The results were encouraging without being phenomenal. They were a little better than those obtained with the usual antiseptics or optochin and in a parallel series of cases treated by older methods. No eyes were lost either in experimental cases or in controls, except those that had been severely burned by molten metal. The cases treated with sulphapyridine drops had the advantage of quicker recovery and less dense scarring of the cornea. Several of the control cases failed to clear up or recurred, and were finally cured by administering sulphapyridine drops, in one case assisted by subconjunctival injection of the same solution. In a proportion of the cases sulphapyridine has been given orally instead of or in addition to the drops.

During the last few months a number of really severe cases have appeared, and it became evident that only by frequent instillation of the drops could the condition be prevented from deteriorating. A continuous drip was thought to be necessary to effect a cure, and this led to the use of sulphapyridine powder just as one uses calomel powder in phlyctenular ulcers. By this means 3 cases with purulent regurgitation from tear sacs were successfully healed; the tear sacs were subsequently removed—2 after healing of the cornea and 1 while healing was in progress.

Subconjunctival injections of soluseptasine (10%) have been given in a small number of cases in which there was no apparent discharge from the eye and conjunctival redness was moderate. One case—a typical serpiginous ulcer in a coal-miner, with early collection of pus in the anterior chamber—was given such an injection and the patient was allowed to go home—a risk one could never have taken in the past. Two days later the hypopyon had cleared and the ulcer had healed.

Accessory Forms of Treatment

In addition to the sulphonamide every case has had atropine drops and some form of cautery of the ulcer. It is true that some cases are cured by these means alone, but many eyes have been lost when these forms of treatment, aided by every art and antiseptic, have been carried out. It may be possible to omit cautery of the ulcer when using a sulphonamide: that and several other permutations and combinations of sulphonamide treatment remain to be tried.

Suggested Routine Treatment

In the light of experience so far gained the following is suggested as an outline of treatment, to be modified as further experiment may indicate:

1. The patient should as a rule be admitted to hospital.
2. A smear and culture are taken.
3. Atropine is an essential part of treatment, and cautery may prove to be so (see above).
4. In the absence of purulent discharge, possibly even with slight discharge, a subconjunctival injection of two or three depots of soluseptasine (10%) or sulphapyridine (0.07%), about five minims to each depot, should be given. Possibly stronger solutions of sulphapyridine may yet become available.
5. When the organism is known the appropriate sulphonamide treatment should be chosen. For the pneumococcus, sulphapyridine powder should be dusted lightly over the cornea three times a day. For a streptococcus, sulphanilamide powder may be used or soluseptasine continued as drops or by subconjunctival injection. For *Staphylococcus aureus*, sulphathiazole would seem to be the appropriate drug. It has been used in the form of drops in this experiment as 0.1% solution in 1.4% saline, but no definite opinion can yet be offered regarding its superiority over sulphapyridine.

Fine powder (200-mesh) causes no discomfort to the patient, though considerable conjunctival redness arises. So far the practice has been to precede the dusting by one drop of 1% decaine. Any discomfort complained of has been relieved by removal of the pad and bandage. There

is no need for this dressing unless the cornea erodes deeply and requires external pressure.

The total number of cases treated, apart from controls, is 41. Details of cases and comparative tables have not been given, as it is felt that brevity is preferable at the present time.

The two kinds of drops and the sulphapyridine powder were supplied by May and Baker, Ltd., to whom my thanks are tendered. My thanks are also due to the ophthalmic house-surgeons and nursing staff at the Guest Hospital and Eye Infirmary, Dudley, and to the matron and nurses at the Worcester City and County Eye Hospital.

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THE CALCULATION AND PRESCRIBING OF INFANTS' FEEDS*

II. THE NEONATAL PERIOD: PRACTICAL POINTS IN THE REGULATION OF FEEDS IN MATERNITY HOSPITALS AND HOMES

BY

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Many experienced sisters in maternity hospitals deal very successfully with feeding problems without the aid of any schedule of feeding, but their experience has to be bought at the price of many mistakes, and is not easily passed on to others unless it can be formulated in some general principles. At a time when many new maternity homes have been established in reception areas, and large numbers of newborn babies must be coped with by midwives with occasional help from a general practitioner, some practical suggestions may be helpful.

