Tragedies of Infant Formula and Sub-optimal Breastfeeding

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Child Nutrition and IYCF sub-Committee
BANGLADESH PAEDIATRIC ASSOCIATION
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CHILD NUTRITION AND IYCF SUB-COMMITTEE OF BANGLADESH PAEDIATRIC ASSOCIATION (BPA)

Foreword

The publication on '*Tragedies of Infant Formula and sub-optimal breast feeding'* by the Bangladesh Paediatric Association reminds us how unnecessarily children are still dying because of improper breastfeeding and complementary feeding practices. In the last 3 decades Paediatricians in the country have worked hard with the Ministry of Health and Family Welfare, UN agencies and other stake holders to curb the violation of the international and the national breast milk substitute (BMS) code. Unfortunately the milk companies unabatedly ignored the essence of the code which is aimed to save children's lives and instead lured the professionals and policy makers to violate the code. As a result mothers have opted for formula feeding the consequences of which are illustrated in the tale of 27 unfortunate children in this booklet. Morality and justice dictate that this man-made plight of our children with severe acute malnutrition (SAM) be stopped.

I agree with the authors that the country now has knowledgeable and skilled human resources to scale up proper breastfeeding and complementary feeding practices. The Ministry of Health and Family Welfare (MOHFW) can, through the recently launched National Nutrition Services (NNS) develop mother support groups to help mothers to establish successful breastfeeding and complementary feeding. At the same time the new strong BMS law needs strict implementation with the collaboration of all stakeholders.

This publication should help not only Bangladesh but other countries which also plan to prevent SAM and other forms of malnutrition through programme implementation of correct Infant and Young Child Feeding (IYCF) practices.

Professor (Dr.) M R Khan
Paediatrician and National Professor

Foreword

I am pleased that Bangladesh Paediatric Association is publishing this important document on the Tragedies of Infant Formula and Sub-optimal breastfeeding. The booklet is authored by Paeditricians who are involved clinically in the management of children with severe acute malnutrition (SAM) and in the protection, promotion and support of Infant and Young Child Feeding (IYCF) Practices. The illustrated cases are the real life situation where due to wrong feeding practices, these unfortunate new born, infants and children have either died or became the victims of morbidities with various illnesses and poor quality of life. One of the causes of these SAM cases is the intake of dilute and contaminated infant formula which understandably happened as a result of aggressive marketing of breast milk substitutes by the milk companies in the country.

Obstetricians are primarily involved in the management of infant feeding sooner after the birth of a baby. Mothers should be counseled on proper breastfeeding practices. We should make sure that the new born is on breastfeeding within 1 hour of birth. This early initiation of breastfeeding will help the establishment of exclusive successful lactation.

I also strongly recommend that all Obstetricians and other medical professionals know and put into practice the new law titled 'The Breast Milk Substitutes, Infant Foods, Complementary Infant foods Manufactured commercially and the Accessories Related thereto (Regulation of Marketing) Act, 2013'.

And finally I urge the OGSB to join hands with the BPA in their advocacy work with the MOHFW to promote appropriate IYCF promotion on two important government public health platforms. The first is the postnatal visit within 24 hours of birth - now a part of the job description of every FWA and female HA - which research has shown can prevent faulty positioning and attachment climbing exponentially by 7 days of age. And the second is the EPI, where over 93% of mothers are bringing their babies to Health Assistants before 6 months of age and 80% at 16-18 months of age for immunization. These are both excellent opportunities to promote exclusive breastfeeding in infants less than 6 month of age and a minimum acceptable diet in 6-23 month old.

I wish a wider readership and effective application of this publication.

Professor (Dr.) Shahla Khatun
Obstetrician and Gynaecologist
National Professor

Comments

The evidence collected on effects of feeding breastmilk substitute and failure to promote, protect and support of breastfeeding appropriate complementary feeding is eye opening to all parents and health professionals of Bangladesh. This work by the Bangladesh Pediatric Association is highly commendable. This work by three members of both the BPA and the board of Trustees (BOT) of the BBF is highly commended. Children die 14 times more with formula feeding compared to exclusive breastfeeding. Bangladesh Breastfeeding Foundation shares the comments and reinforces the implementation of New BMS Law, 2013 of Bangladesh to minimize the use of Breastfeeding Substitute and save the children of Bangladesh as well as to ensure their healthy life.

Dr. S K Roy
Chairperson
Bangladesh Breastfeeding Foundation

Publisher's Note

The Bangladesh Paediatric Association (BPA) has, throughout its history, been intimately associated with the struggle for the promotion, protection and support of breastfeeding in this country. And thus the BPA, above all, feels the pain of that struggle as it confronts the latest infant and young child feeding (IYCF) figures from the 2012 Food Security and Nutrition Surveillance Project (FSNSP) report[1]. This comprehensive and nationally representative study shows that exclusive breastfeeding rate under six months of age has become stagnant at 45%, that 1st hour breastfeeding is also static at 48%, that prelacteal feeding continues in half our newborns, that infant formula feeding and bottlefeeding are both on the rise and that just over a third of 6-23 month old babies are fed a minimum acceptable diet[2] (MAD). Is it, thus, any wonder that the same report tells us that under 5 wasting (WHZ<-2) is 11%, stunting (HAZ<-2) 38% and underweight (WAZ<-2) 34% - intolerable figures for a country congratulating itself on its rapid progress to middle income country status.

This booklet is therefore a timely reminder from BPA's Child Nutrition and IYCF Sub-committee that the fight for establishing good IYCF practices is not over. The National Nutrition Service of the MOHFW has started an extensive programme of training front line government health workers to promote and support mothers in their IYCF practices. Where these workers will actually access the 8 million or so mothers with under two children to counsel them is, however, unclear.

There have been suggestions from a number of quarters that the EPI programme, accessed by over 93% of mothers before 6 months and by about 80% at 16-18 months, is the ideal opportunity to support mothers in their effort to follow recommended IYCF practices. The EPI is the government's flagship public health programme and there needs to be a new level of advocacy to policymakers and EPI managers to allow IYCF promotion to be grafted on to this most successful platform. The Executive Committee of the BPA is committed to this advocacy and we urge our members to persevere with dedication in the day-to-day struggle for IYCF, wherever they may be. This will mean that extra minute of counselling with the bottle feeding mother of an infant with diarrhoea on the ward round or appointing lactation nurses in our workplace would do justice to the vulnerable who have come to us for help.

The other role of the BPA in this struggle is our advocacy for the new BMS Code that has been strengthened in 2013 to provide a law, which will transform the regulation of marketing of these dangerous products in our country. The new law covers not only infant formula but also processed foods targeted to all young children under 5 and thus will prevent the terrible

exploitation of this vulnerable population by commercial food companies. The BPA's advocacy role for this Law will be important because the law now warns of serious consequences for all health professionals if they take gifts or any form of support for attending meetings or educational courses from the producers of these products. Our members need to be made aware of this new changed environment, especially with regard to meeting funding, so that we actively shun association with these companies.

Prof. Md. Ruhul Amin
President
Bangladesh Paediatric Association (BPA)

Prof. Mohammod Shahidullah
Secretary General
Bangladesh Paediatric Association (BPA)

1. Released in March 2014 by the Bangladesh Bureau of Statistics, Helen Keller International and the James P Grant School of Public Health of the BRAC Institute of Global Health.
2. A child between 6-23 months of age is said to have a minimum acceptable diet (MAD) when, in the previous 24 hours, in addition to breastmilk, they've been fed
   a. from at least four of WHO defined seven food groups (1. Eggs 2. Vitamin A rich fruit and vegetables 3. Legumes 4. Dairy 5. Other fruit and vegetables 6. Flesh foods and 7. Starches)
   a. at least twice a day for 6-8 month olds and at least three times a day for 9-23 month olds

Tragedies of Infant Formula and Sub-optimal Breastfeeding

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Preface

This small book focuses on the disastrous consequences of powder milk feeding mostly in the name of infant formula instead of breastfeeding. Detailed histories of illness of these children are not described but without exception these unfortunate children were fed dilute infant formula or other forms of powder milk and in a few cases dilute cow 's milk.

