SPECIAL FEEDING CASES

XI

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SPECIAL FEEDING CASES

The aims and purpose in writing this paper is to determine some of the most prevelant causes of feeding problems among children. The age group I have chosen for this study is from birth up to seven years.

First, I shall take up a brief history of Pediatrics. The movement for child welfare and protection started very slowly. Before the christian era, the social value of an infant was negligible and it was not condidered a crime, even in cultured Greece and Asia Minor, to expose, abandon or destroy an infant. Children were not disregarded entirely by the Ancients, as Soranus of Ephesus was known as the greatest obstretrician and pediatrician between the years of 110 A. D. and 130 A.D. His work conforms more nearly to that of modern standards of nursing than any other material which was written before the last century.

Hippocrates and other writers of ancient times have mentioned the child, as did several of the medieval authors: but when you come to think of the art and philosophy of the early people, like the cultured Greeks and Romans, you can not help but feel that they neglected the child to a great extent.

Since Pediatrics was not recognized as a separate science before this period, I think it is most fitting to bring in the definition of Pediatrics at this time. It comes from two Greek words, "pais", genitive "paidos", meaning the child, and "iatrike", the science or art of healing: therefore, it is the science which deals with the healing of children.

Some of the first printed literature of Europe on the subject was that of Metlinger, in 1473, and that of Bagellardo, in 1487. In 1484 Micheal Underwood wrote an "Essay on the Diseases of Children", and Edward Jenner's great work on Smallpox vaccination in 1798. In the 19th Century Franc, England and Germany produced some important literature on pediatrics.

Much credit is due Dr. Abraham Jacobi of New York. It was through his efforts that the first professional teaching of the subject of children's diseases was instituted in 1860 at the New York Medical College. He was

the teacher at that time. He did a great deal to stimulate interest in pediatrics by founding the section of pediatrics in the New York Academy of Medicine and the American Medical Association. At present there is a widespread interest in pediatrics in all countries.

There was no mention of hospitals for children in the early period, there were only foundling asylums. The first one of authentic record was the one at Milan established in 787 by Archbishop Datheus.

As the knowledge of medicine advanced, more attention was being placed on specialization, and in that way pediatric hospitals began to be established over the country. The first separate children's hospital in Europe was founded in London by Dr. George Armstrong. The first one in America was opened in 1855 in Philadelphia. There were 12 beds in which 29 patients were cared for during the first year and 306 out-door-patients. Thus children's hospitals were soon found in many of our larger cities as well as in the larger European cities.

The nursing care of children has become a specialized development only in recent years. The first exchange of students between hospitals was done in 1888, when The Children's and The Columbian Hospital of Washington, D.C. became affiliated. Now pediatric nursing is a required course for registration in the United States and in other countries.

MALNUTRITION IN INFANTS (MARASMUS)

Malnutrition may develop rapidly or insidiously. all degrees of severity are seen. It is a failure of artificial feeding. Condition is very rare among breat-fed babies.

It is seen often in foundling homes and in similar institutions for infants.

Etiology- May depend upon inherited conditions, certain children are delicate from birth, having feeble vitality, often parents have delicate constitutions and poor physical development, or of those with tuberculosis, gout, and syphilis. Overcrowding, frequent infections, and lack of individual care. Premature babies and very small ones develop malnutrition. Improper feeding and poor nursing is another cause. In children over two years old, the cause is more often due to some previous acute disease.

Occurence is seasonal. It is more frequent in summer and autumn months.

Symptoms-

I. Continue to lose weight until a condition of extreme wasting is seen. May be very little change for several weeks.

2. Aged appearance when disease has progressed. Drawn features, wrinkled skin and hollow temples.

3. Bones and joints are prominent. Legs are like drumsticks.

4. Fretful, irritable and restless.

5. Sleep badly during the day and worse at night.

6. Enlargement of lymph glands.

7. Abdominal distention.

8. Temperature often subnormal.

9. Usually lost appetite, vomiting and diarrhea.

Complications-

I. Nutritional anemia not uncommon.

2. Accidental heart murmurs are likely to be heard.

3. Rickets or scurvy

4. General edema

5. Peculiar rigidity of muscles, especially in legs and neck.

Diagnosis- Examination of child with great care to exclude all common organic and constitutional diseases. In private practice most cases are due to improper feeding and nursing. The improper surroundings. Third comes inherited constitutional conditions.

Treatment- Most important treatment relates to prophylaxis prevented by prompt recognition and treatment at an early stage. Usually solved by dietary and general management. Drugs occupy a very small place.

In infants it is chiefly a question of feeding. Often these cases will not show improvement with any variation in diet until fresh air is secured. Cold sponging is a valuable tonic. Friction and mass ge often are useful.

Tonics such as iron, nux vomica, and cod liver oil can be used to advantage.

The secret of success is to hold these patients to a regular routine of feeding, sleeping, and everything relating to his life.

Prognosis- Depends on the cause of condition. If one that can be corcved, prognosis is good. The duration of disease is a great factor in the prognosis.

J.C. is a baby boy one month of age. He was admitted to Doernbecher hospital on March 5, 1934 as a feeding problem. The mother's chief complaints were vp,otomg, gas on stomach and bowels, and constipation. The baby was born on February 2, 1934, weighing nine pounds twelve ounces. The delivery was normal, labor lasting twenty hours. There was no attempt made at breast feeding. Infant has been on the following formula:

Cream T 4

Top milk T 3

Water T 9

Lactose T I

Lime water T 2

Four ounces every 3 to 4 hours was given to the child.

At age of five days child began to choke at intervals. These spells lasted a few minutes, occuring both during feedings and otherwise. Baby had been constipated even after trying castor oil and castoria. Then began to use Milk of Magnesia, one teaspoon daily in the formula. There was a great deal of flatus expelled per rectum and some belching. Baby had one bowel movement daily on this treatment. At present time baby weighed eight pounds, nine ounces.

On examination the abdomen was greatly distended, the stomach was rather clearly outlined through the body wall. The abdomen was tympanitic everywhere. The temperature was normal most of the time. 100.6 being the highest.

Laboratory report: urine , no pathology found except pus 1+, and epithelium 1+. Blood findings normal except for white blood count which was 16,500.

Diagnosis- Intestinal irritation from prolonged improper diet and use of cathartics.

There was no medical treatment for this baby while in the hospital.

Dietary treatment- Baby was first put on a formula of equal parts of skimmed milk and water given three ounces in six feedings. A day or two

later changed to following formula:

Whole boiled milk	ounces	I5	
Water	"	7	
Lactic acid	drops	45	
D.M.	ounces	I	6 x 3½ oz.

Two days later changed to:

Evaporated milk	ounces	8	
Water	"	I5	
D.M.	"	I	6 x 3½ oz.

After the baby's formula was changed to who milk, the following there was slight emesis after the 2 P.M. feeding. The following day at the same time there was a slight emesis of his feeding. At that time the formula was changed to evaporated milk. The next day there was emesis at the IO A M feeding, but none since.

There was no apparent constipation since admittance. Baby had soft yellow stools.

The child was discharged a day or two later with a marked improvement.

Prognosis--Good.

L.M. is a baby girl nine and one-half months old.She was admitted to Doernbecher Hospital with the following complaints--grunting breathing and "stomach trouble". The baby was full term weighing nine and one-half pounds. The delivery was normal.

The child has always been pale. Has been principally on a milk diet. She has eaten very little in the way of vegetables- evidently a case where the mother did not see that the child took her food the way she should have.