Routine of Feeding

Full-term babies are best put to the breast as soon as the mother has had some hours' rest after her labour—say about six hours after birth—and thereafter fed at regular intervals. But there is no object in keeping the baby at the breast for more than a few minutes at a time until the milk has "come in." Three-hourly feeding, giving both breasts at each feed until lactation is fully established, probably suits a larger proportion of newborn babies than a four-hourly routine, but against this must be set the greater amount of rest allowed to the mother by a four-hour interval. In any case nearly all normal babies can be started on five feeds in the day at four-hourly intervals before they are a month old. The time spent over a feed should never exceed thirty minutes and should seldom exceed twenty minutes. Many strong babies will soon take all they need in eight to ten minutes. Long feeds exhaust baby and mother and generally lead to an inadequate intake.

A common cause of lethargy and failure to suck is a subnormal temperature. When a lethargic baby develops slight oedema one can be fairly sure the temperature has fallen to a low level, perhaps on the previous day; moreover, if a baby shows little or no loss in weight after birth he should be examined for oedema. The keeping of a temperature chart for each baby in the maternity ward is strongly advised. Underfeeding, too, is often a cause of lethargy and poor sucking, and hence may establish a vicious circle; but every lethargic baby merits

* Part I of this paper appeared in last week's issue at page 841.

careful consideration, as failure to suck satisfactorily is a symptom in many pathological conditions in the newborn, including intracranial trauma. Midwives are generally familiar with the necessity for having mother and baby in a comfortable position during feeds and with the fact that in the early days many babies need gentle encouragement to suck, and know that if the breast is hard and yields with difficulty manual expression may be temporarily necessary.

Quantitative Requirements during the First Ten Days of Life

Daily weighing of the newborn baby is much to be desired in order to ascertain his progress. If a breast-fed baby is making satisfactory progress and showing normal vigour it is unnecessary to attempt to regulate his intake, as he will do this quite well for himself. Test feeds are desirable, however, if he is not sucking well, if he is not gaining weight fairly steadily from 3 days old, if he loses more than, say, 8% of birth weight (or about 1½ oz. per pound birth weight), or if he vomits or passes an excessive number of stools. If accurate scales are not available a rough estimate of the day's intake may be made by expressing and measuring the whole of some feeds.

I have suggested a formula based on the baby's birth weight whereby an approximate estimate can be made of the calorie requirements for the first ten to fourteen days of life (Mackay, 1941). On the seventh day (6 days old) and during the second week of life the requirement for twenty-four hours is assumed to be 50 calories per pound birth weight. This calorie allowance is divided by 7, and, on the first day of life the baby is allowed 1/7 of 50 calories per pound birth weight, with an increase of the same amount daily until 6 days old. On this basis a baby by the second week of life would receive 2½ oz. of breast milk per day per pound birth weight. A premature baby doing well and seeming hungry would be allowed more by the end of the second week, all increases being made gradually. As an example, a baby 4 lb. at birth should, according to the formula, have 200 calories on the seventh and subsequent days, or, in order to have a figure divisible by 7, let us say 210 calories; during the first day he would receive 30 calories, or 1½ oz. of breast milk, and this would be increased by 30 calories daily till he reached 210 calories, or 10½ oz. of breast milk, daily at 6 days old. This formula has been shown to give good results with hand-fed premature babies, but it must be remembered that most of the hand-fed premature babies were started on human milk from another mother. The normal full-term baby, however, fed on the breast, and making normal progress, gets considerably less than the formula requirement during the first two days of life, but after that period his average intake is somewhere around that shown by the formula, with large individual variations resulting probably in part from variations in the calorie value of colostrum and early breast milk (Langstein, Rott, and Edelstein, 1913). If it is known that a mother cannot feed her baby, and that consequently he has to be hand-fed from the outset, he may be fed in accordance with the schedule from the first day if breast milk is available. A rather slower start is generally necessary if he is wholly artificially fed, and no harm is done by giving water only to a healthy full-term baby during the first twenty-four hours if so desired.

Calorie Value of Colostrum and the Use of "Standard" Mixtures of Artificial Feeds