Search of literature shows that globally infant feeding practices had never been right. In particular since the 1860s cow's milk in powder form began to be produced in Germany. Henri Nestle produced powder milk in 1867. By 1890, 29 brands of powder milk were marketed in Europe. Instead of breastmilk, infants were fed water reconstituted whole powder milk in bottles. In England the infant mortality rate was around 200 per 1,000 live births at the beginning of the 20th century. The major contributing factors of this high infant mortality were very poor breastfeeding rates and improper feeding practices.

During the second world war in 1939 Cicely Williams, a British Pediatrician, gave a lecture at the Singapore Rotary club meeting where she said "If your lives were embittered as mine is, by seeing day after day this massacre of the innocents by unsuitable feeding, then I believe you would feel as I do that misguided propaganda on infant feeding should be punished as the most criminal form of sedition, and that those deaths should be regarded as murder." What Cicely Williams observed 70 years ago is still happening in Bangladesh today. About 200 children under 5 years of age are dying every day from malnutrition as an ultimate consequence of infant formula feeding instead of proper breastfeeding. This is most unfortunate during a time when knowledge, skill and resources are available to meet the recommendations of the universal Infant and Young Child Feeding (IYCF) practices. These recommendations are i) to initiate breastfeeding within one hour of birth; ii) to breastfeed exclusively for 6 months; iii) to begin home based complementary food from 6 months and iv) to continue breastfeeding for 2 years and beyond.

Basically two actions are required to successfully breastfeed the child. Firstly, the mother should be helped to initiate breastfeeding soon after the child is born. This should be done within one hour of birth. Secondly, no infant formula or any form of powder milk should be given to the newborn and infant. In this regard, we should adhere to the 2013 Bangladesh Breastmilk Substitute (BMS) law. Exclusive breastfeeding rates have increased from a stagnant 42% in the previous decade to 64% according to the 2011 Bangladesh Demographic Health Service data. This is very encouraging and there are indications that this should rise to over 90% very soon if current stakeholder commitments and efforts continue.

The cases described in this booklet have been arranged by age of the unfortunate children described. This will provide insight into the consequences of wrong feeding practices from the newborn to 3 years of age.

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Professor Syeda Afroza

Professor Shahida Akhter

Professor Shafi Ahmed

Dr. S K Roy

Dr. Wahida Khanam

Dr. Nazma Begum

Dr. Iffat Ara Shamsad

Dr. Aditi Sarker

Dr. Shonjoy

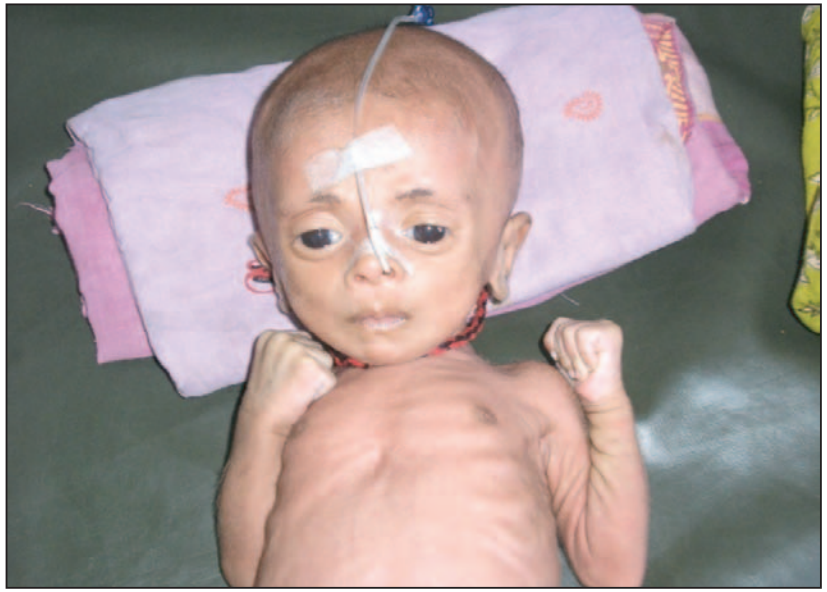
Dr. Shumon

Dr. Shehrin Kabir

Ms. Khurshid Jahan

Tale of 27 Unfortunate Malnourished Children

Case-1: The consequence of not breastfeeding at 1 month of age.



An one month male infant presented with failure to gain weight and diarrhoea. His father was a day laborer. The baby was bottle fed with powdered rice since birth. He was suffering from Severe Acute Malnutrition (SAM) with acute watery diarrhoea.

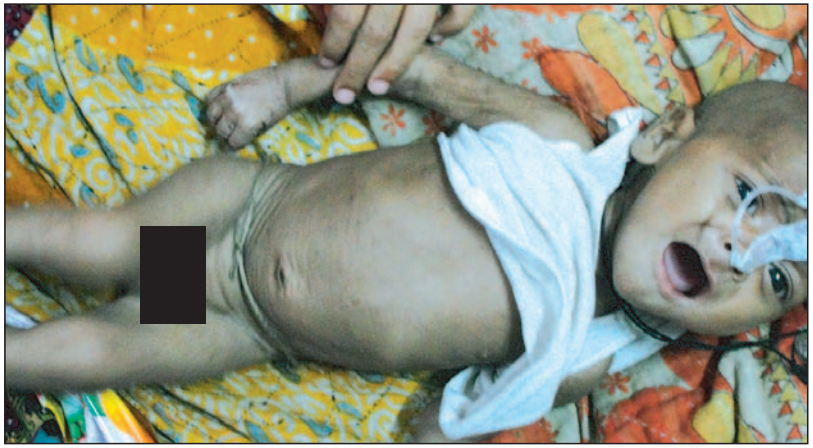
Case-2: Severe wasting from feeding with dilute formula.

A 1 month 19 day old boy, was delivered by LUCS at Khanpur sadar hospital, Narayanganj. Mother said that the baby did not get breast milk after her delivery so they introduced dilute infant formula since birth. The baby has signs of severe wasting.

Case-3: Tragic death of twins from severe acute malnutrition, pneumonia and sepsis.

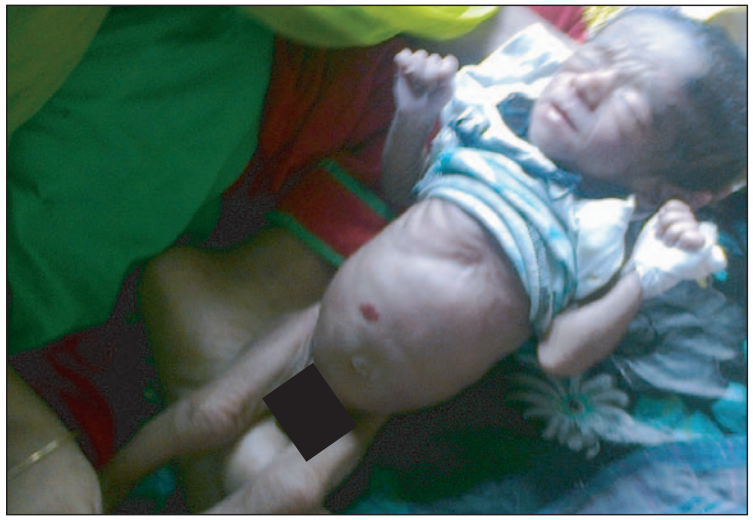
Twins with birth weight 800 and 650 g more than doubled to 1.7 kg by 3 months of age on exclusive breastfeeding. Then formula feeding was started and the babies died of pneumonia and sepsis.

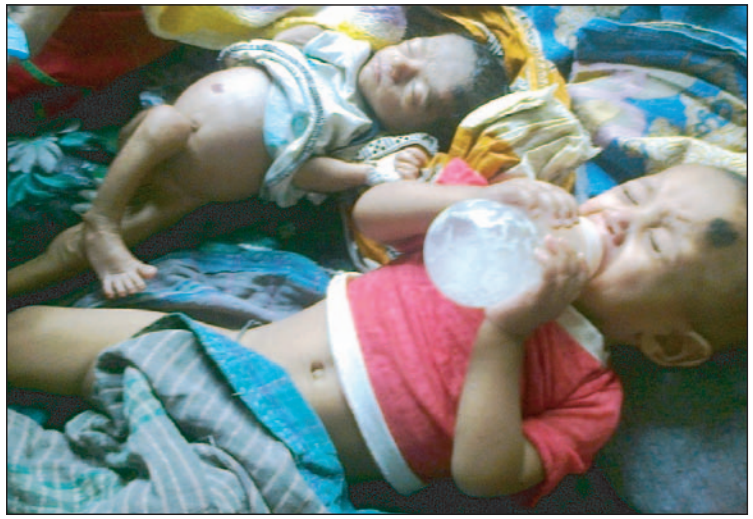
Case-4: What does the future hold for this child?



