidence by patient kept NBM.

Intervention: The objective of the management is to optimize nutritional status by providing adequate protein and energy requirement. Energy requirement is prescribed as 1500 kcal/day, with protein requirement of 78.7g (1.3 g/kg BW/day). Patient has ROF 500 ml/day. The nutrition plan for this patient is to start with Novasource Renal in view of electrolyte imbalance and ROF. Thus, max of 90 cc, 3hourly, 8 times per day is directed.

Monitoring and Evaluation: Upon 1st follow up, patient was on the first step of 50cc. 2nd follow up, patient has achieved full feeding of 90cc. On 3rd follow up, patient has allowed orally. Patient was encouraged orally with renal diet and supplemented with Novasource 1 pack/day in view of the current oral intake was only 300 kcal/day, protein 7g/day.

SC24 - Management of critically ill obese patient, complicated with feeding intolerance

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2. Hospital Sultan Haji Ahmad Shah

Assessment: A 57 years old Malay, female was brought to hospital after having chills and rigors. Upon arrival at emergency department, GCS was noted to be 3/15. Patient was sedated and ventilated to prevent from respiratory distress. Diagnosed with septic shock, AKI and type 2 MI with underlying hypertension. Referred to dietitian for initiation of feeding. She is obese at BMI 31.6 kg/m2. Laboratory data deranged reading of full blood count and renal profile. Patient was on IVD NSD5%, 4 pints/day. Early admission to CCU, patient was KNBM due to coffee ground aspirate and energy only comes from IVD.

Diagnosis: Thus, the nutrition diagnosis was inadequate protein-energy intake related to decrease ability to consume sufficient energy due to patient is intubated as evidenced by energy intake only 340 kcal/day (from IVD).

Intervention: The objective was to provide patient with hypocaloric, high protein feeding to preserve lean body mass, prevent overfeeding and mobilize adipose tissue. Nutrition prescriptions were as such: 1036 (14 kcal/kg BW) kcal/day with 106 g/day protein (2.0 g/kg IBW). Nasogastric bolus feeding with polymeric formula (Ensure Gold) was given along with modular product (Myotein) to meet the hypocaloric, high protein feeding. After 3 days of enteral feeding, patient experienced diarrhoea. Fermentable soluble fibre supplement was added into the feeding regime. After 4 days, patient developed high GRV and vomited. Feeding regime was reviewed.

Monitoring and Evaluation: Monitoring and evaluation for this patient focused on patients body weight, blood profile level (renal profile & liver function test) and dietary intake (energy and protein adequacy) and feeding tolerance (aspirate, bowel distension, diarrhoea, constipation, vomiting).