For practical purposes the round figure of 20 calories per fluid ounce can be taken as the average calorie value of colostrum and early breast milk, like that of milk after lactation is established. The differences between indi-

vidual samples may be large, particularly during the first few days after parturition, and it is said that on the first day the calorie value of colostrum may even be double the average value for breast milk (Langstein, Rott, and Edelstein, 1913). On this ground it would seem illogical if artificial feeding has to be adopted, to give the newborn infant dilute feeds of low calorie concentration. In practice it is found that if this is done the baby is apt to receive an insufficient amount of food because he tires before he has taken the large bulk necessary. Babies from the first day of life can usually take and tolerate feeds of suitable character with a calorie value of 20 per fluid ounce, provided the quantities are carefully graded; and when artificial feeds have to be given I strongly advocate the use of "standard" mixtures of this calorie value (see Part I, p. 842), whatever the infant's birth weight. The quantity of artificial food must always be carefully graded, however, with no sudden large increase. For example, if till the fourth day of life the infant has been put to the breast but has obtained little food he should start with a small supplement, and not suddenly receive the full allowance given in the schedule of feeding for this age, or an upset and a loss of weight are risked. As to the character of the feed, I suggest for premature and feeble babies sweetened condensed milk, 1 in 5 by volume, and for vigorous full-term babies half-cream dried milk with sugar—either the powder already sweetened by the manufacturer and containing about 27% of the calories in added lactose, or unsweetened milk powder to which sugar must be added when the feed is mixed. If these are not available, and full-cream dried milk must be used, a large proportion of the food must be given as added sugar in order to render it as easily tolerated as possible. Of the calories ordered 50% may be in the form of added sugar, in which case the feed would consist of equal volumes of "standard" dried milk mixture and "standard" sugar solution. But the use of full-cream dried milk entails a careful watch for any symptoms of digestive disturbance which necessitate reduction of intake. Since roller-processed milk with its poorly emulsified fat must always be freshly mixed with water for each feed, the quantity mixed will often have to be in excess of that required for a very young baby, since it is impossible to measure fractions of a drachm of dried milk with any semblance of accuracy. In the case of premature and feeble babies no artificial feeds can approach the results achieved with breast milk.

Vitamin and Mineral Adjuncts

Vitamin D in some form should be started as soon as the baby is well established on his full calorie requirements, except during the summer, when it need not be given to full-term babies lying out of doors daily. Vitamin C should be started next, and it is desirable that all babies, breast-fed and bottle-fed, should receive an iron supplement from about 2 till 12 months or more old.

The Use of Feeding Tables: (a) For Full-term Babies

The use of feeding tables, such as those here given, saves time and trouble in repeated calculations, and in a maternity hospital such tables hung in the ward kitchen will do much, provided they are intelligently used, to keep the feeding on the right lines. It is assumed that all foods given provide 20 calories per fluid ounce. In Table I are shown the volumes of food, according to the schedule, required for babies of different birth weights for each of the first seven days of life. The total for each twenty-four hours is given and also the volume required in each feed, according to whether five feeds or six are taken in the day. For breast-fed babies such a schedule is chiefly of use from 3 days old and onwards for checking the intake if they are not making normal progress, and should prevent mistakes in diagnosis between overfeeding and

TABLE I.—Scheme of Feeding for the First Seven Days of Life (Quantities to Nearest Quarter-ounce)

Age:	1st Day of Life			2nd Day of Life (1 Day Old)			3rd Day of Life (2 Days Old)			4th Day of Life (3 Days Old)			5th Day of Life (4 Days Old)			6th Day of Life (5 Days Old)			7th Day of Life (6 Days Old)		
Fraction of 2½ oz. per lb. birth weight	$\frac{1}{7}$			$\frac{2}{7}$			$\frac{3}{7}$			$\frac{4}{7}$			$\frac{5}{7}$			$\frac{6}{7}$			$\frac{7}{7}$		
Birth Weight lb.	In 24 Hours		Per Feed	In 24 Hours		Per Feed	In 24 Hours		Per Feed	In 24 Hours		Per Feed	In 24 Hours		Per Feed	In 24 Hours		Per Feed	In 24 Hours		Per Feed
	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.	oz.	5 f. oz.	6 f. oz.
5	1½	(1)	1	3½	(3)	1	5½	(1)	1	7	(1½)	1½	9	(1½)	1½	10½	(2½)	1½	12½	(2½)	2
5½	2	(1½)	1½	4	(3½)	1½	6	(1½)	1½	7½	(1½)	1½	9½	(2)	1½	11½	(2½)	2	13½	(2½)	2½
6	2½	(2)	2	4½	(4)	2	6½	(2)	2	8½	(2)	2	10½	(2½)	2½	12½	(3)	2½	15	(3)	2½
6½	2½	(2)	2	4½	(4)	2	6½	(2)	2	8½	(2)	2	10½	(2½)	2½	12½	(3)	2½	15	(3)	2½
7	2½	(2)	2	5	(4½)	2½	7	(2½)	2½	9	(2½)	2½	11	(3)	2½	13	(3½)	3	16½	(3½)	3
7½	2½	(2)	2	5½	(5)	2½	7½	(2½)	2½	10	(3)	2½	12½	(3½)	3	15	(4)	3	17½	(4)	3½
8	2½	(2)	2	5½	(5)	2½	7½	(2½)	2½	10	(3)	2½	12½	(3½)	3	15	(4)	3	18½	(4)	3½
8½	3	(2½)	2½	6	(5½)	3	8	(3)	3	11	(3½)	3	13½	(4)	3½	16	(4½)	3½	20	(4½)	4
9	3	(2½)	2½	6	(5½)	3	8	(3)	3	11	(3½)	3	13½	(4)	3½	16	(4½)	3½	20	(4½)	4
9½	3½	(3)	3	6½	(6)	3½	8½	(3½)	3½	11½	(4)	3½	14	(4½)	4	17½	(5)	4	21½	(5)	4½
10	3½	(3)	3	6½	(6)	3½	8½	(3½)	3½	11½	(4)	3½	14	(4½)	4	17½	(5)	4	21½	(5)	4½
Per lb. birth weight ..	Calories 7			Calories 14			Calories 21			Calories 29			Calories 36			Calories 43			Calories 50		

