Infant feeding problems in the new born infant

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Breast-feeding has advantages in terms of psychosocial aspects, maternal considerations and infant factors. However; many problems may interfere with normal breast-feeding. These problems are either related to the mother or related to the infant. Problems related to the mother include, the obstetric complications (caesarean section, toxemia, venous thrombosis and pulmonary embolism), maternal infections (urinary tract infections, group B.B. haemolytic streptococcal infections, tuberculosis, leprosy, listeriosis, bacterial diarrhea, rubella, herpes virus, mumps, hepatitis B, toxaplasmosis, parasites as giardia), maternal problems (diabetes mellitus, thyroid disease, cystic fibrosis, malignancy, smoking, renal transplantation). Other problems related to the mother are breast and nipple diseases, and the drugs and pollutants secreted in the human milk.As regard caesarean section, if the infant is a full-term and has not depressed by maternal medications, he should do well. Pain medication used is best given immediately -after breast-feeding to permit the level to peak before the next feeding. Short acting should be used where the adult elimi-nate quickly and the newborn is able to excrete also. In case of toxemia, the decision to breast-feed depends on infant conditions; small for gestational age or premature infant require special or intensive care. If the infant is full-term and well, breast-feeding is initiated when toxemia precautio s are discontinued and the mother’s phenobarbital intake has been tapered off to about 180 mg/day or less. Breast-feeding in case of venous thrombosis and pulmonary embolism is not a problem because heparin does not appear in breast milk, also warfarin is secreted in a small amount and is considered -safe. Maternal infections are considered to be major problem in case of breast feeding. A mother with T.B. infection can breast feed her infant while taking treatment. Both infant and mother should receive INH, it would be a matter of assuring that the accumulation in the infant is not excessive because INH does not -pass into the breast milk. Cytomegalovirus infection is a contraindication to breast feeding because it is secreted in breast milk, however; some feel that CMV infection is not a contraindication to breast-feeding because the risk of infection is small compared to t e benefits obtained by breast feedinf.A mot er with positive syphilis serum reaction, should be treated immediately and the infant should be isolated fromhis mother. The possibility that hepatitis B virus is present in breast milk is a controversial poibt; but it is beyound doubt that the virus may be ingested through blood or serum exuding from cracked nipples, which is a common occurence, and it was therefore suggested that breast-feeding of infants born to hepatitis B surface antigen positive mothers should be avoided. However; passive-active immunization

allows these infants to enjoy breastfeeding, the nutritional, immunological, and psychological advantages of which are well known.Giard a have been reported to appear in mother’s milk, and the parasite has been transmitted via this route. The inter-rel tionships of the parasite and the breastfed host continue to be studied. Mate nal hypothyroidism treatment is not a contraindication to breast-feeding. Also, hyperthyroidism is not a contraindic tion to breast-feeding, because minmal amount ofpropylthiouracil (PTU) and methimazole (tapazole) reach the milk. With careful follow up of the infant with 74 and TSH measurements, he can enjoy breast feeding. Mothers with pulmonary and pancreatic disease of cystic fibrosis can breastfeed and their infants do well. Milk samples should be periodically tested for sodium and chloride A diabetic mother should be offered the same opportunity to breast-feed that is offered to all patients unless her disease has so incapacitated her that any -stress is out of the question. Infants of diabetics present a special problem in breast feeding, because they are often premature, frequently have respiratory distress, hyperbilirubinemia, hypoglycemia, hypocaleemia, and may be poor feeders at first. Intravenous glucose should be given 8-10 mg/kg/min. A 10% solution of calcium gluconate, 1 ml/kg every 8 hours, or a 50% solution of magnesium sulphate 0.1 to 0.25 ml/kg i.m. may be given in cases of neuromuscular excitability, tremors and fits.Mothers who smoke usually discontinue breastfeeding by 6 weeks. Nicotine has been shown to interfere with the let-down reflex, but it does not appear to disrupt lactation once it has been initiated. Breast engorgement should not be a problem if the infant is allowed to nurse frequently. When engement does occur, the infant may have trouble grasping the nipple and areola. Hand-expressing milk or using a small hand pump before the infant is put to the breast may soften the breast and reduce sopme fullness. As regard breast cancer; in view of the complete absence of any studies showing a relationship between breast-feeding and increased risk of breast cancer, the presence of virus-like particles in breast milk should not be a contraindication to breastfeeding.Drugs may gain acess to breast milk by simple diffusion if they are water soluble with a molecular weight of less than 200. The importance of drugs in milk depends upon the amount received by the newborn and the harm which might be produced by this dose. Pollutants are not present in sufficient quantities in breast milk to be of concern. Of greatest concern among such chemicals are. The organohalides (such as polychlorinated biphenyls (PCB’s), and Dichloro-diphenyl-trichlorethane(DDT). Lactating women are advised to eliminate eating fish from contaminated water, avoid quick weight loss, and to test breast milk for PCB content. Also they should avoid exposure to DDT.Feeding problems related to the infant are classified according to birth-weight infant problems (premature and small for gestational age), postmature infant (fetal distress and hypoxia) and the problems with full-term infant.Low-birth-weight infant needs special care, as it may be premature or small for gestational age. Nutritional needs of LBW infant differ from that of normal full-term infant as regard caloric requirements, protein, amount and type, fat requirements, carbohydrate, minerals and vitamins. Whether breast milk of mothers of premature infant is sufficient or not for feeding premature was discussed, it is safe to feed human milk to human premature infants with the possible exception of fresh human milk from a donor other than the mother. Feeding of LBW infant, orally, or parenterally depends on