A 3 month old male child, weighing 2 kg presented with several episodes of loose motion & failure to thrive. Child was fed dilute formula milk along with breast milk upto 2 months. Then mother gave rice powder along with formula milk. Daily energy deficit was 150 Kcal. Mother was a house wife and father a rickshaw puller. Monthly income of the family was 5000 Taka. He was admitted into hospital and diagnosed as SAM with dermatoses, severe anaemia and acute watery diarrhoea.

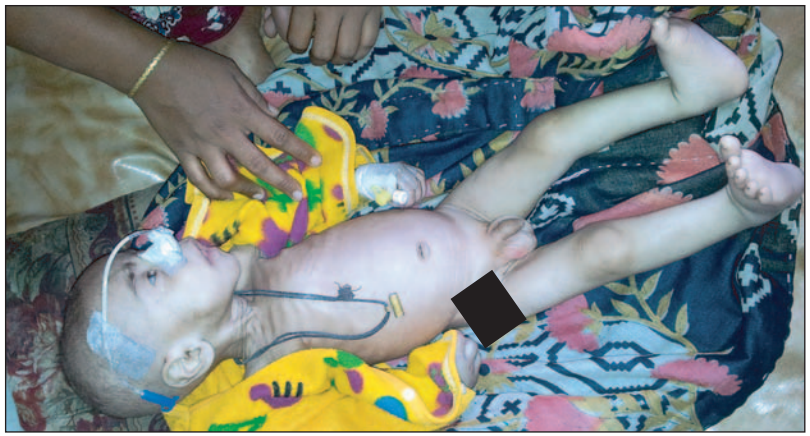
Case-5: Brothers with malnutrition from bottle feeding dilute powder milk.

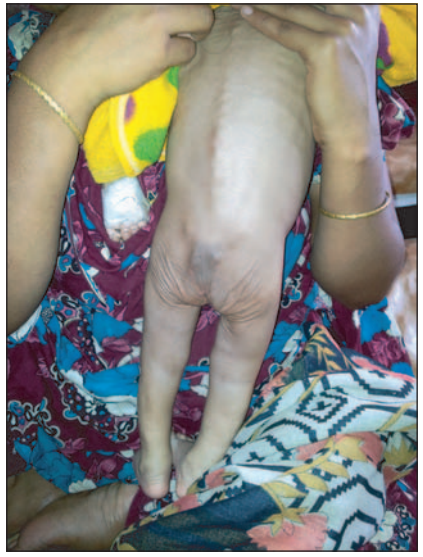




A 3 month old boy was admitted with SAM along with his 13 month old brother. Bottle feeding, dilute powder milk, no breast feeding, poor family, faulty feeding practices were the underlying cause of malnutrition in these siblings.

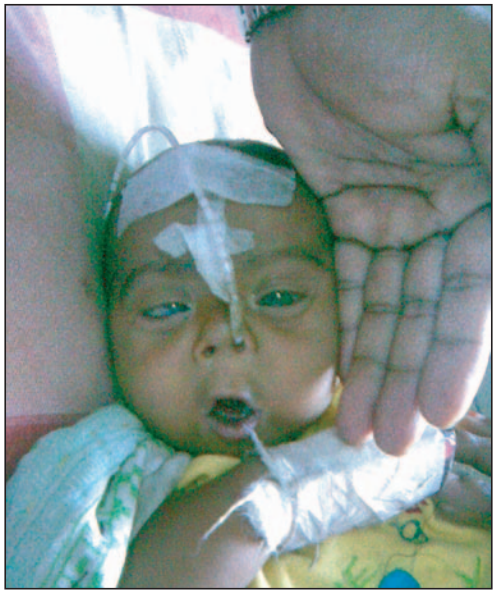
Case-6: Consequences of an infant whose breastfeeding was stopped and fed dilute infant formula.

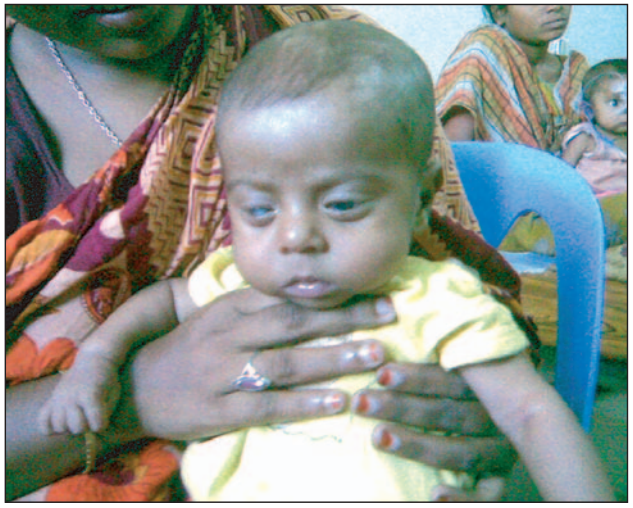




Case-6: A 4 month old boy weighing 4 kg was diagnosed as SAM with bronchopneumonia. Father was a day laborer, mother housewife. Monthly income 7000 taka. Baby was exclusively breastfed for 28 days only. Then dilute infant formula was given, breastfeeding discontinued. Baby was fighting for his life at Mitford Hospital at the time of reporting.

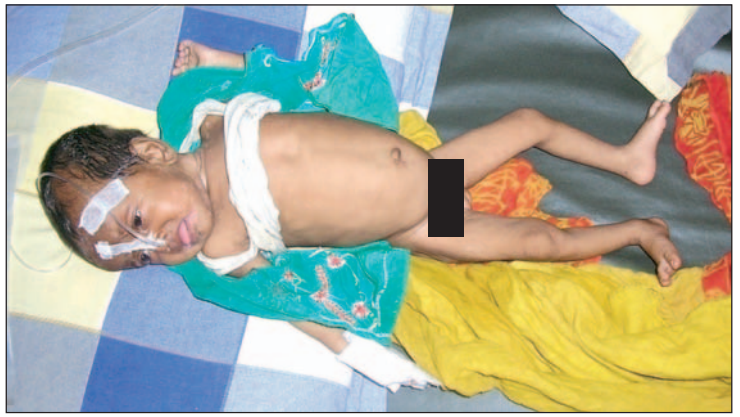
Case-7: Blindness in an infant at 4 months of age.

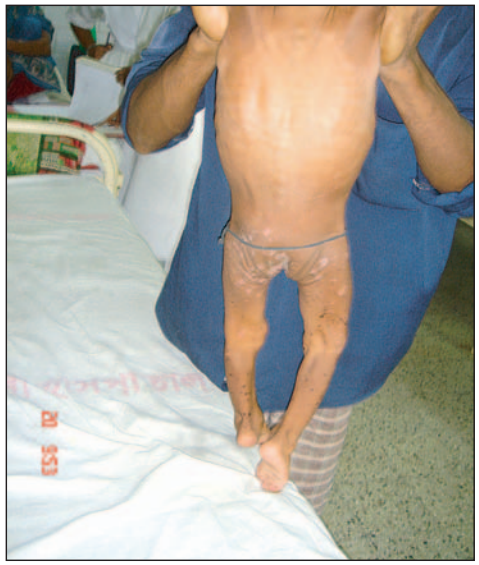




This infant was never breastfed. He was given rice gruel, dilute infant formula and cow's milk. Baby became blind by 4 months from xerophthalmia (Vitamin A deficiency).

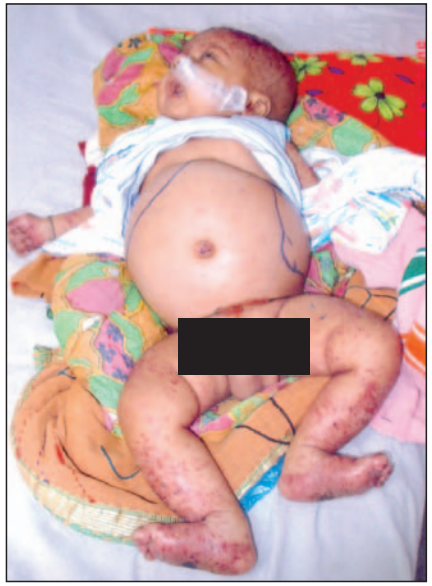
Case-8: This infant suffers malnutrition as he was bottle fed with powder milk.