The volumes shown in this table are based on the assumption that all feeds given provide about 20 calories per fluid oz. Normal breast-fed babies take less than the quantities shown on the first and second days of life. No breast-fed baby progressing satisfactorily should be given a supplement. Babies wholly artificially fed should have a rather slower rate of increase than that here shown.

underfeeding—mistakes which are not infrequent. The figures for the first three days can be used for the prescribing of feeds for babies who have to be hand-fed throughout, though if no breast milk is available the increase should usually be rather slower than that shown in the table. It should be carefully explained to nurses that it is not desired to adhere to any schedule rigidly, that in the first two or three days of life normal breast-fed babies do not take the quantities shown in the table, and that babies making normal progress on the breast should certainly not receive supplements up to this schedule; also, as artificial feeds are less easily tolerated than the breast, supplements should always be started gradually.

The ordering of supplements for breast-fed babies in the first ten days of life involves various considerations. Generally speaking, a baby losing weight after the third day on account of underfeeding should have a supplement, but to this there are many exceptions. Some lethargic babies, when given supplements, tend to suck the breast less vigorously; but more commonly lethargy is increased by keeping the baby underfed, and vigour and sucking improve with the giving of a supplement. Great care must be taken to ensure complete emptying of the breasts, and if the baby does not do this with gentle encouragement

they should be emptied by hand. If a mother lacks confidence in her ability to feed her baby this may be a reason for avoiding supplements when possible. Big babies, weighing 8½ lb. and more at birth, often require temporary supplementing of their feeds until the breast secretion adjusts itself to their larger needs. An infant should not be discharged from hospital or pass to the mother's unaided care while he is underfed. A mother finding that her underfed baby is "not getting on" often abandons breast-feeding in the second fortnight after parturition, whereas, with a temporary supplement, full breast-feeding could often be resumed. If a supplement is given, the mother's co-operation should be sought in reducing and omitting it, if and when possible. Statistics showing a high proportion of babies discharged from hospital wholly breast-fed are valueless unless it can be shown that the babies were getting enough food.

(b) For Premature Babies

Table II sets out a schedule of feeding for premature babies, calculated from the formula. Some such table is essential in a busy maternity ward, as the time consumed in calculating each day's feed for each premature baby is wasteful, and mistakes are likely to be common. Here again the table is intended as a guide only: a baby wholly