birth weight, ability or unability to suck, and the presence or absence of respiratory distress syndrome. The most common problems encountered with artificial feeding in the newborn infant are; infections, neonatal tetany, hyper osmolarity and hypernatremia, and cow's milk allergy. Proper sterilization of the bottles used will decrease much more of the infections occuring due to improper cleaning of bottles. Infections commonly recorded to be more in artificially-fed babies are, gastroenterities, respiratory tract infections, otitis media and thrush.Convulsions occuring between the third day and tenth day of life in mature infants fed cow's milk preparations are due to the late variety of hypocalcemia of the newborn. The most biochemical findings are low serum calcium and magnesium and high phosphate, either singly or more commonly in combinationCow's milk contains an excess of sodium, chloride and protein resulting in a high osmolal load. Prevention of hypernatremia depends on education of the public as regard the reconstitution of milk feeds according to the manfacturers instructions. Cow's milk allergy is mainly due to beta-lactglobulirt; also casein another agent responsible for allergy. The presenting symptoms in babies with cow's milk allergy are recurrent diarrhea, repeated vomiting, persistent colic, eczema, recurrent rhinorrhea, recurrent bronchitis and asthma. A soyaformula or a hypoallergic formula, such as Nutramigen or pregestimil, should be offered. Critically ill newborn with a functioning gastrointestinal tract and unwilling or unable (impaired sucking or swallowing) to feed orally, several alternatives are available for nutritional support. Tube feeding has long been an approved method of feeding sick newborn. Problems with this technique include difficulty in placing the tube, displacement, diarrhea, regurgitation and risk of aspiration. Metabolic complications with tube feeding are common; the most important of which are hypoglycemia, hyperglycemia, hyperor hypo-natremia, hyper-or hypo-kalemia, and hyper-pr hypo-calcemia. Gastrostomy and Jejunostomy feeding should be considered in those critically ill newborn who will require prolonged tube feeding, have undesirable side effects of tube feeding, or have an upper gastrointestinal tract anatomical abnormality. Problems with gastrostomy and jejunostomy feeding are gastric distension, infections, peritonitis, and stomal and intraperitoneal leakage.Feeding of critically ill newborn in whome use of the gastrointestinal tract is precluded by disease or surgery is now possible by intravenous nutrition. Parenteral infusion may be via an umbilical artery catheter, peripheral vein or central vein. A;lthough the technique of intravenous aliment-ation can be life-saving in many circumstances. Its use in newborn infant is not without problems. Problems with parenteral nutrition fall into 3 categories; problems related to the catheter, microbiological problems and metabolic problems. Catheter-related complications can be minimized by the use of rubber catheters, which may be more difficult to insert and secure than the polyvinyl or polyethylene catheters, which can become stiff after being in place for a prolonged period of time. The use of the juglar vein rather than the femoral or umbilical veins minimizes the venous complications. Infection can be prevented by strict aseptic technique during insertion and maintenance of the catheter. The catheter should be used only for the infusion of the parenteral solutions and not blood, antibiotics, or aspiration of blood samples. Metabolic complications can be minimized or prevented by proper and careful biochemical monitoring.