The baby had some cough beginning about a week ago. No nasal discharge was noted. A few nights later the child began this grunting type of breathing which still continues. The mother gave the baby a physic because the bowels did not move as they should. Baby had two enemas within the past 24hours. Stools were always yellow and light colored. The child had on an average of 2-3 bowel movements daily before taking sick. Has had orange juice (sucking an orange) and cod liver oil 2-3 teaspoonfuls some days, other days none.

The baby seldom had colds. Has had a slight nasal discharge once or twice. Has had a good appetite for milk, but poor for other foods. Child has always slept well and does at present.

The baby shows a markedly milk white appearance, fairly well nourished with marked dyspnea and hyperenemic.

Blood count shows hemoglobin I5%, RBC I.5, WBC 23,035, polyneutrophils 29, and S.L. 7I. There were no abnormal urine findings. Temperature on admittance was normal. There was a slight variation above normal at times while in the hospital.

This child has besides his parents, two brothers, all living and well.

Diagnosis- nutritional anemia.

Medical treatment- Blood transfusion was given as soon as possible after child was admitted. One hundred and eighty ccs of f ther's blood was given in the ankle vein . The baby's color showed an immediate improvement/ That same night atropine grs 1/200 was given and an enema. The baby seemed considerably improved. The following day child seemed more

alert and active. Two or three days later there was a marked increase in hemoglobin and red blood count. Hem. 69.9 % and R.B.C. 3.85

Dietary treatment- She was gavaged with orange juice and dextrose 160cc the first day. That night 5% lactose 7-8 ounces every four hours was given. On the following morning baby was started on an infant soft diet with eggs, vegetables and cereals. Iron am. citrate drams one and viosterol MIO twice daily was administered.

There was a gradual increase in hemoglobin. No more transfusions were necessary. The child went home in good condition.

Prognosis- Good.

E.C. is a boy twenty-one months old. He was admitted to Doernbecher hospital on February 14, 1934. The chief complaints ere constipation, fever, loss of weight and Scarlet Fever convalescent. The child had Scarlet Fever early in December. After recovery the patient developed a diarrhea and became very irritable. His rectum appeard reddened and was delirious. In a few days ran a fever for about a week. He seemed not to be able to take food without going into a stupor. He developed a marked edema. This continued for a week or so, then he seemed to be all right.

He later became very constipated, but became better until six days ago when he became stuporous after eating-seemed somewhat distended. About fifteen minutes after eating he get pale and runs a fever. After taking milk, he seems to swell up. the cheeks become puffy and the glands in the neck become enlarged, but no dyspnea is present.

Has lost weight for the past week losing more than two pounds. Child has had some cough until two weeks ago.

On examination was found to be emaciated, some palor, no edema, no skin rash, ribs somewhat prominent, stuporous, and very irritable. There was profuse purulent nasal discharge and some Impetigo lesions on the chest.

The laboratory findings were as follows: urine, color yellow, appearance cloudy, reaction alkaline, amorphous +, pus +, and epithelium occasional. Blood report: hemoglobin 86.2, grams II.90, red blood count 4.82, white blood count 6800, polyneutrophils 57, S.L. 42, and monocytes 4.

Family history- This is an only child of middle aged parents. After he had Scarlet Fever, he didn't want to eat and his mother was afraid to urge him to eat. When she found that he didn't seem to tolerate milk, she just let him go without eating. It seems that both parents were over anxious about him. They wanted children so badly and waited for nine or ten years before this child came. They were so afraid that something would happen to him. As a result he was very malnourished and dehydrated when he entered the hospital. He had the appearance of being starved and had an anxious appearing expression.

Diagnosis- Malnutrition and possible milk alergy.

Medical treatment- This child received very little medical treatment. On the third day he was given 400 ccs of 5% glucose subcutaneously. Elix. Luminal grs ¼. was ordered three time daily. Merthyolate Ointment and Ammoniated Mercury 3% was applied to lesions on chest.

Dietary treatment- The first day the patient was put on a liquid diet, but no milk ordered. Next day a semi-solid diet consisting of the following foods: thick cereal, pureed vegetables and fruits, dry toast, orange juice, yeast grams I daily, cod liver oil and viosterol M xx daily with approximately 500 calories. Next day diet was increased to 600 calories. The following day evaporated milk one-half strength was added. Total daily intake was increased to I200 calories.

By mistake he got a glass of cow's milk. The following day he ran a temperature between IOO and IOI degrees F. The child's improvement was noted greatly from day to day. He did not seem to have any stuporous attacks after eating at all. He had an enormous appetite. Seemed as if he couldn't get enough to eat.

A few days later egg yolk, beef, liver, and broth were added to the diet.

About a week later he was given one glass of whoe boiled milk with one of his meals and he seemed to tolerate it all right. Evidently in his run down condition after Scarlet Fever, he was not able to tolerate foods well. I think it was probably due to a great extent because of improper feedingon the mother's part.

After a day or two he was put on cow's milk entirely. Every day a great improvement could be seen. His personality changed a great deal too. On admittance he had a rather dull expression, but it wasn't long before he became alert to everything going on in the ward and also a very happy child. He didn't want to be touched or anythingat first, but before he was discharged he would put out his arms to be taken up.

Nursing care was chieflycf seeing that the child had plenty fluids,

baths daily, and kept comfortable and as happy as possible.

Prognosis- The child was discharged in very good condition. The mother was instructed as to the proper diet for the child.

D.H. is a baby boy ten weeks old. He was a premature baby weighing four pounds, one ounce at birth. This baby had been seen in pediatric clinic two different times prior to admission to Doernbecher hospital. The baby at that time was having diarrhea and very irritable, crying almost all the time. Occassionally he spits up some of his milk. His nutrition is very poor. He has a marked diaper rash and a right inguinal hernia.

The patient had been on the following formula:

Evaporated milk	ounces	8
Water	"	6
D.M.	T	2

Was changed to:

Evaporated milk	ounces	6
Water	"	15
D.M.	T	1 (until diarrhea stops)

The mother was advised to start sun baths and orange juice. Baby's weight at that time was six pounds, three ounces.

Three weeks later baby was again seen in clinic. Baby's weight was five pounds, fifteen and a half ounces. The mother stated that the child cries almost constantly. Child was very much undernourished. There was bulging over the right inguinal region, diagnosed as a herniation, it being reducible, was worse on crying, and contained expressed flatus. Baby was referred to Doernbecher hospital by Dr. Ashley at that time.

The baby gained weight slowly until three weeks ago. Since that time has lost five pounds, fourteen ounces. Baby cries constantly and vomits almost after every feeding. The time varies from after immediate feeding to several hours. The stools are normal but scanty. Had diarrhea for several days, but it stopped spantaneously.

He takes part of his feeding readily, but stops before entire feeding is taken.

On examination child was found to be very poorly developed and emaciated and very restless. His forehead is wrinkled and has an aged worried

expression. The skin is bluish and mottled. The extremities are cold and cyanotic. There is a loss of subcutaneous fat. The fontanelles are slightly depressed.

The temperature on admittance was 97,8 degrees F. Laboratory findings: urine, color yellow, appearance clear, reaction acid, and pus +\. Blood report: hemoglobin 70.3, grams 9.7, red blood count 3.4, white blood count 9,050, polyneutrophils 50,S.L. 42, and monocytes 5.

Diagnosis- Right inguinal hernia and malnutrition.

Medical treatment- All attempts made to reduce hernia failed, but patient could not be operated upon because his general condition was very poor. A yarn truss was applied for right hernia. Patient was given a subq. of 120 ccs of normal saline. His diet was watched carefully and in less than four weeks the baby was in satisfactory condition for surgery.