TABLE II.—Scheme of Feeding for Premature Babies in the First Week of Life

Weight at Birth	Food by Formula					Daily Feeds: Number × Volume in Drachms (Calories in Parentheses)							Food in 7 Days (Oz. and Calories)
	On 7th Day		In 7 Days	Daily Increase		1st Day	2nd Day 1 Day Old	3rd Day 2 Days Old	4th Day 3 Days Old	5th Day 4 Days Old	6th Day 5 Days Old	7th Day 6 Days Old	
	Calories	Oz.	Calories	Calories	Oz. (approx.)								
2 lb.	100	5	400	14	$\frac{1}{2}$	$12 \times \frac{1}{2} = 6$ (15)	$12 \times 1 = 12$ (30)	$12 \times 1\frac{1}{2} = 18$ (45)	$12 \times 2 = 24$ (60)	$12 \times 2\frac{1}{2} = 30$ (75)	$12 \times 3 = 36$ (90)	$12 \times 3\frac{1}{2} = 42$ (105)	21 (420)
2½ ..	125	6½	500	18	1	$12 \times \frac{1}{2} = 6$ (15)	$12 \times 1 = 12$ (30)	$12 \times 2 = 24$ (60)	$12 \times 2\frac{1}{2} = 30$ (75)	$12 \times 3 = 36$ (90)	$12 \times 3\frac{1}{2} = 42$ (105)	$12 \times 4 = 48$ (120)	24½ (495)
3 ..	150	7½	600	21	1	$12 \times \frac{1}{2} = 6$ (30)	$12 \times 1\frac{1}{2} = 18$ (45)	$12 \times 2 = 24$ (60)	$12 \times 3 = 36$ (90)	$11 \times 4 = 44$ (110)	$10 \times 5 = 50$ (125)	$10 \times 6 = 60$ (150)	30½ (610)
3½ ..	175	8½	700	25	1½	$12 \times 1 = 12$ (30)	$12 \times 2 = 24$ (60)	$12 \times 2\frac{1}{2} = 30$ (75)	$12 \times 3\frac{1}{2} = 42$ (105)	$11 \times 5 = 55$ (125)	$10 \times 6 = 60$ (150)	$10 \times 7 = 70$ (175)	36 (720)
4 ..	200	10	800	29	1½	$12 \times 1 = 12$ (30)	$12 \times 2 = 24$ (60)	$12 \times 3 = 36$ (90)	$12 \times 4 = 48$ (120)	$10 \times 6 = 60$ (150)	$10 \times 7 = 70$ (175)	$8 \times 10 = 80$ (200)	41½ (825)
4½ ..	225	11½	900	32	1½	$10 \times 1\frac{1}{2} = 15$ (37)	$10 \times 2\frac{1}{2} = 25$ (62)	$8 \times 5 = 40$ (100)	$8 \times 6 = 48$ (120)	$8 \times 8 = 64$ (160)	$7 \times 11 = 77$ (192)	$7 \times 13 = 91$ (227)	45 (898)
5 ..	250	12½	1,000	36	1½	$8 \times 2 = 16$ (40)	$7 \times 4 = 28$ (70)	$7 \times 6 = 42$ (105)	$7 \times 8 = 56$ (140)	$7 \times 10 = 70$ (175)	$7 \times 12 = 84$ (210)	$6 \times 16 = 96$ (240)	49 (980)
5½ ..	275	13½	1,100	39	2	$8 \times 2 = 16$ (40)	$7 \times 5 = 35$ (87)	$7 \times 7 = 49$ (122)	$7 \times 9 = 63$ (157)	$6 \times 13 = 78$ (197)	$6 \times 16 = 96$ (240)	$6 \times 18 = 108$ (270)	55½ (1,113)

All feeds to provide 20 calories per fluid ounce. Supplements providing vitamin D and vitamin C should be started cautiously as soon as the baby is established on his feeds, and iron should be started before he is 2 months old.

artificially fed, or one who takes unwillingly and is inclined to vomit, or who has some abdominal distension, must have a slower increase; a baby obviously hungry and progressing well on breast milk may have the quantities telescoped, so that he receives 50 calories per pound birth weight by the sixth or even the fifth day. Whether the calorie allowance for the day is divided into a smaller or a larger number of feeds must depend on how easily the feed is taken. Abdominal fullness is probably the commonest early sign that the baby is getting rather more than he can well tolerate.

Many small premature babies have temporarily to be fed with pipette or spoon, or possibly with an oesophageal tube. Often administration of carbon dioxide and oxygen through a double nasal catheter for five to ten minutes before feeds increases depth of respiration, brings about better expansion of the lungs, and thereby increases the baby's vigour and his ability to suck. As premature babies are particularly likely to suffer from dietetic deficiency, vitamin D, vitamin C, and iron should be given early and regularly.

Extra Fluid

Some extra fluid over and above that contained in the feed is essential if the best results are to be obtained and inanition fever avoided. A full-term baby taking from the breast requires water given regularly for the first three to seven days, and continued thereafter if the baby takes it readily, as he probably will in hot weather or if living in a very warm room. The quantity will depend largely on the baby's desire to take, but should generally amount to 3 oz. to 4 oz. daily from the second to the fourth or fifth day of life. In my opinion it is undesirable to give sugar in the water.