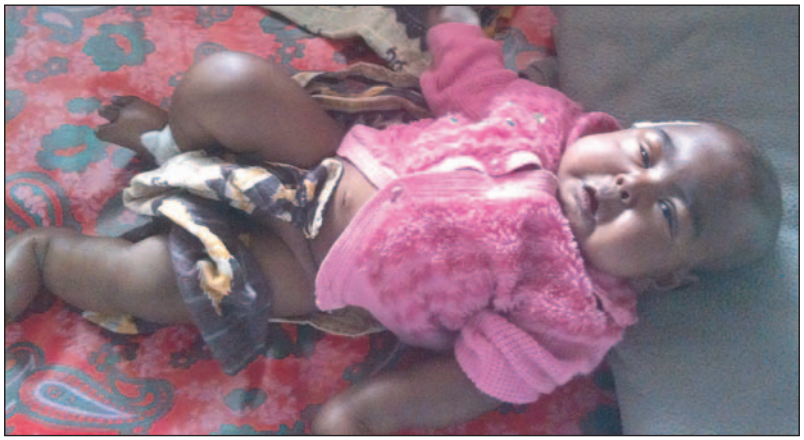
Case-8: This 4 months old girl is suffering from SAM. Father had left her after delivery as he wanted a boy. Mother started to work at someones house. Baby was cared for by her maternal grandmother. She was fed dilute infant formula in a bottle with a teat.

Case-9: Powder milk and bottle: infant killer.



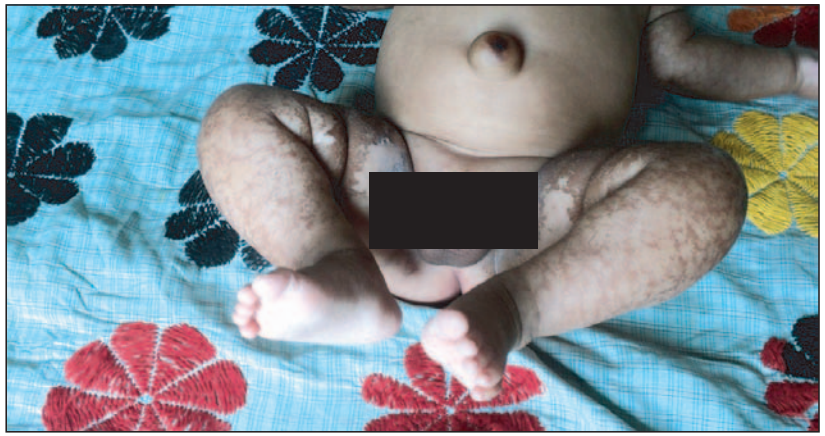
A 5 month old male infant weighing 4.5 kg was admitted with oedema, peeling of skin and reluctance to feed. Father was a day laborer. He was never exclusively breasfed and was fed with dilute infant formula in bottle. He was diagnosed as oedematous malnutrition with septicaemia. The baby died.

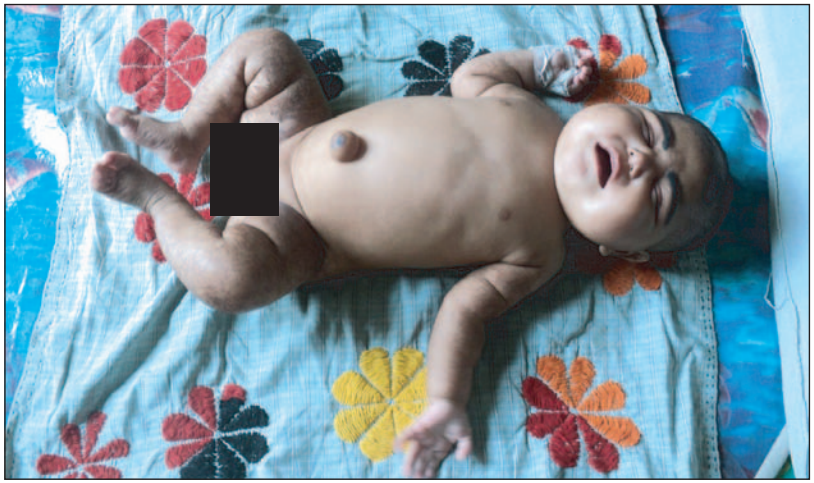
Case-10: What should we do with these killer powder milk and bottles?



A boy of 5 months weighing 3.8 kg was diagnosed as SAM (Oedematous Malnutrition) with bronchopneumonia. Father is a day laborer with monthly income of 3000 taka. Boy was never exclusively breastfed. He was fed with dilute formula in bottle. At the time of taking photograph, baby was receiving treatment in the hospital. See on the bed side locker, infant formula tin and the bottle that were brought by mother.

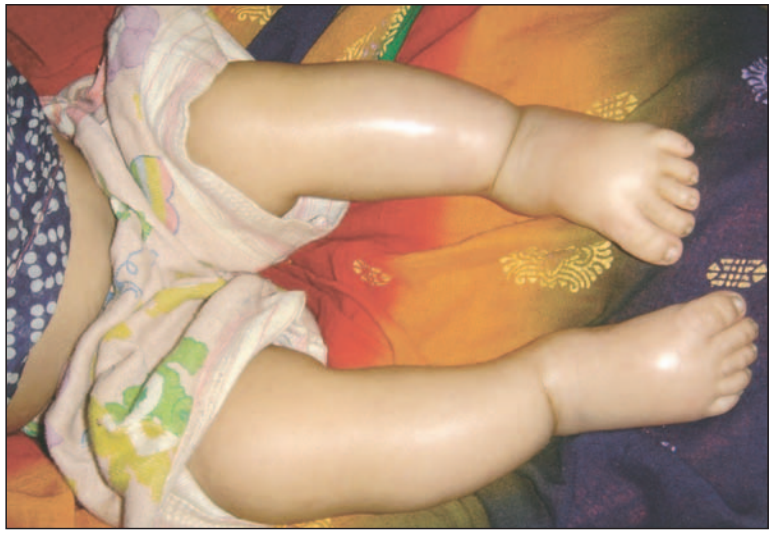
Case-11: Wrong feeding practice made the infant lifeless with malnutrition.

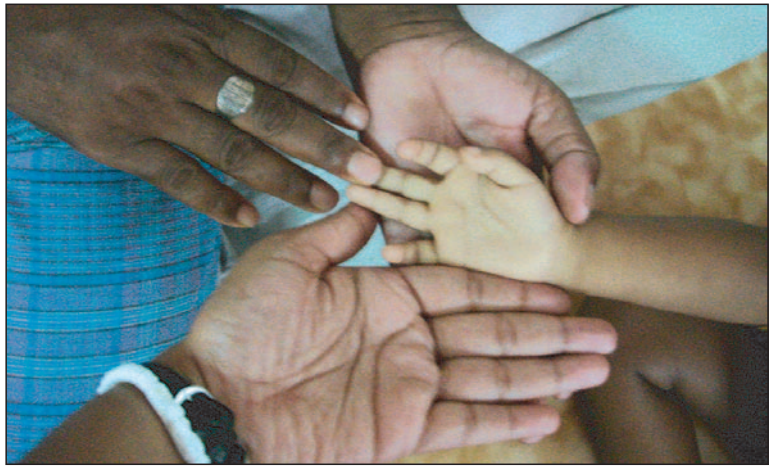




A 5 month old boy weighs 6.1 kg having puffy face, edema of both legs and dermatitis. He was exclusively breastfed for one and half months only, then rice powder with dilute cow's milk added. Mother is a day labourer, father left them when the mother was pregnant.

