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DIETARY MANAGEMENT OF ACUTE NECROTIZING PANCREATITIS PATIENT: A UNIQUE SURVEY

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ABSTRACT

Acute necrotizing pancreatitis (ANP) accounts for 10%represents 10% of acute pancreatitis (AP) cases and is associated with a higher morbidity and mortality. Necrosis at the initial a month of infection beginning is characterized as an acute necrotic collection (ANC), while walled off pancreatic necrosis (WOPN) develops following a month of illness beginning. A few group with pancreatitis get NP. Pancreatitis is a genuinely normal condition. It's more common in men than in women. It can influence individuals of all ages. Numerous components contribute to malnutrition in ANP, particularly abnormal metabolism and catabolism related to inflammation. In this study we detailed a patient having acute necrotizing pancreatitis and observed all require parameter in dietary management. All biochemical parameter like K+, Na+, Hb were analyzed and required diet were prescribed with respect to patient condition. Extra sodium rich food, i.e. ORS, buttermilk, extra salt in diet, salty peas, nuts etc. was also given because of low sodium. Normally hemoglobin was low from the date of admission of the patient. So iron rich food was supplied i.e. pomegranate juice, beet-root juice, carrot juice everyday by alternating. The nutritional management of necrotizing pancreatitis keeps on being a test to internists and surgeons, as illustrated by the following case study of an elderly patient who, regardless of enduring numerous complexities of the disease, eventually survived.

Key words: Pancreatitis, Necrosis, morbidity, nutrition, management

INTRODUCTION

Acute necrotizing pancreatitis or acute pancreatitis is a condition wherein actuated pancreatic chemicals release the substance of the pancreas and start the auto assimilation of the organ. The pancreas is an organ that sits behind our stomach. It makes liquid that course through a pipe into the small digestive tract. These liquids assist us with processing food. The pancreas also releases hormones to help control glucose. This incorporates insulin. Pancreatitis is additionally because of irritation of the pancreas. At the point when the pancreas gets aggravated, it might release stomach related compounds into the actual pancreas. This can lead pancreatitis. At the point when this harm is extreme, portions of your pancreas may not get sufficient blood and oxygen to endure. NP happens when a part of the pancreas or the tissue around it dies from inflammation. Some people with pancreatitis get NP. Pancreatitis is a fairly common condition. It's more common in men than in women. It can affect people of all ages.

Necrotizing pancreatitis is a staggering disease with high mortality. Early investigations announced death paces of half 80%, yet present day escalated care the board has decreased rates to around 20% **[1-4]**. The mortality is generally brought about by the extreme foundational fiery reaction that goes with the sickness, set off by a serious cytokine response to the autophagy pancreas. These outcomes in various organ failures, particularly affecting the lungs (adult respiratory distress syndrome) and kidneys. Metabolic instability is common, as the disease process also impairs pancreatic endocrine function, and uncontrolled hyperglycemia is associated with poor outcome **[5]**. Invulnerable and entrail capacities are impeded, bringing about high sepsis rates, ordinarily from enteric life forms **[6]**. Estimations of paces of metabolic use have shown heights in protein catabolism of 80% **[7]**, with moderate expansions in energy utilization **[8]**.

The advent of parenteral feeding in the 1960s was heralded as the perfect answer because it could provide total parenteral nutritional (TPN) requirements, without stimulating the pancreas. Beginning perceptions of training, for sure, showed an emotional lessening in the normal mortality from 60% to 20% **[9]**. In any case, the eagerness for TPN melted away when the high frequency of metabolic and septic intricacies got remembered: one investigation reported hyperglycemia in 80% of patients **[10]** and in another, catheter-related sepsis in 15%–20% **[11]**. In this

study, we explained details nutrition and diet like what to be avoided, and foods to be included depending on different biochemical parameter in an acute necrotizing pancreatitis patient.

MATERIALS AND METHODS

This is an observational analysis carried out at Institute of Medical Sciences and Sum hospital, Bhubaneswar. The patient history was given below

Prognosis

The patient undertook a dietary counseling for 13 days and dietary modification was done according to the patient condition. During the last week of counseling he experienced no pain in abdomen and reported feeling more energetic & was able to talk and was active. Following a total of 26 days of care she was discharged based on his condition. So, the prognosis is good.

Weight : 68 kg

BMI : 24.1 kg/m2

Chief complaints : abdominal pain, vomiting, jaundice

Past disease : Nil

Previous operation : Nil

Family history : No history

History of present Illness : Patient was apparently all night before 1 day. He developed with 4-5 episodes of vomiting and back pain and abdominal pain

Any kind of allergy : Nil

Diagnosis : Acute necrotizing pancreatitis

Diet recommended : Normal soft diet

Observation and results

Diet- Normal soft diet

- The patient was taking diet from therapeutic kitchen but it was suggested to bring the extra suggested food, i.e iron rich food, potassium rich food, sodium rich food.
- Normal soft diet of E=1800k cal, CHO=235g, protein=55g and fat=23g during discharge were given. Extra potassium rich food, coconut water and iron rich pomegranate juice, beetroot juice, carrot juice, turnip juice, raw banana was given because of low potassium and haemoglobin. In the next day after given diet Haemoglobin level increased to 12.3g and Potassium increased to 3.4 mEq/L.
- Extra sodium rich food, i.e ORS, buttermilk, extra salt in diet, salty peas ,nuts etc. was also given because of low sodium. After

giving sodium rich food the sodium increased to 138.