Premature babies for the first five days of life should, if possible, be given extra water amounting to about as much as they get in their feeds: as the size of the feeds increases the amount of extra water can be decreased. This water is better given between rather than in the feeds, as big bulks are more likely to be vomited, and as it is undesirable to let the food allowance drop because the baby tires before he takes the whole of a large volume of fluid.

Day Sheets

If the best results are to be attained with premature and feeble babies full records are essential. For this purpose it is desirable to supply the nurses in maternity wards with ruled sheets for each infant, on which to record in columns hour by hour anything of importance. The records should include the quantity of food taken at each feed; extra fluid given, and its amount; each stool, and if abnormal its size and consistency; all vomits; the temperature record, if possible four-hourly; the baby's weight at the same time each morning; and any symptoms noted.

Discharge of Babies

If it can possibly be avoided babies should not be discharged from hospital and maternity homes underfed or until they are making satisfactory progress. They should be having not more than six feeds in the day: night feeds mean insufficient sleep for the mother. The conditions to which a baby is going should be inquired into: is the house intact?; will he be sleeping in a wet Anderson shelter or under a railway arch?; is there infection in the home?; can the mother obtain any needful artificial food at once, and are her financial circumstances such that she is entitled to obtain free milk for herself and the baby? The mother should herself have fed and washed the baby before discharge and have mixed any artificial feeds being given, so that she can undertake these things with confidence in her own home. If possible, the premature baby

should be getting its full requirements of vitamin D, vitamin C, and iron before discharge, so that the feeding may be something like plain sailing for the mother.

Summary

The routine feeding of newborn babies is discussed, and a formula is suggested whereby their approximate daily calorie needs can be calculated. The advantages are indicated of standardizing artificial feeds so that they contain 20 calories per fluid ounce. Feeding tables are given whereby the food of babies in the neonatal period can be ordered or checked, and indications for supplementing the breast milk intake are discussed.

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Medical Memoranda

An Unusual Sign in Fractured Skull

The following case may be considered worthy of record on account of its rarity.

CASE REPORT

A man aged 45 was admitted to hospital with a history of having fallen off a bus twenty minutes previously. He was semi-comatose, restless, and incoherent. The pulse rate was 100 and the blood pressure 120/80. The pupils were equal and active. Movement of limbs was apparently full. Babinski's sign was absent. There was bleeding from the left nostril, and he vomited once soon after admission.

Two hours later he was conscious and showed retrograde amnesia, remembering nothing after waiting for the bus. He complained of headache only. Lumbar puncture produced pure blood only. Radiographs revealed a fissured fracture of the occipital bone running down from the foramen magnum to the right of the middle line. Forty-eight hours after admission there was "oedema" of the whole scalp, with pitting on pressure. The swelling extended from occiput to sinciput, but did not spread beyond the supra-orbital ridges. There was no scalp wound, no obvious haematoma, and no localized inflammatory swelling such as is seen in Pott's puffy tumour. Twenty-four hours later the oedema had gone. He now complained of dimness of vision of the right eye, and investigation disclosed a complete vitreous haemorrhage with absence of the red reflex. The left fundus showed swelling of the nerve head to the extent of about 2D.

Lumbar puncture sixteen days after admission revealed clear fluid with no abnormal features except a stronger Fehling reaction. By this time there was a slight return of the red reflex on the right side with some corresponding return of vision, and the swelling of the left disk was subsiding. The headache improved slowly, and on discharge after seven weeks the patient did not complain of anything except slight giddiness and defective vision in the right eye.

DISCUSSION

The only similar case record found in the literature is that of a child reported by Gottlieb (*Medical Record*, 1935, 142, 511), in which with a fracture of the occipital bone there was a progressive swelling of the scalp and face attributed to an escape of cerebrospinal fluid extending into the subaponeurotic tissues from the epicranial space and thence to the subcutaneous tissues. Gottlieb suggests the name "cephalohydroma" or "extracranial hydrocephalus" for the condition. He was able to show radiographic evidence of fluid beneath the scalp, and though this proof is missing in our case it would seem likely that the condition is of the same nature.

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J. Parks (*Amer. J. Obstet. Gynecol.*, 1941, 41, 714), who emphasizes the rarity of true diphtheritic vaginitis in the adult, records a case of isolated diphtheritic vaginitis in a woman aged 22. The diagnosis at first made was acute Bartholinitis and secondary syphilis, until the patient passed a cast of the vagina in which virulent diphtheria bacilli were found. Rapid healing followed injection of diphtheria anti-toxin. Generalized constriction of the vagina ensued.