Patient returned from surgery in good condition. Codeine grs . every four hours prn for twenty-four hours was ordered.

Dietary treatment- Patient was put on a lactic acid milk formula when first treated. The patient was lavaged and then gavaged on the first day, but the following day lavage was discontinued.

A few days later C.L.O. one teaspoonful daily and orange juice gtts x were ordered. Orange juice was to be increased gtts 2 daily. The following day every other feeding was given by bottle. Next day all bottle feedings were given. Formula increased to:

Lactic acid milk	ounces	24
Water	"	3
D.M.	"	½ 6 x 4 oz.

The following day patient went to surgery for herniorraphy. The day after the operation, the child had ½ strength formula, but was put back on regular routine the next day. On the fifth day post op. formula changed:

Evaporated milk	ounces	II
Water	"	I7
D. M.	"	I 6 x 4½ oz.

The baby was discharged with the following formula:

Evaporated milk	ounces	IO	
Water	"	I7	
D.M.	"	2	6 x 4½ oz.

With cod liver oil one teaspoonful daily, and orange juice two teaspoons twice daily.

Nursing care consisted of keeping patient as comfortable as possible, giving daily baths, seeing that patient was fed on time, and any other orders were carried out whenever written by the doctor.

Prognosis - the baby went home in very good condition.

H.L. is a baby boy eleven months old. He was admitted to Doernbecher hospital on February 8, 1934. He was a full term, normal baby in good condition at birth. Failure to gain weight was the chief complaint. At present time baby weighs seventeen pounds, seven ounces. His appetite seems quite poor and during past month has not gained any at all. He eats one-half ounce of vegetable puree daily, and from five to six ounces of milk for five feedings daily. Also get two tablespoons of cereal twice daily. Patient has had a cold off and on all winter. Last month he vomited a little. He is constipated. Given enemas and castor oil Drams four about two times a week. Temperature on admittance was 99.8 F.

Laboratory report was as follows: urine, color yellow, appearance cloudy, reaction acid, amorphous+, casts+ granular+ pus+ epithelium+. Blood report: hemoglobin 89.0, grams 12.28, red blood count 5.05, white blood count 8550, polyneutrophils 59. and S.L. 60.

Family history- Father and mother are both living and well. This baby has four brothers and sisters. There is only a year s difference between these four children and two years between the ages of the fourth child and this one. The other children are all well. This is a Philipino family.

Diagnosis- Malnutrition, secondary anemia, and chronic otitis media.

Medical treatment- Tuberculin I-1000 skin test was negative. Several days after enterance baby developed an unexplained temperature. Ears were examined by the resident E.N.T. doctor. No infection or bulging was found. The temperature gradually came down, but the child took his feedings poorly and fussed a great deal. Then it shot up to 101 degrees again. A few days later a bilateral myringotomy was done by one of the doctors. Frank pus was obtained from both sides. The ears were irrigated three times daily with normal saline solution, followed with Rx nose drops.

Dietary treatment- Placed on special diet of: two cereals daily, two tablespoons of pureed vegetables. one egg yolk daily, broiled liver and scraped beef every other day (alternated) , broth, toast, and whole

boiled milk six to eight ounces. Child had four feedings daily. Cod liver oil drams three and orange juice ounces three were given daily.

The patient took solid foods quite well, but did not like to take milk. Fluids were gavaged prn. The cereal was thinned with milk so that some of it was taken in that manner. His toast was moistened with it as well. More milk was gotten down him in that way. The first few days there was a small loss in weight, but after that the baby gained on an average of fifty to seventy grams daily. The child was placed on an infant soft diet and took the food very well.

Nursing care consisted chiefly of getting the child to take all of his food. It usually took a great deal of patience as he ate very slowly and would spit the food out every chance he got. Otherwise the usual routine nursing care was given.

Prognosis- Good. The child went home in good condition.

P.C. is a baby boy four months old. He was admitted to Doernbecher hospitat on October 6, 1932. This baby was a full term infant weighing seven pounds at birth. The delivery was normal, being the sixth child. Baby was breast-fed for about one month. Was then placed on cow's milk and water half and half. Later on Lactogen, but did not agree with him so was put on A.M.A. three ounces every three hours. The baby got along fairly well for a whole, but then he began vomiting his formula. The mother gave the child one-half teaspoon of cod liver oil before each feeding. No orange juice was given. Water two ounces was given between feedings. The bowels seemed normal. The baby fretted occasionally.

The baby has an idiotic facies, eye roll upward and outward, drooling siliva from his mouth. A boney hard mass was noted in region of posterior fontanelle.

Family history- Father and mother are living and well. Patient has a brother seven years old whose twin died. Two sisters respectively four and two years old both living and well.

Diagnosis- Malnutrition and mastoiditis.

Medical treatment- Spinal puncture done on day of admittance- the pressure was equal to I2 min. Kg. The fluid was clear. Two days later a bilateral myringotomy was performed. Pus was obtained from both sides. A few days later a I00cc s of normal saline was given subcutaneously. This caused a gain in weight of 50 grams. Two days later a bilateral antrotomy was performed by Dr. Fenton under a general anesthesia. The baby was gaining weight steadily following the operation. Sometime later I25ccs of citrated blood was given into the anterior fontanelle. The condition seemed to improve slowly.

Dietary treatment- The patient was first placed on a skimmed milk and water formula half and half boiled three mintes. Given in three or four ounces every two hours. Two days later two ounces of karo was added to the above formula. Elix. of Luminal Mx was given with each feedings.

Then formula was changed to the following:

Evaporated milk	ounces	7	
Water	"	I8	
Karo water 50%	"	2	8 x 3 oz.

About two weeks later formula was changed to:

Bulgarian milk	ounces	IO	
Karo 50%	"	4	6 x 4 oz.

Three weeks later cod liver oil and orange juice was added to diet.

The child was discharged in a week or two in fairly good condition.

About two months later the child was admitted to the hospital again. The chief complaints were failure to nurse and not crying. The last few days the mother noticed that the baby did not take his feedings well. The patient has had some colds and does not cry like a normal child. Baby has been on the Bulgarian milk formula since previously discharged from the hospital. Also had cod liver oil and orange juice.

Diagnosis- Chronic malnutrition.

Medical treatment- On admittance I50 ccs of 5% glucose was given in saline subcutaneously in the morning and in the afternoon. There were several injections of glucose and normal saline within the next few days. The baby's condition was poor; The fontanelles were depressed, respiration was rapid and shallow, the chest was clear, the back and hips were held stiff, but there was no arching of the back. The elbows were held in extension and the wrists were pronated. The right leg was resistent to passive motion and the knee jerk hyperactive and clonic type. The Kernig sign was negative.

Baby was still very dehydrated, and refused some of his feedings. A number of glucose and saline injections were given to bring up his fluid content.

One of the staff doctors suggested that an x-ray of long bones be taken, as he thought that the extreme irritability of the child suggested scurvy. No pathology was found.

About a week later another staff doctor advised further study of

mastoids and possible infections. He felt that the child's condition was not all mental in origin.

A day later the resident physician stated that the child was not getting any worse or better. He believed that a blood transfusion would stat things going as the hemoglobin was down to about 50%.

The following day 50 ccs of whole blood was given. Afew days later a cysternal puncture was done. Clear normal fluid was obtained under no increased pressure.

Since the transfusion the baby's color had improved and approximately increased fatty tissue.

Dietary treatment- The patient was placed on S.M.A. formula of normal dilution, four ounces in six feedings daily.