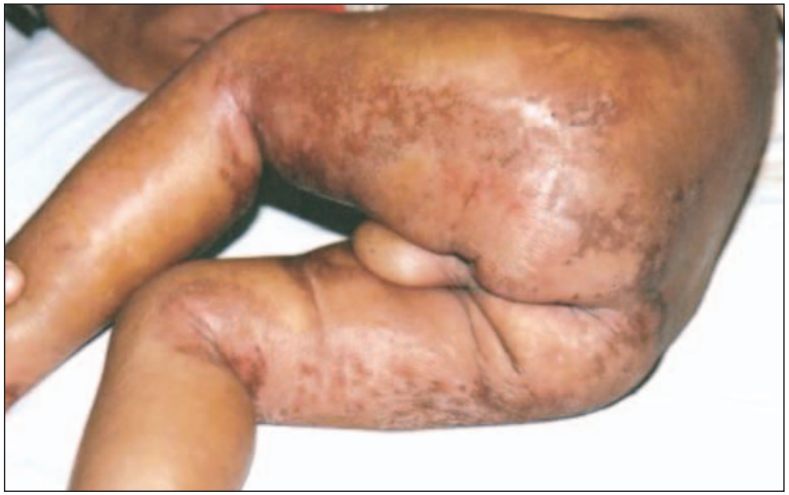
Case-12: SAM following dilute formula feeding.





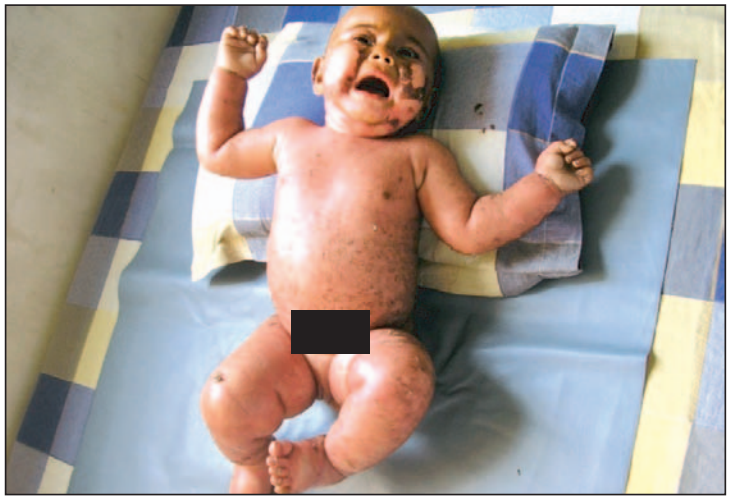
This girl of 6 months presented with oedema and progressive pallor. Father is unemployed. Mother is a garments worker. Baby was fed with dilute infant formula. She was admitted to Dhaka Medical College Hospital where she was diagnosed as SAM (oedematous malnutrition) with nutritional anemia (severe pallor) and bronchopneumonia.

Case-13: What a tragedy of a 7 month old with SAM!



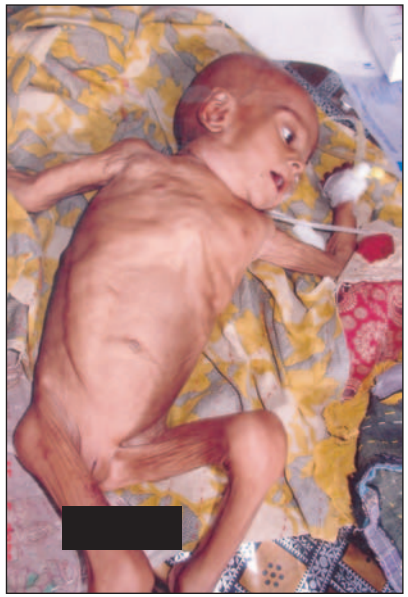
A 7 month old boy with oedematous malnutrition (Kwashiorkor). It was the result of feeding dilute infant formula.

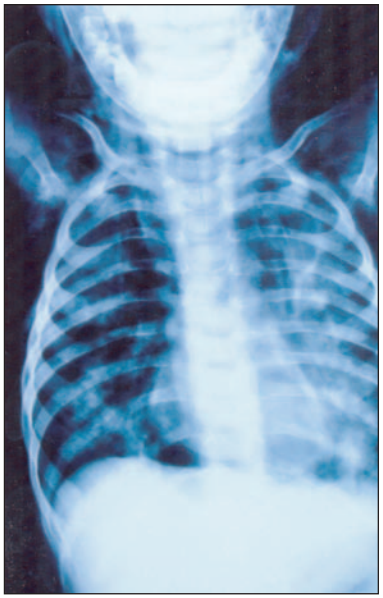
Case-14: Maid in a home lured to use infant formula as a result SAM in an infant.



A 8½ mo old female infant weighing 6.7 kg presented with swelling of whole body. Mother was a maid in a house where the landlady feeds her 3 month old baby with infant formula. Inspired with that, this mother started formula. She fed the baby dilute milk. Baby was in a private hospital for 12 days and the bill was 3650 taka. Family was able to pay 1400 taka only.

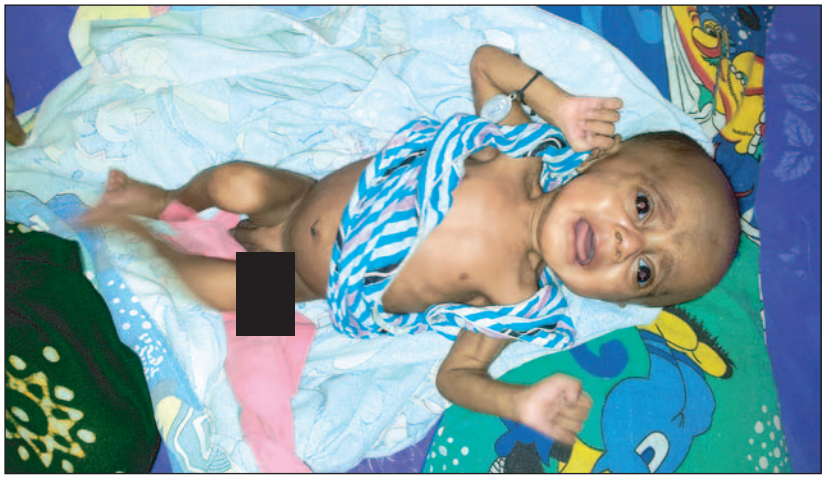
Case-15: Another infant dies from SAM.

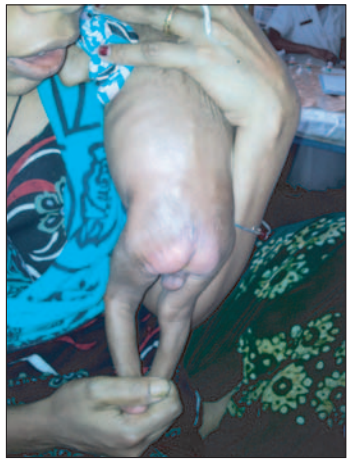




A 10 month old girl weighing 4.5 kg presented with cough and failure to gain weight. Father was a rickshaw puller. She was exclusively breastfed for 1 month. Then dilute infant formula was given. She was diagnosed as Severe Acute Malnutrition (SAM) with bronchopneumonia. After admission she suddenly developed subcutaneous emphysema (arrow) & severe respiratory distress. X ray showed pneumatocoele and pneumo-mediastinum (arrow). The child died.

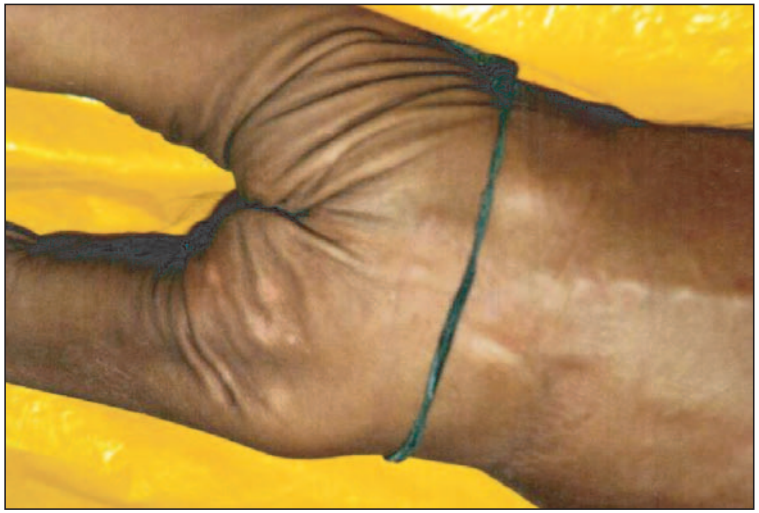
Case-16: No powder milk, I need home cooked complementary food.