- Normally haemoglobin is low from the date of admission of the patient. So it was given iron rich food, i.e pomegranate juice, beet-root juice, carrot juice everyday by alternating.
- The patient was discharged on 20/2/21. At that timehe was able to sit and stand by his own without any support, he is also able to talk and was quite active and was interacting actively. At the time of discharge sodium level was 138, Haemoglobin=14 and potassium=3.8
- Normal diet chart with some modification of adding soft diets were recommended in discharge time. He was suggested to eat some iron rich foods with this normal diet.

Table 1: Food chart of patient in acute necrotizing pancreatitis

FOODS TO EAT	FOODS TO AVOIDED
• Rich in protein • Low in animal fats • Try lean meats, beans and lentils, clear soups, and dairy alternatives (such as flax milk and almond milk)	• Red meat • Organ meat • Fried foods • Fries and potato chips • Mayonnaise • Margarine and butter • Full fat dairy • Pastries and desserts with added sugars • Beverages with added sugars

***A diet of 1800 kcal with normal carbohydrate. High protein moderate fat was advised**

Table 2: Biochemical parameters

PARAMETERS	VALUE OF THE TIME OF ADMISSION	VALUE AT THE TIME OF DISCHARGE	NORMAL VALUE
Hb	10.1	14	12-15
Na+	129	138	135-145
K+	3.2	3.8	3.5-5

Table 3: Dietary management with time

DATE	DIET RECOMMENDED
24/1/21-01/2/2021	NPO+RTA
02/2/21-03/2/21	Orally liquid diet
04/2/21-20/1/21	Soft diet

Table 4: Sample menu during discharge

MEAL	MENU
EARLY MORNING (7am)	ORS/ Coconut water/ carrot juice/beet-root juice
BREAKFAST(9am)	Roti(2-3 pc), santula(1 cup)/upma/ mandiajau/ dalia/ chakuli
MID-MORNING (11am)	Butter milk/ Coconut water/ fruit juice
LUNCH (1pm)	Soft Rice(1 Cup)/ Roti- (3-4 pc),Dal/dalma(1 cup), vegetable curry(1 cup), curd(1/2 cup)/any bharta item, Small fish, egg, paneer curry, soyabean curry
SNACKS (5pm)	Sweet corn/veg soup/halwa/semiakheeri/rice kheeri
DINNER (8PM)	Roti(2-3 pc), Milk(1 cup), Santula/mix veggie fry/ dahlia porridge/oats porridge/saago porridge

DISCUSSION

Nutrition management is of head significance in patients with AP. Various RCTs and meta-analyses have been directed to assess different parts of enteral taking care of, including season of inception (early versus late), **[12]** course of conveyance (NG versus NJ),**[13]** and the kind of diet or equation controlled **[14]**. This remaining parts a huge and dynamic field of study

Despite the fact that reviews assessing composition of the ideal eating routine in pancreatitis are restricted, accomplishment with early taking care of has been seen with various weight control plans, including normal-fat, low-fat, and delicate eating regimens with strong or fluid consistency **[15]**. For patients who endure oral admission, RCTs have shown no contrast between beginning patients on clear fluids with plans to propel the eating regimen and beginning with a strong eating routine. Significantly, this may offer advantage of a diminished length of hospitalization **[16]**. With regard to tube feeding for those patients who do not tolerate oral feeding, though further studies are needed, current rules suggest continuous feeds as the preferred approach over cyclic or bolus feeds. The optimal formula for tube feeding remains unclear because of limited data. In any case, a recent report from Japan proposes there is no clinical advantage to utilizing natural recipes when contrasted and semi-elemental and polymeric definitions **[17]**.

CONCLUSION

Acute necrotizing pancreatitis is a gastrointestinal disease with varying level of disease severity ranging from self-limiting mild to devastating and fatal severe. As of now, disease-specific treatment remains obscure and supportive care, including nutrition intervention, are crucial. Nutrition treatment not only helps prevent malnutrition, but it is also a key to reduce systemic inflammation, complications, and

death. Seriousness appraisal is the initial step to manage nourishment mediation. In gentle pancreatitis, patients are by and large ready to start strong oral eating routine and don't need particular sustenance care. In tolerably serious or extreme pancreatitis, gut ought to be considered as a significant organ, and early EN ought to be given to keep up gut work and accomplish positive clinical results. Gastric and jejunal feeding are equally effective in severe pancreatitis. Be that as it may, further investigations are as yet required in this to get a concrete nutritional management.

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