The child was not doing well on this formula. It was changed to S.M.A. protein acidulated milk. five ounces at each feeding. A few days later it was changed to:

Evaporated milk	ounces	IO
Water	"	20
D.M. with vit. B.	T	2 5 x 6 oz.

Three days later formula was increased to half and half evaporated milk and water.

Nursing care was chiefly that of routine care with keeping the patient as comfortable as possible. Feeding the baby on time, and changing his position often.

Social service report. The case was referred to that department by the resident physician for investigation of home conditions. The American Red Cross and probation officer in Salem reported that there was flu in the home and the mother did not seem to be particular in the care of the baby. Baby would have to go to stay with a fiend for a while.

One of the staff doctors wanted the child referred to a state agency, then placed in competent institution or home for care.

Waverly Baby Home was unable to take the patient on account of lack of personnel, and the home is supposed to be for well babies.

Another report was obtained from the probation officer which stated that home conditions were impossible for correct care of baby. The baby was placed in the Albertina Kerr Nursery.

About four months later a report from the nursery revealed the fact that the baby stayed there only about a month. It seems that the Marian Count Court felt that the parents should care for the child. So that the parents have the baby.

Prognosis. Doubtful whether the child will recover fully.

S.P. is a baby girl nineteen months old. She was referred to Doernbecher hospital by the Clinic for observation and treatment of anemia. Child has been fretful and losing in color, gradual in onset. Apparently milk has formed more of diet than vegetables and iron containing foods. The mother appeared half-starved herself.

The temperature on admittance was 101.8 degrees F. Urine report: color yellow, appearance cloudy, reaction acid, diacetic acid, trace, and amorphous . Blood report: hemoglobin 35%, red blood count 4.68, white blood count 7050, polyneutrophils 20, and S.L. 76.

Family history: The father is dead. The mother is not working. The Unemployed League payed the house rent. The Family Relief Unit supplies grocery orders. The grandmother is in the home too, not working. There is another child five years old. The mother does not have a separate bed for the baby.

Diagnosis- Deficiency anemia.

Medical treatment- Blood transfusion by multple syringe method. From 165-175 ccs of whole blood given. Immediate results were good. Ultra-violet treatments twice daily for about a week were given. Iron and ammonium citrate drams one was given three times daily. Codeine cough syrup one-half ounce every four hours was administered prn.

Dietary treatment- Child was put on an infant soft tray stressing foods high in iron. Fluids were forced with orange juice with dextrose.

The baby's hemoglobin was increasing steadily coming up to 70.35%. The child showed a great improvement.

Nursing care- There was no special nursing care. Just the routine care.

Prognosis- Good. The patient returned to Pediatric clinic about one month later. Child appeared well and had a good appetite.

B.B. is a baby girl three months old. She was admitted to Doernbecher hospital with the complaint of failure to gain weight. She was born on May 31, 1933. Birth weight not exactly known. The delivery was very difficult with face presentation lasting about fifteen hours. A Cesarean section was considered. No cyanosis, [illegible] stiffness of neck present, but seemed to get better slowly. Since that nursed for one month. Baby was losing so that mother took it off breat. Weight at that time was not remembered. First formula was carnation milk, proportions not recalled. S.M.A. tried, but was not tolerated well. At present time on Eagle Brand. The child has weighed as much as ten and one-half punds. Now weighs seven pounds and one ounce. The baby has never vomited. Has had normal bowel movements while on Eagle Brand formula. Has had Milk of Magnesia four times, but no other cathartics have been used. Child has not been given orange juice or cod liver oil.

Temperature on admittance was 99.6 F. Urine, no pathology found. Blood report: hemoglobin 76.6, grans IO.58, red blood count 3.37, white blood count IO,250. polyneutrophils 62. and S.L. 27.

Family histroy- Father is living and well. The mother had one miscarriage-last pregnancy- three and one-half month toxemia-feotus dead and aborted. Mother's health was poor during past pregnancy. Had weak fainting spells, hypertension. The mother worries about the condition of the baby. Cries and is very nervous. They have two other children, three and four years old. They are both normal and well, nursed until nine months old.

Diagnosis- Athrepsia.

Medical treatment- None.

Dietary treatment- First on formula of:

Whole boiled milk	ounces	I6	
Water	"	2	
Lactic acid	drops	48	
D.M.	ounces	I	6 x 3 oz.

In three days formula changed to:

Whole milk	ounces	22	
Water	"	2	
L. A.	drops	66	
D. M.	ounce	I	6 x 4 oz.

Orange juice, ten drops increasing two drops daily

Viosterol M v daily

Baby was discharged on the following formula:

Whole milk	ounces	26	
Water	"	4	
L.A.	drops	80	
D.M.	ounce	I	6 x 5 oz.

Patient made rapid gain on lactic acid formula. General condition was much improved. Child has gained 700 grams while in the hospital.

Nursing care. No special care given. Just routine baths and care.

Prognosis- Good. Patient was seen in clinic about a month later. She was gaining weight quite well. There was regurgitation. Took all of five ounces of formula. Gets two teaspoons of orange juice and one-half teaspoon of cod liver oil daily.

Formula changed to:

Whole milk	ounces	31	
Water	"	4	
L.A.	drops	90	
D.M.	ounces	I½	6 x 6 oz.

Cod liver oil two teaspoons

Orange juice six "

RUMINATION

Rumination is the regurgitation or spitting up of swallowed food. Some infants vomit readily on the slightest disturbance. Rumination occurs usually in infants of nervous, fretful type, and those who are handled and played with most of the time. Some form the habit of bringing up food voluntarily. The food may be just brought up into the mouth, held there for a while and swallowed or may be completely expelled. This habit is known as "rumination" or "nervous vomiting". There is no organic basis for the disease.

Some seem to ruminate just to amuse themselves, others to attract attention. Usually goes through a series of grimaces and contortions preceding the vomiting: child frowns, smiles, works his jaws backward and forward, stiffens the body, arches the neck, and expells the food. Sometime vomiting is brought on by putting the fingers in the mouth. It's a habit which may exist through infancy and well into childhood. A severe degree of undernutrition may result.

Treatment- It may be treated in various ways. No one method is effective for every infant and with some all methods fail. Most successful method is that of thickening all feedings by boiling with cereals. Milk formulas may be the same as in case of normal child except from IO-I5% of barley flour and the whole is heated for an hour or more in a double boiler. Mixture of such consistency that it won't fall from an inverted spoon. Vegetables and other articles of diet can be fixed with the thick feedings. Must be fed by spoon or with a hygeia nipple of which the nipple is cut off so that a good sized hole is had. These thick mixtures are vomited with difficulty, and some infants finding themselves unable to vomit, after a period of time give the attempt up. These feedings may be continued for a year or more.

The mouth may be kept tightly closed after feeding with a T-bandage applied to the jaw in such a manner that the child can not work the jaws. There is certain danger in this if the child should aspirate some food if he should vomit.

If infant brings on vomiting by placing hands in his mouth, arms may be restrained by means of loose splints.

A child may be placed on his stomach. This is sometimes effective. Rocking the child to sleep in a hammock after feeding has proved very successful at times.

A.Y. is a nineteen months old girl. She was admitted to Doernbecher hospital on May I9, I933. Patient was seen previously in Pediatric clinic. The child weighed thirteen pounds. eleven ounces. The temperature was normal. The patient has a history of persistent underweight and non-projectile type of vomiting. Baby refused breast at three months. Has been on cow's milk and karo water with cereals and vegetables. Vomiting has occured every day. There is considerable regurgitation.

