Summary & Conclusion

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Nutritional requirements vary greatly from health to disease. Four feeding methods are available: oral feeding, tube feeding, gastrostomy and jajunostmy feeding and total nasodudenal and nasojejunal The last three methods in addition to nasodudenal and nasojejunal feedings are used for high risk newborn.

In fever and infection, the caloric requirements may be increased to 50% ,protein intake to 2gm/kg body weight, a liberal use of carbohydrates is important in replenishing glycogen stores. Fluid intake must be liberal to compensate for losses. Vitamins are needed in larger doses proportionate to the increase in calories . Small quantities of food at intervals of 2- 3 hours will permit adequate nutrition without overtaxing the digestive system at any time.

In hiatus hernia, dietary measures consist of small frequent feeds with proping up the child during and for an hour after feeding in mild cases. Positional therapy should be continued all the day in severe cases.

In pyloric stenosis, frequent feeds thickened with cereals are given. The child should be put in semi-upright position for an hour or so after feeding.

In constipation, high fibre diets as vegetables, fruits, cereals and bran are essential as they increase the faecal bulk, soften the stool and stimulate peristalsis.

In diarrhea, feeding should be continued in both breast and artificiallyfed infants in order to breake the vicious cycle of fluid electrolyte malnutrition- protein energy malnutrition. If intravenous fluids are used the patient should receive nothing by mouth.

In coeliac disease, the regimen of gluten free diet must be lifelong. In cystic fibrosis, small frequent meals fortified with pancreatic enzymes, rich in protein and poor in fat are usually

better tolerated Water soluble preparation of vitamin ADEK (Abidec) are usually added.

In protein loosing enteropathy, hypoallergic and high protein diet should be prescribed in addition to replacement of iron, copper, calcium and lipid losses.

In glucose galactose intolerance, fructose is the only sugar to be introduced. In sucrose intolerance, sucrose free diet must be planned. In lactose intolerance, lactose free diet should be given. In all disaccharides malabsorption, starch, sucrose and lactose free regimen should be prescibed. If all monosaccharides intolerance is present, parenteral feeding should be instituted.

In ulcerative colitis and regional enteritis, liberal amounts of high quality protein 2-3 gm per kilogram body weight with low residue diet should be prescribed .

In liver cirrhosis, protein intake should be high enough to maintain nitrogen equilibrium but low enough to prevent hepatic coma. Approximately 35 - 50 gm/ day are needed. Potassium supplements are sometimes needed to correct deficiency from nausea, vomiting, diarrhea or reduced intake. Sodium restrıcrtion is prescribed in presence of oedema and ascites. Low fibre diet is necessary when there is danger of haemorrhage from oesophageal varices.

In hepatitis, foods should be liquid to soft of sufficient calories. A liberal intake of carbohydrate and fat as tolerated is required. proteins are given in 1 gm/kg body weight daily.

In hepatic coma reduction of protein intake is essential in acute cases. Later on, proteins are given gradually while monitoring the level of blood ammonia. About 1500-2000 Kcal in the from of carbohydrates are needed to prevent tissue breakdown.

In protein calorie malnutrition, the essence of therapy is to provide sufficient protein, calorie, vitamins, and minerals to bring positive nitrogen balance and improve lean body mass as soon as possible.

In food allergy, treatment requires elimination of the offending allergin from the diet.

In congenital heart disease and congestive heart failure, a small frequent feeds of high energy and sodium free diet as caloreen and adequate supply of vitamins are needed. Vitamin K is given when prothrombin time is prolonged, proteins should be given up to 5 gm/Kg body weight/ day.

Hypertension is often lowered with weight loss in the obese patients. sodium restriction is also effective in lowering the blood pressure

In respiratory infection, good diet helps the patient to overcome infections. In bronchial asthma, the detection of a food allergin and its subsequent exclusion from diet may be important factor in the treatment of asthma.

In acute glomerulonephritis, energy should be increased 25% above normal. Protein intake is reduced only if there is uraemia. Fluids are adjusted according to urine output. Sodium salt is restricted whenever, oedema, hypertention or oliguria are present.

In nephrotic syndrome, high protein intake should be supplied if serum albumin 2 gm/ 100 ml or less provided that blood urea does not exceed 100 mg/ 100ml. Sodium restriction is prescribed in the presence of oedema.

In chronic renal failure, proteins are supplied in a dose of 35- 40 gm in severe cases and 1- 1.5gm of high bilogical value protein /Kg body weight in those on dialysis. Sodium is restricted in the presence of oedema, hypertention or excessive weight gain. phosphate intake must be restricted to less than 500 mg daily in renal osteodystrophy. Calcium supplements, 0.5 gm for younger children and 1 gm for older children are needed. Supplements of B complex vitamins, ascorbic acid and trace elements are required especially in those on regular dialysis.

In Grave's disease, ample energy intake is necessary to protect body tissue and to prevent weight loss. In tatany high calcium low

phosphate diet is recommended. Vitamin D supplement is advised to enhance the absorption of calcium. In Chushing syndrome a high prntein diet must be given to correct negative nitrogen balance. In Addison's disease, low blood sugar necessitates small frequent high protein, low carbohydrate meals.

In diabetes mellitus, approximately 100 gm charbohydrate is required at I year of age increasing by 10 gm each year to a maximum of 200 to 400 gm dialy in adolesscence. High protein diet is recommended to suffice the energy need of the child, fats are restricted to prevent obesity.

In phenylketonuria, a restricted phenylalanine diet(Lofenalac) is the mainstay of therapy. In Maple syrup urine disease, a diet restricted in leucine, isoleucine and valine has been given with good results. In homocystinuria low methionine diet with adequate cystine and vitamin B6 have been used with success. In galactosaemia, early introduction of non milk formula is the essential theraputic procedure. In Fructosaemia, the condition is controlled by a diet free of fructose and its sources. In tyrosinaemia, a hydrolysate low in phenylalanine and tyrosine is used with small amounts of milk to provide these amino acids. In Wilson's disease, patients are usually advised to avoid foods that are excessively high in copper.

In cerebral palsy, concentrated foods with maximum protein and calorie should emphasized to keep the volume to a minimum. Vitamin and mineral suppiements are usually required. In athetoids, feeding is time consuming and emphasis should be placed upon concentrated foods of high caloric, high protein intake. In spastics, marked restriction of caloric intake withoutjeopardizing the intake of protein, minerals and vitamins. In mental retardation, to obtain adequate food intake for growth may require frequent small feeds and certainly an abundance of patience. In epilepsy, a normal diet for the individuals age and activity are prescribed. ketogenic diet may be prescribed in minor motor seizures and petit mal epilepsy with success.

In preoperative period, a recommended intake of protein to 100 gm or more, carbohydrates to 300 gm or more, minerals:calcium Zinc and iron,

and vitamins are given. In postoperative period, patients are given 35 - 45 Kilocalories per kg of ideal weight. Proteins are given increased by 10 - 25 / . Vitamins espcially vitamin C , A and K are needed. Minerals particularly calcium and zinc are required.