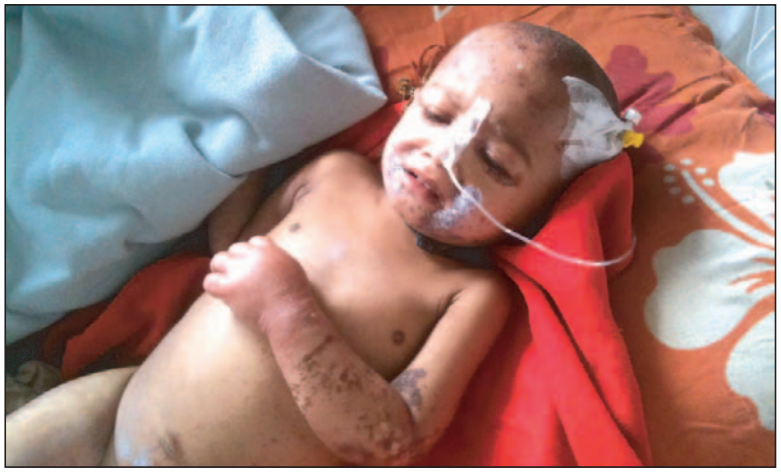
A boy of 10 months weighing 3.75 kg presented with progressive loss of weight, fever and cough. Father was a day laborer, monthly income 4000 taka. Baby was exclusively breastfed for 6 months. Then diluted infant formula in 1:3 dilution was given and was not given home based complementary food. He was diagnosed as Severe Acute Malnutrition (SAM) with broncho-pneumonia. Baby was receiving treatment in hospital at the time of reporting.

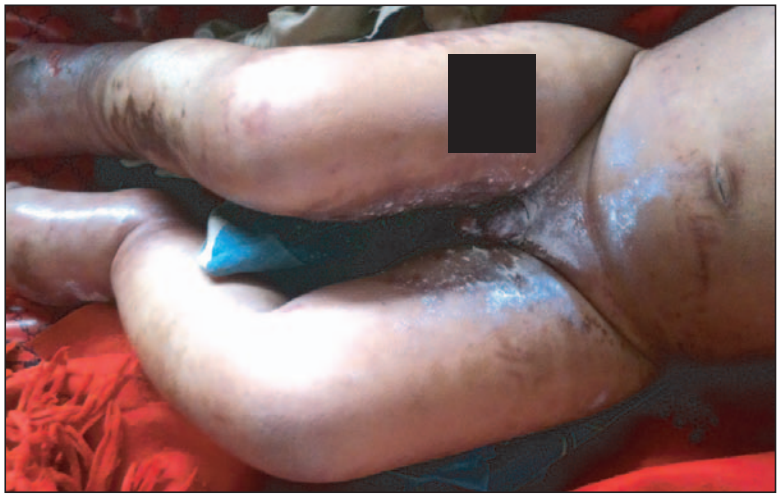
Case-17: Total injustice from improper feeding.



An 11 month old boy, weight 4.9kg, length 63cm, MUAC 115 mm. Mother initiated breastfeeding after birth, he was exclusively breastfed for only 1 month and then dilute infant formula milk added. Complementary feeding started with occasional rice and suzi, no animal foods were given. He was diagnosed as Severe Acute Malnutrition with severe anemia.

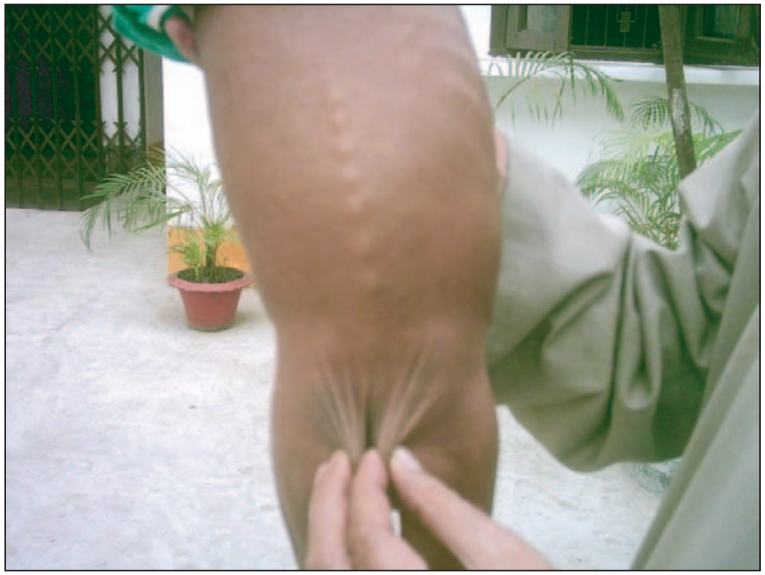
Case-18: Why does this child have SAM?





A boy of 1 year weighing 5 kg presented with loose motion and swelling of whole body with peeling of skin. Mother was a Maid and father a rickshaw puller. He was fed with dilute formula since birth. Complementary feeding was not given. He was diagnosed as SAM (Oedematous Malnutrition) with acute watery Diarrhoea. Boy recovered with treatment at hospital.

Case-19: Powder milk fed with a soft drink bottle.

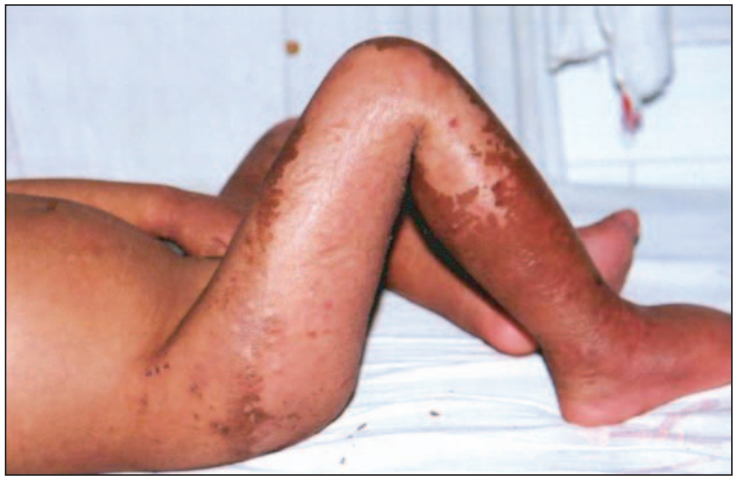


A 12 month old girl weighs 4 kg. She was fed formula and dilute cow's milk. Mother fed the baby with an empty soft drink bottle. The infant developed Severe Acute Malnutrition and several episodes of diarrhoea.

Case-20: Swollen cheeks and malnutrition.

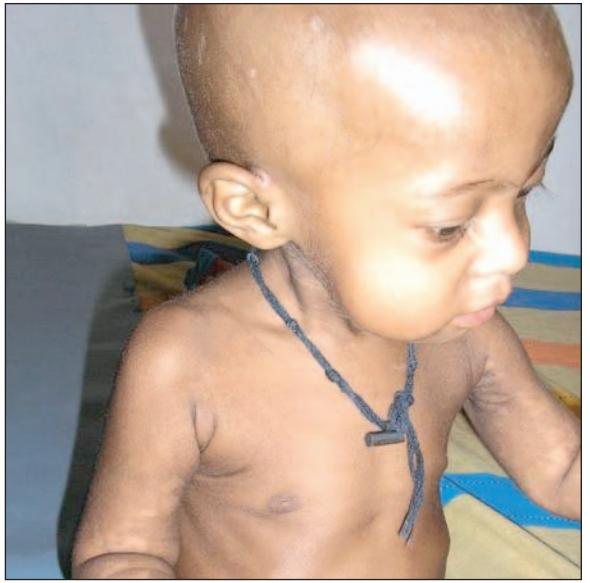
1 year old with severe malnutrition with swollen cheeks . Baby is fed dilute infant formula with occasional plain rice.