Patient was seen in clinic again less than a week with no apparent loss in weight. Mother was advised to give thick cereal feedings with pabulum and luminal grs ¼ before each feeding.

week later in clinic again with loss of eight ounces in weight. Peristaltic waves were observed in upper abdomen. Patient was transferred to Doernbecher hospital.

Child has always been poorly nourished. She takes her feedings well and seems hungry. But a variable time after eating she regurgitates part of her food, swallows part of it again, and spits out a part. She has never had forceful or projectile type of vomiting. This condition has been worse for the last few months until she was placed on thick cereal feedings following which she has regurgitated less. Infant has always been constipated having only small hard stools. Sometimes she had slight bleeding with defecation.

On examination child was found to be very markedly emaciated with a proportionately large head:

Circumference of head	I8.5 inches
" " chest	I5.0 "
" " abdo.	I3.0 "

Her eyes are very deep set. There was no discharge from the nose. She has only two lower teeth. The abdomen is very flabby and soft. Liver and spleen are not palpable- no evidence of pyloric tumor. There is rather firm fecal material in sigmoid colon.

Diagnosis- Partial hypertrophic pyloric stenosis and rumination.

Medical treatment- On second day in hospital baby was given 500 ccs of normal saline intraperitoneally. A T-bandage was applied in an effort to immobilize jaw between feedings. Iron ammonium citrate grs v twice daily was given. The following day baby was rocked to sleep in a canvas hammock suspended from the crib sides after each feeding. When the child fell asleep, the hammock was lowered to the bed. Some feedings were retained well, but at times she ruminated a part of her feedings. Luminal grs ¼, twenty minutes a.c. was given for a few days, then changed to atropine grs I-1000 a.c.

After two weeks baby ran a fever of 104-105 degrees F. for three or four days. A bilateral myringotomy was done. There was considerable pus on the right side but very little on the left. Temperature curve gradually went down to normal in several days. Baby is still very dehydrated. Another subq. of normal saline of 400ccs was given intrapertioneally. The patient's weight gain has been very slight.

Later child's stomach was lavaged with 5% sodium bicarbonate solution and then formula was gavaged. At first only mucous was returned, but several days later particles of undigested cereal was returned. This treatment was carried out for ten days.

Baby was placed on infant soft diet and did very well. She retained almost all of her feedings. There was a steady weight gain. Child was discharged doing very well with no regurgitation and having soft brown stools. There was no evidence of constipation.

Dietary treatment- Child first on thick cereal feedings of seven ounces in five feedings. Cod liver oil drams one twice daily, and orange juice one-half ounce twice daily.

Later on formula of:

Whole boiled milk	ounces	32	
Two egg yolks			
Squibb's vitavose	grams	45	4 x 8 oz.

The last four days before the child was discharged, she was on an infant soft diet which consisted of milk, cereal, toast, pureed fruits and vegetables, custards, puddings, and potatoes.

Nursing care was that of keeping patient quiet as possible. The child was given daily baths, etc. The child was quite dull and unhappy when first in the hospital, but it wasn't very long before she became quite cheerful. Seemed to respond to treatment and care readily.

Prognosis- Good.

PYLORIC STENOSIS

Pyloric stenosis is the condition where the pylorus, or opening of the stomach into the intestinal tract, is thickened and rigid, a state of spasm existing with it.

The symptoms are not usually marked until after the second or third week of life. It is as frequent in breast-fed babies as in artificially fed. The first symptom is vomiting and usually occurs shortly after feedings or taking of water. At first may just be spitting up of small amounts of feedings, but it becomes more forcible and projectile type often to a distance of several feet.

The second is that peristaltic waves may become visible. These pass always from left to right and should not be confused with peristaltic waves which pass in opposit direction. These may be present constantly or only after food or water has been taken. This is observed in almost all cases.

Third, a thickened pylorus may be felt in fair proportion of cases. Size of tumor varies from that of tip of little finger to a large olive.

Fourth, urine is scanty and highly colored. Infant becomes very dehydrated.

When much vomiting occurs, the child becomes very malnourished. These children are usually constipated and may suffer from a starvation type of diarrhea.

Treatment- Either medical or surgical.

There are three methods in the medical treatment.

First, refeeding of infant after he has vomited. It has been observed that if the child is refed immediately after emesis, will retain second feeding.

Second, administration of atropine sulphate just before each feeding

Third, use of thick cereal feedings.

Prognosis- Mortality about 20% or more. In cases seen at onset of condition, there should be practically no mortality.

D.S. is a baby boy six weeks old. He was admitted to the hospital on January IO, I934. with vomiting as the chief complait by the mother. The baby at birth weighed seven pounds. The delivery was normal. At age of one month he was circumcized and he vomited that evening. That was two weeks before admittance. Since that time, he vomited following approximately one-third of his feedings, occasionally he vomited the entire amount but usually not. Formerly he had from seven to eight stools daily, at present only one or two. At one month of age baby weighed ten pounds, two ounces.

He was examined by a doctor in Tillamook, Oregon, not long ago. The doctor found a lump in the abdomen which he had never noted before.

For the last five days the baby was off breat feedings completely. They tried "Eagle Brand" and also S.M.A. Neither one was tolerated by the baby. Cow's milk and Dextri maltoseused. Baby usually retained the feedings about ten minutes. The vomiting occurred from ten minutes to three hours after feeding.

On examination the infant was found to be very malnourished with a dry skin, the muscle tones being alright, no tenderness or palpable masses, no visible peristalsis, and slight tympany.

Diagnosis- pyloric stenosis.

Medical treatment- The baby was first treated as a medical case. He was given atropine grs 1/150 twenty minutes a.c. Fluids in form of normal saline and 5% glucose were given subcutaneously.

When thick cereal was given, baby rolled the food out of his month Did not seem to know how to eat. He vomited repeatedly. After close observation of the patient for a day or two, one of the nurses had noted projectile type of vomiting which shot clear across the room. She also stated that she saw peristalic waves, but the doctors were not able to note this phenomena. The next day the baby kept down the majority of his feedings. The following day he vomitedhis six o'clock morning feeding about three hours later. The next day the vomiting was more frequent and

and the following day he vomited just before every feeding which is typical of pyloric stenosis cases. On that same day his temperature went up to 103 degrees F.

He was taken to surgery the following day. Returned from surgery in a rather shocked condition.

For three or four days the baby had nothing by mouth. Normal saline was given subcutaneously twice daily. Then one-half ounce of karo water 5% and barley water was alternated every hour for a fewdays. Then on formula three ounces every three hours.

The baby seemed to be getting along very nicely for some time when bloody mucous was noted in the stools and the temperature became sub-normal. The incision appeared fairly clean. Two days later the baby vomited considerably and fecal matter was noted in the drainage on the dressing. The edges of the wound had become mascerated and sutures began to pull through.

It was learned that by some accident the mucosa had been cut through which had caused a fistula to form.

The baby was taken to surgery for closur of fistula. The baby's condition was only fair. The drainage became more and more profuse- the wound had broken down again. These were reenforced by sutures and strapped with adhesive.

The patient ate greedily but regurgitated much of his feedings. The drainage from the fistula became very extensive. Patient had become very dehydrated and fluids ere ordered subcutaneously.

The baby was taken to surgery again and the fistulous tract was dissected out and the intestine closed with two layers of sutures. The following day subcutaneous injections of normal saline ere given three times. Patient absorbed the fluids very slowly.

In two or three days the fistula was open again. The wound was entirely broken down. He was taken to surgery again where fistula was closed again and the wound edges were brought together with silk worm

sutures. No good results as the patient was getting weaker all the time.

Dietary treatment- The baby was put on karo water 5% four ounces every four hours when first admitted. Then a formula of:

Whole boiled milk	ounces	I2	
Water	"	6	
Lactic acid	drops	36	
D.M.	ounces	¾	6 x 3 oz.

The baby lavaged with 50% normal saline solution and then gavaged with formula at each feeding. This was done for only one day as the following day thick cereal feedings were ordered. Three ounces in six feedings was given.

When he was able to tolerate fluids after his operation, he was put back on the above formula.

Nursing care consisted chiefly of keeping the patient as comfortable as possible. Daily b ths ere given, dressings changed whenever necessary.

Pronosis- Child expired.

CELIAC DISEASE

Celiac disease is a chronic intestinal indigestion principally of fat intolerance. It is comparatively rare, but is more numerous in the southern states than elsewhere in the United States. It is more frequent in girls than boys.

Etiology- Difficult to determine what role the diet plays in development of the disease. May follow after general infection, but not a specific cause. A rare sequellae of ordinary dysentry.

The disease uaually develops some time after infant has been weaned, usually during the second year of life. The child ceases to gain weight, becomes irritable, the abdomen distends, and stools gradually take on the characteristic featurs of being loose, not formed, but not water, more bulky than the food taken would seem to account for; pale in color, as free from bile, yeasty, frothy. The pale loose stool looks very much like oatmeal porridge or gruel and yellow with fatty acids and soap. In other instances the onset is dated from diarrhea or dysentry from which the infant has never completely recovered. May have from four to eight stools daily.

Unless the condition is controlled, the infant wastes to a marked degree. The extremities become very thin with distended abdomen giving the child a spider-like appearance. There is muscular weakness-young children may become bed-ridden. Growth of long bones is retarded. There is little or no fever.

Treatment. The essential factors in the treatment is the diet. The patients have an intolerance to fat of all types. Carbohydrates are more readily utilized than fats, but are apt to result in an increase in diarrhea. Dexrin, maltose, and dextrose can be taken in reasonable amounts. Tolerance for dextrose is the highest. Protein seems to be be well digested and absorbed. The irritable condition of the intestinal tract makes it unfavorable for any tupe of rough food.

The diet is made up largely of protein consisting of moderate amounts of dextrin, maltose and dextrose. Skimmed lactic acid milk with casein

or curds of skimmed milk forms a suitable basis for diet. In the beginning of treatment the infant may be given from one to two pints of skimmed lactic acid milk with one to three ounces of dried casein or curds from one to two quarts of skimmed milk. It supplies the necessary mineral salts and iron vitamines. This is not a complete diet and child can not be expected to thrive on it. It is suitable for only about two weeks at beginning of treatment. As character of stools improves, addition should be made to diet. Cod liver oil, one to two teaspoons a day may be added. Strained orange juice at least two ounces per day should be given.

The next addition should be dextrose, beginning with one-half ounce daily and increasing gradually to two ounces. Can be built up to six or eight ounces. There should be no further addition for a number of weeks.

If child is doing well, one to two tablespoons of scraped rare beef or one to two egg whites may be added daily..

For some unexplained reason, ripe bananas are well tolerated. As many as four daily seem to be tolerated. Then thoroughly cooked pureed green vegetables as spinach, peas, string beans, tomatoes, and carrots- From four to six ounces of vegetable puree daily may be given. No further change in diet for number of months. When fats may be cautiously added, first begin by substituting whole egg for white and gradually whole milk. No butter should be allowed. If all goes well, starches in form of farina, cornstarch, and barley gruel may be added and dry toast. This type of diet should be continued for a period of years.

Essential in treatment is to get the parents to realize that quick results cannot be expected. That any attempt to advance too rapidly an addition of variety of diet, may result in serious relapse and undo all the good work done for a number of weeks or months.

Also that proper attention be paid to general hygienic surroundings of child, fresh air, sunlight, proper clothing and sufficient rest all tend to promote recovery.

Prognosis- It is difficult to estimate the mortality as the course is so prolonged. Dr. Still states that in a series of forty-one cases

under his care six were known to have died. In two of these death followed as a result of complications.

V.A. is a boy seven years old at present. This child began to have trouble at three years of age. The first abdominal symptoms came after an attack of Whooping Cough. Before that he had gained more than required- weighing 36 pounds at 3 years. Since then he has lost weight continuously even though his appetite has been good. He began to complain of pain under the right costal region which has at times been so severe that he screams with pain. Nausea and vomiting is a frequent accompaniment of these attacks. He is very constipated- movements being only after an enema. Has had numerous convulsions.

This child has been seen by Dr. Bridgeman in Pediatric clinic several timessince July 18, 1931. The chief complaint at that time was a continual loss of weight. He weighed 29½ pounds at that time and went down to 26 pounds in four months. The mother told the doctor that some physcian had diagnosed the case as a Celiac. The patient has been on a celiac diet for some time. Diet consisted of cottage cheese, skim milk and scraped beef. The child eats this all right, but never is satisfied. One banana was added to diet. The baby cries and screams a great deal of the time. When seen later at the clinic, disposition of child had improved a great deal, but still screams at times. The child's condition appeared much better, but he still wants to eat all the time. Pureed vegetables were added to the diet. Patient is not responding to addition to diet.

A month later child still shouted and cried and has not been any better. Was to continue on same diet. Returned in five months with no apparent improvement. Gained only one-half pound in six months. The skin is dry and wrinkled. The child was transfered to Doernbecher hospital for treat- ment. He has strabismus of the right eye.

After being in the hospital for a few days, his condition was good. He was put on a protein diet. Gained about four pounds since admittance which is about one week. Patient was dischaged and sample diet was given to the parents. His general condition was fairly good.

Three weeks later returned to clinic. No gain or lossin weight. Child is very constipated-abdomen very large. To continue on the same diet.

Returned in two weeks. There was a loss of one pound in weight. Child has not been active and cries continually for food. His mother says he eats excessively. The stools are still quite hard, dark colored, and foul smelling. His present diet is as follows:

Breakfast	Lunch	Dinner
Mead's cereal ½ cup	Scraped beef T 2	One slice dry toast
Two white's of egg	Baked banana I	Mead's cereal ½ cup
One cup buttermilk	One cup buttermilk	Sweet milk ½ cup
Slice of dry toast	One slice dry toast	Protein milk I cup
Orange juice ½ cup		Cod liver oil t I
Cod liver oil t 2		

He has no nausea or vomiting nor abdomenal pain.

Child returned in about a month. There was a loss of one-half pound. Mother reports that child has been stealing lunches at school. Mother was advised to give child another banana in his lunch and try to control diet correctly.

He returned in one week later with loss of another half-pound. The child did not steal any lunches the past week. Abdomen does not protrude as it did a week ago. Child feels better. Was instructed to continue on diet as before.

He was again admitted to the hospital on June 3, 1933. The chief comp plaint was convulsions--loss of consciousness. The child was well until yesterdayin the afternoon. About 5 PM he became irritable. Went to bed and fell asleep about 8:30. About IOo'clock his mother was attracted by peculiar sounds coming from the boys (grinding of teeth). She found him in a convulsion, arms and legs were rigid, could not be moved. The eyes were rolled upward. Child has been unconscious since onset. Vomited repeatedly and had several bowel movements. The child was taken to the Emanuel hospital where the mother was told that nothing was the matter with the child. Has been in a state of varying rigidity since onset last nite.

On examination arms were found quite rigid , held in neutral position, left thigh and leg held absolutely rigid in extension, right leg is moderately rigid with negative Kernig sign, no tendon reflexes obtained, and bilateral Babinski positive.