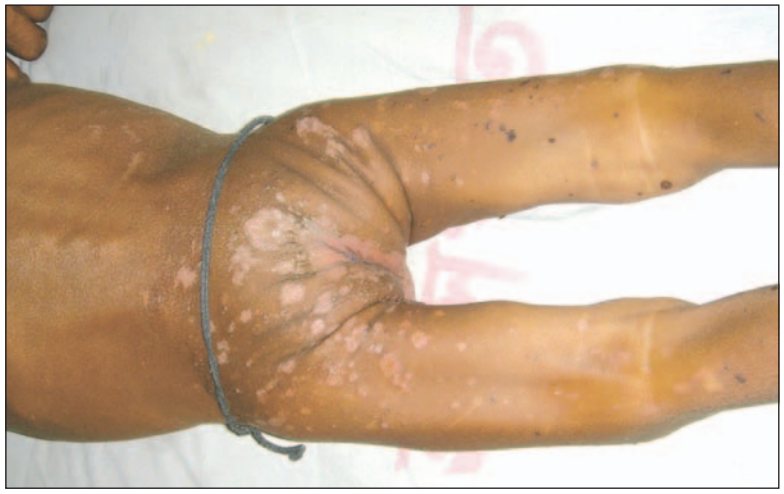
Case-21: SAM from chronic insufficient food.



A 16 month old female child weighing 8.2 kg presented with swelling of whole body. She was diagnosed as SAM (oedematous malnutrition) with bronchopneumonia. Skin changes of kwashiorkor is obvious. Her father was unemployed and mother was a primary school teacher. Upto the age of 40 days, she was on breastfeeding, then dilute milk formula was added. She was given 400 g pack of milk powder in the first month and then 2 packs of 400 g in next month. Full cream milk was started in dilute form. Since 6 months, she was on mashed rice only and occasional khichuri (rice and pulse only).

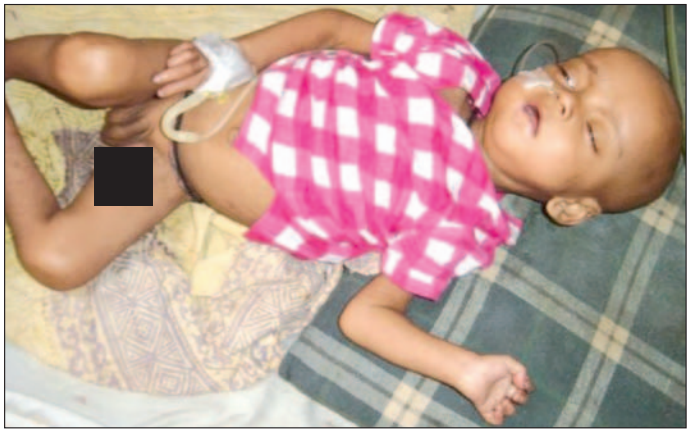
Case-22: A helpless child with SAM.

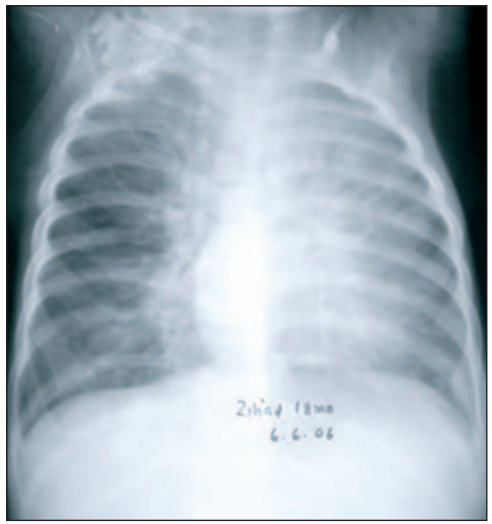




A 16 month old helpless boy with severe wasting and skin ulceration. Faulty feeding and dilute powder milk feeding were the causes of malnutrition.

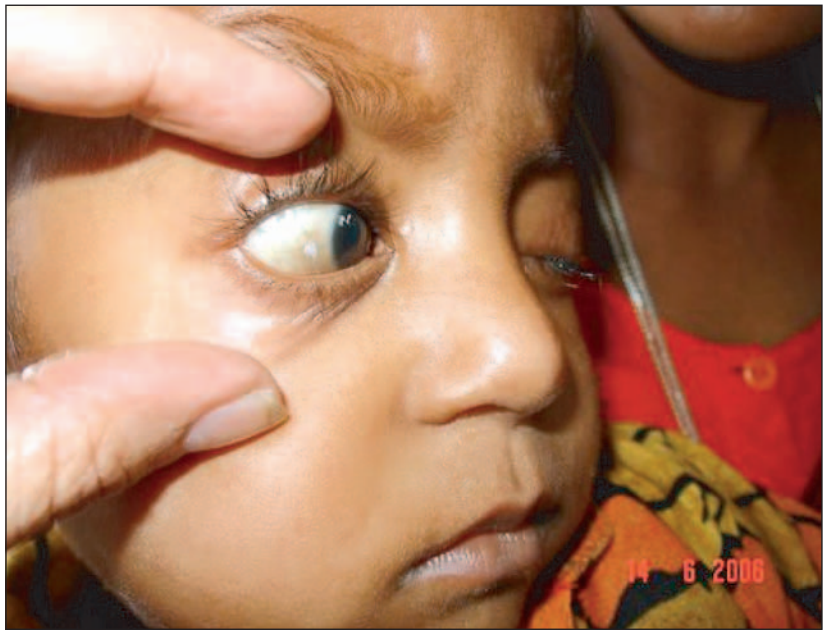
Case-23: 18 month old child weighting 3.5 kg!





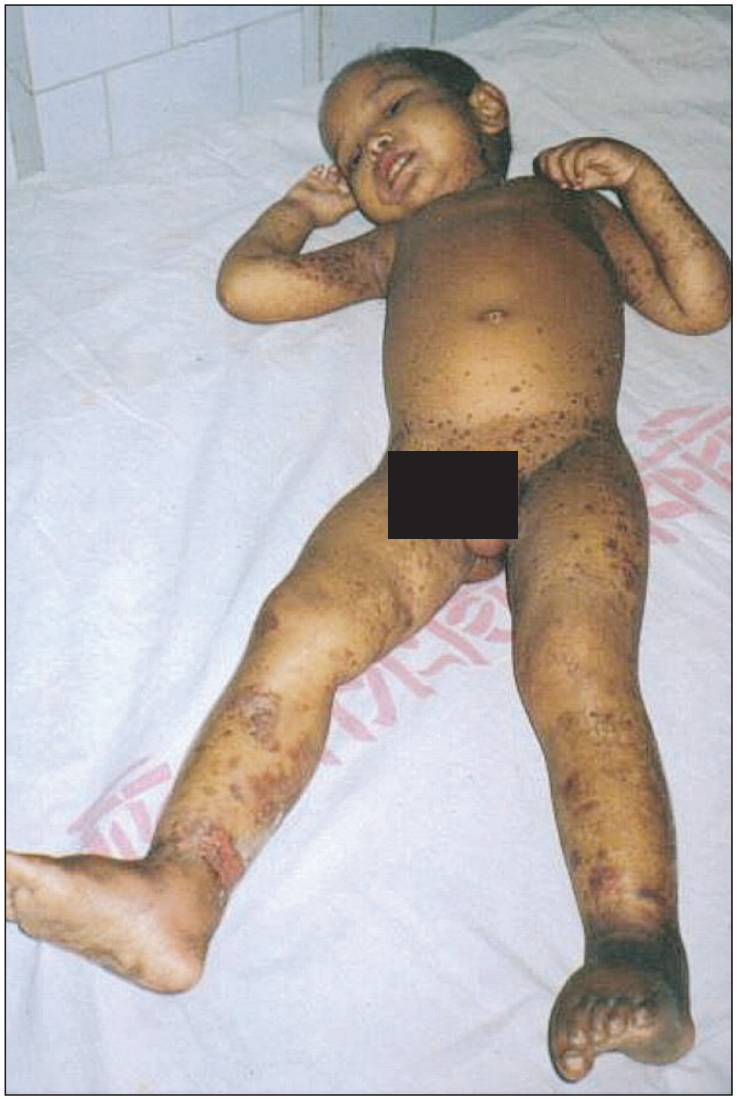
An 18 month old boy weighing 3.5 kg was diagnosed as SAM with bronchopneumonia. His father was a rickshaw puller. The baby was only breastfed for 10 months. Then dilute formula, cow's milk and rice powder with occasional khichuri was given. He was severely wasted and severely stunted. Child recovered with treatment.