Lumbar puncture done the following day. The fluid was clear with no increased pressure. The child was in a comatous condition for three days after admittance. The child is very dehydrated. A subcutaneous injection of fluid was given/ His condition was improved on the third day. Two days later marked improvement with a voracious appetite. Four days later he was discharged in excellent condition.

Returned to clinic about a month later. Mother stated that he does not sleep. Child looks like an extreme malnutrition case. He is seven years old. He seems to know the days of the week and can count around twenty.

Third admission to hospital on December 24, 1933, cane in with convulsions. Whenever there is some dietary indiscretion, the patient goes into convulsions. The day before he entered the hospital, he ate some nut meats. Three hours later he had pain in his head, and vomited fecal material. There were nuts present in the stools. Immediately he began the muscular spasms. Had three such seizures since onset. He was very apethetic, refused to answer and very emaciated and dehydrated.

In the afternoon the child became more alert and began to talk. Had no convulsions since admission. The circumference of the abdomen was 22½ inches. Dr. Bilderback advised a study of the gastro-intestinal tract.

Later colon fluroscopy revealed dilated and tortuous loops, however, not the extreme dilitation of a Hirshsprung disease. Dr. Bueerman felt that this was possibly a case of congenital bands. An x-ray using air injectionshowed dilitation of transverse colon with definite obstruction at the hepatic flexure and a slow passage through the transverse colon.

The child went to surgery a few days later for freeing of the paracolic bands. The abdomen was opened through a left low paramedial incision. The cecum, as far as the hepatic flexure, was dilated. The appendix

seemed normal. The hepatic flexure was pulled high up in the left fland by very dense non-elastic, parietocolic bands which did not give under moderate amount of tension. After due exposure this band was sectioned permitting the ascending and transverse portions of the hepatic flexure to open to its full size. The descending colon and sigmoid were collapsed and in a state of spasm during the operation. The splenic flexure seemed bound down posteriorly and this was freed with some difficulty, permitting the passage of gut around the splenic flexure with greater degree of ease. There was a very deep recto vesical fossa which was obliterated with silk worm sutures, suturing the anterior portion of the rectum to the base of the bladder thus obliterating the Cul de sac. The appendix was not removed because of the length of the operative procedure. Closure in the usual manner was done.

Final diagnosis- congenital cecal bands.

Medical treatment- glucose and normal saline injections subcutaneously were given at different times while in the hospital. Chloral hydrate grs VIII per rectum on the third admission. Had ultra-violet treatments for seven days.

Dietary treatment- While in the hospital, child was on a diet of cottage cheese, scraped beef, bananas, raw and baked, whites of two eggs daily, protein milk, given in three feedings. Water was given ad. lib.

Later buttermilk, toast, jello, lean meats and broth, yeast 4 teaspoons, viosterol drops XV, and fat-free milk to 750 ccs was added to the diet.

After the operation child was put on a regular diet with egg nogs between meals.

The child's parents are of German decent. He has one brother.

Nursing care consisted mainly of the routine care given in the hospital for care of patients with convulsions and post operative. Also trying to keep the child as comfortable and happy as possible.

Prognosis- Good. Child and mother seen about two months later. The child appeared healthy looking, with rosy checks. Has gained some weight. Mother stated that child was able to eat everything that was given to him.

ALLERGIC DISEASES

Allergy, strictly speaking, means abnormal reactivity. Here we will use it in phenomenas of hypersensitiveness to specific substances, by antigen antibody reactions. So far as is known only proteins can act as antigens.

Classification of allergic diseases:

I. Hypersensitiveness of infection

2. Anaphylaxis

3. Serum diseases

4. Various forms of hypersensitiveness, such as eczema, asthma, etc.

Age incidence:

I. Eczema, generally appears within first six months and usually is confined to two to three years.

2. Typical uticaria and angioneurotic edema are uncommon before latter part of first year, but may be seen at any time.

3. Asthma may begin at infancy, but in most instances onset is after third or fourth year. Not uncommon for a patient to recover from eczema at end of second year and fall a victim to asthma which lasts through out childhood and then to superseded by hay fever.

ECZEMA

Eczema is an acute, subacute, and chronic inflammation of the skin. It is characterized by erythema, papules, vesicles or pustules as primary elements, with seconday changes such as exudation and crusting with extreme itching and burning.

After the second year the predisposition ceases and throughout childhood it is relatively uncommon.

Etiology- Two factors of particular importance in cause-

I. Condition of hypersensitiveness usually to foods, especially to proteins.

2. Delicate character of skin in infancy.

No sharp distinction between allergic and irritative forms, as both

factors are operative in most cases.

Accessory factors which play a part in production of eczema:

I. Is rare in infants who are poorly nourished.

2. Especially common in those who are obese.

3. Aggravated by over feeding.

Local irritants as cause:

I. Atmospheric heat causing excessive amount of perspiration.

2. Cold dry air and winds.

3. Use of hard water.

4. Strong soaps.

5. Irritation from clothing.

6. Want of cleanliness or irritating discharges from mucous surfaces.

Symptoms- Starts usually on face, cheeks, forehead and scalp. May occur on any other part of body. Rash on trunk and extremities usually occurs in patches.

Starts with small, red papules: then a weeping stage is reached with oozing serum. Secretion dries and forms thick gummy crusts. The surface bleeds readily dur to scratching caused by itching.

Spreads from cheeks to forehead, scalp, etc. and similar lesions are formed. Mild form may be confined to cheeks and forehead.

Treatment- Local. Relief of skin irritation. Soap and water should not be used. Olive oil baths are best. Then ointments or lotions are applied. Sometimes wet packs are used usually during the weeping stage. Aluminum acetate solution I:IO as wet packs. Ointments and pastes are not often tolerated during this stage.

Dietary treatment- Avoid over feeding. Decrease in carbohydrate intake and ant proteins which seem to aggravate the rash.

Prognosis- Good. Usually out grow it after two or three years.

M.A. is a baby girl thirteen months old. She entered the hospital January 30, 1934. This child has had a skin erruption ever since the first time the mother waw the baby after birth. This skin irritation began on the forehead and gradually had spread over the entire body. She was breast-fed until she was twelve months old. Was given cod liver oil until she was three months old, but none since. Had orange juice at times all the time; cream of wheat for six months, until a month ago.

Two months prior to her admittance skin tests had been done for orange juice, wheat, applesauce, egg yolk, cow's milk, mother's milk, and arrow root cookies. She reacted to wheat.

The mother used Calomine lotion, Zinc Oxide, and various other things on the skin. Child had been constipated a great deal of the time. Had no trouble with ears, throat, or gastrointestinal tract.

The skin was quite red with vesicles from which an exudate was oozing and crusts were formed from scratching the irritated areas.

The laboratory findings for urine were: appearance cloudy, reaction acid, pus +, and epithelium occasionally. Blood report: hemoglobin 93.3%, gram 12.87, red blood count 4.43, white blood count 10,500, polyneutrophils 42, polyeosinophils 8, and S.L. 41. There was a slight variation of temperature above normal each day.

The father and mother are both living and enjoy good health. The father is 24 years old and the mother is 25 years old. This is the only child in the family. Her grandmother has hay fever and asthma. The grandfather has heart trouble, but there is no tuberculosis history in the family. The baby has had no previous illnesses.

Diagnosis was Infantile Eczema.