Case-23: Powder milk, SAM and blindness.



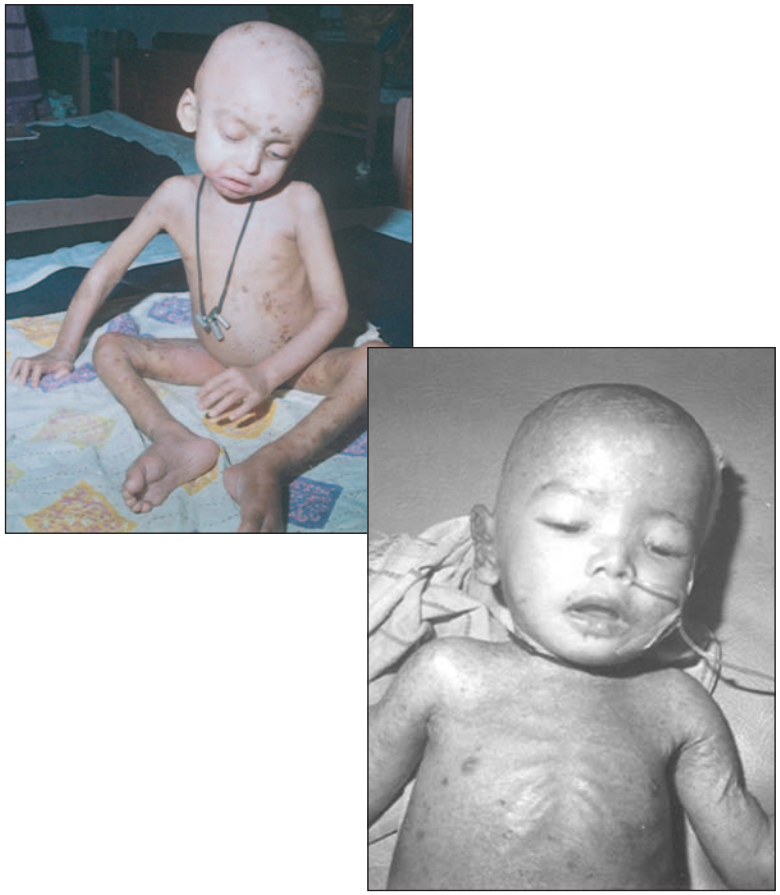
A 2 year old boy weighing 6 kg presented with failure to gain weight and inability to see in the dark. Mother was a maid, father unemployed. He was exclusively breastfed for 2 months. Then dilute infant formula, dilute cow's milk and subsequently rice with dilute dal was given. Bitot's spot was found in the right sclera and conjunctivitis in the left. He was diagnosed as SAM with xerophthamia.

Case-25: SAM is an everyday event in this country.



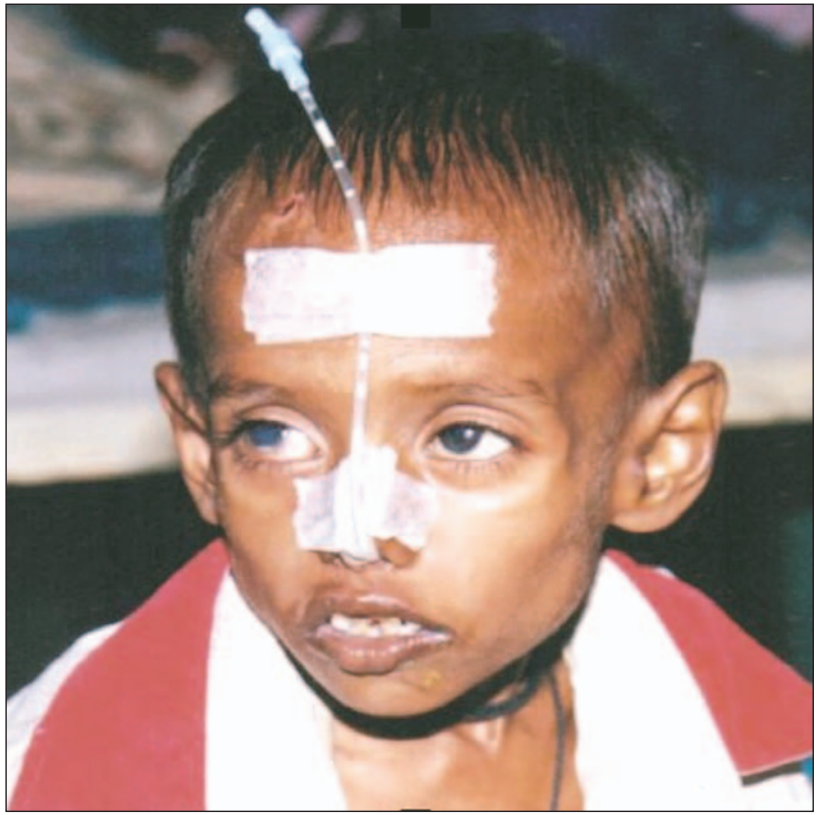
Another 2 year old boy at Dhaka Medical College Hospital diagnosed as oedematous malnutrition with dermatosis (Kwashiorkor). The child was fed with dilute powder milk.

Case-26: As though he does not have any wish to live.



A 3 year 2 month old male child presented with weight loss, oedema and dermatosis. This was his 3rd admission in the last 5 months. His father was a truck helper. He was given breast milk up to the age of 3 months and later dilute milk formula along with breast feeding. Family food was given from one year of age. He was severely underweight (wt 6.8 kg, Z-sore-6.9), severely stunted (ht. 77 cm, Z- score -5.1) and severely wasted (Z-score-5.6). Gastric lavage showed AFB. He was diagnosed as SAM (Oedematous malnutrition), with dermatosis and disseminated tuberculosis. He was discharged after 3 weeks with anti TB therapy.

Case-27: Powder milk, improper complementary feeding SAM and xerophthalmia.



A boy ($3^1/_2$ years age) with xerophthalmia (Vitamin A deficiency) at Dhaka Medical College Hospital. He was fed dilute formula and cow's milk earlier, then dilute tinned complementary food and occasional plain rice. He had severe wasting, severe stunting and corneal ulceration.

An urgent call to action

The tragedies that have befallen the children described in this booklet are man made. Ignorance and apathy must be forsaken at all levels. The Ministry of Health and Family Welfare (MOHFW) should prioritise investment in the promotion, protection and support of recommended IYCF practices which, as a preventive measure, will save lives, promote health, improve nutrition and contribute to prevent non-communicable chronic diseases. It is heartening that the Government has passed a new law in Parliament in September 2013 entitled 'Breastmilk Substitutes, Child Foods, Complementary Foods manufactured commercially and the accessories related thereto'. A strict implementation of this law will undoubtedly increase exclusive breastfeeding rates and facilitate proper complementary feeding. As a result the present nutritional status will improve. Severely malnourished children should be managed with relactation and homemade energy dense foods. Any recommendation for the use of ready to use therapeutic food (RUTF) will go against the BMS act and will be subject to legal action.

Paediatricians and Obstetricians, as a priority, should help to establish and maintain all newborns, infants and young children on proper breastfeeding. At the same time Paediatricians should manage severely malnourished children with relactation and home made energy dense foods. The health care providers in the community must be trained to relactate and demonstrate energy dense food preparation at home for the management of severe acute malnutrition. There should be zero tolerance for conflicts of interest in child nutrition.

The present trend of commercial approaches to child nutrition is unfortunate and regrettable for all children in the world. UN, bilateral and donor agencies' endorsements on use of commercial products has done untold damage to global child nutrition. These products will be a deterrent to child nutrition and should be a non-starter. The roles of UN agencies are critical not only to identify countries health issues but also to discuss with the Government, professionals and relevant stakeholders to address the problems. National and international NGOs should carefully complement Government Health and Nutrition programmes rather than embarking on any innovative measures.

Prevention of malnutrition must be the key approach and this is possible in all our countries through the full implementation of the WHO/UNICEF recommended global IYCF strategy.