Medical treatment- When the child first entered, she had a special Rx lotion with calomine as the base. This was used on her body during the day and night and also on her face at night. In the day time she had continuous wet packs of Burrow's solution to scalp and face. Her scalp was shampooed every morning with castile soap. After ten days the wet packs were dis-

continued and the same Rx lotion which was used on body and face at night was used on face and scalp during the day. A coat was put on and allowed to dry, then another coat of lotion was applied and allowed to dry so that there was a well plastered coat on all the time. About three days later Lassar's paste with tar was applied to face and neck at night only. A great improvement was noted.

Dietary treatment- On admittance she had a formula of sobee, five ounces, water 27 ounces, and D.M. 2oz, Eight ounces at each feeding were given in four feedings. Three days later sobee formula was discontinued and child was put on cream of wheat cereal. She took about a cup and one-half of it at each feeding, given in four feedings. The cream of wheat was boiled in water, and given straight being thinned with warm water. It was found that cream of wheat did not irritate the skin condition even though the skin test done by some out side physician showed a reaction to it. Then beef broth was added to the diet twice a day and was tolerated. The different vegetables were tried out and she tolerated carrots, peas, and string beans. Orange and tomato juices were found to be very irritating to the skin condition. She seemed to tolerate pineapple juice very nicely.

We were not able to experiment with all the different dinds of foods as we would have liked too, as her parents live out of town and they were very anxious to take her home when they found how much the skin condition had improved.

The nursing care of this child was very difficult because of the intensive itching of the skin caused her to want to scratch very much. We did not like to restrain her completely in bed as she seemed so happy to be up in her crib and watch everything that was going on in the nursery. She was just beginning to talk and seemed to grasp everything that was said. Her arms were restrained were arm cuffs so that she was not able to scratch her face with her hands. She soon learned that she could rub her face against the sides of the crib. She had to be watched very closely. The rest of the nursing care was to see that her treatments were carried out

accurately and on time. Also kept comfortable and happy .

Prognosis- Good. The father and mother both appeared very intelligent and cooperative. I believe that with a carefully planned diet and good care of the baby the mother, that the skin condition will continue to improve readily.

K.D. is a baby boy six months old. He was first admitted to Doernbecher hospital on December 14, 1933. Eczem was the chief complaint. The patient was a full term baby weighing nine and one-half pounds with no difficult labor period. No breast-feeding was attempted. He was immediately put on Eagle Brand. Changed to cow's milk at weeks of age and has been on it ever since. He has had cod liver oil and tomato juice for two months. Developed skin erruption about the face when six weeks old just before being taken off Eagle Brand. This itched and baby scratched it causing it to become worse. It now has extended to neck and arms, but is not marked in those areas which are not accessible to irritation by scratching.

Mother used castile soap and Johnson's baby powder before erruption developed, but since has used boric acid and "Kiddy Cure" soap. She used zinc oxide, sulphur and lard, and olive oil on face. At times he would get some relief, but generally condition has been progressing worse.

Baby seems quite healthy and is gaining well. Has hadno colds, constipation or diarrhea. Baby has had castoria occasionally. Mother stated that baby seemed "nervous" even before skin condition developed.

Temperature on admittance was 99.4 F. The urine findings were: color yellow, appearance clear, reaction acid, amorphous . pus occasional, and epithelium . Blood report: hemoglobin 96.7, grams 13.35, red blood count 4.36, white blood count 15,050, polyneutrophils 58, and S.L. 28.

Family history- This is an only child. His father and mother are both living and well. They are both very devoted to the child and are very anxious for his recovery. They take very good care of him.

Diagnosis- Infantile eczema.

Medical treatment- Rx applied locally over all of body. Oil baths are given in the morning and evening. Phenolbarbital grs 1-8 every four hours for restlessness. Two days later Rx changed to Rx lotion with Calomine as the base. About a week later Potassium Permanganate 1-2500 solution as wet packs was applied to face and scalp at night. Lassar's

paste in the morning and then cleansed off with olive oil at four o'clock in the afternoon.

Ten days later all treatment was discontinued for twenty-four hours, and an 50% alcohol pack was applied to back. Then the wet packs were again applied to face and neck. These were discontinued in three days. Lassar's was again applied.

Hot saline irrigation of left ear three times a day followed with Rx nose drops. Then Lassar's paste was discontinued. Lassar's with crude oil tar was applied to face and neck. Slow improvement of skin condition noted.

Dietary treatment- Child first put on a Sobee formula of normal dilution. About three weeks later formula was changed to Smaco non-allergic milk sixteen ounces, water twenty-four ounces, and D.M. two ounces. Within three days it was changed to:

Smaco non-allergic	ounces	28	
Water	"	I2	
D.M.	"	2	5 x 8 oz.

Corn meal one tablespoon twice daily added. Fluids forced to I000ccs.

Soon changed again to Sobee-six ounces in five feedings. One vegetable was added daily to diet

The skin condition gradually improved under treat ent and there was a gradual gain in weight. The temperature was elevated at times with no apparent cause.

It was noticed that the baby favored his right leg, he cried at times when it was touched. An x-ray was taken, but did not show any pathology.

The baby was discharged to return to clinic in one month.

In less than two weeks child was admitted again to the hospital. Swelling of the right knee was the chief complaint. The family noted baby seemed to favor the right leg shortly after he got home. He had high temperature and cried all night. The knee became swollen and red and had profuse diaphoresis. The skin gets better at times and then worse.

The child was examined by an orthopedic surgeon who believed that

the condition was an epiphysis with ostermyelitis of lower end of right femur.

Was taken to surgery the following day. Under an ether anesthetic an incision was made over the lateral aspect of the right femur and the lower portion of the bone just proximal to the knee joint found to be dead and necrotic. No free pus was found and a window about an inch in length was made in the bone. Vaseline gauze dressing and posterior splint was applied.

A few days later the nurse noticed that the patient seemed to favor his left leg. He cried when it was moved. An x-ray of both legs was taken. It showed a marked ragginess throughout distal epiphysis of right femur with some evidence of periostial proliferation along the posterior portion of shaft. The left leg also showed some evidence of destruction at distal epiphysis of femur. These findings were indicative of a suppurative epiphysitis. Evidence of some rachitic bone changes also.

The child continued to be very irritable and cried the minute anyone came near his crib. A few days later the gums were found to be very red and swollen. Impression by some of the staff doctors that the patient had a scurvy. His temperature went up. His ears on examination revealed bulging and redness. A bilateral myringotomy was performed.

Same treatment for skin condition was carried out as before.

Was on the same formula as before until a short time before being discharged which was:

Whole milk	ounces	28
Water	"	7
Karo 50%	"	I 5 x7 oz.

Cereal twice daily, vegetable and fruit puree once daily, one egg yolk daily, ground liver twice weekly, yeast two grams and orange juice three ounces daily.

When scurvy was suspected, orange juice four ounces three times daily was ordered. After two or three days the symptoms disappeared.

Nursing care- the hands had to be restrained at all times because

the child wanted to scratch his face at every opportunity. It took much skill and practice to be able to do morning care on him and not have the baby scratch himself. One time of scratching will undo perhaps two or three weeks of hard work on the part of the nurse. He required a great deal of time as his treatments took quite a lot of time. He had such a sweet disposition that one always wanted to spend as much time as possible with him.

He was discharged in good condition.

Prognosis- Good. The child returned to E N T clinic in four dats after discgarge to check on ears and they were found dry. also at Orthopedic clinicwhere the dressing was changed. No drainage from wound was noted. The mother changes the dressings at home. Child's knee motion is excellent.

In conculsion, I would like to add that among the cases studied I have found that malnutrition due to improper feeding plays the greatest part in the causes of special feeding problems. Allergic disease caused the next largest item, with Eczema being the chief cause.