

presence of a trace of haemoglobin F; and the family study showing thalassaemia minor in the husband and thalassaemia major in their child.

Haemoglobin A₂ was not increased and the concentration of this haemoglobin fraction was in fact the same in

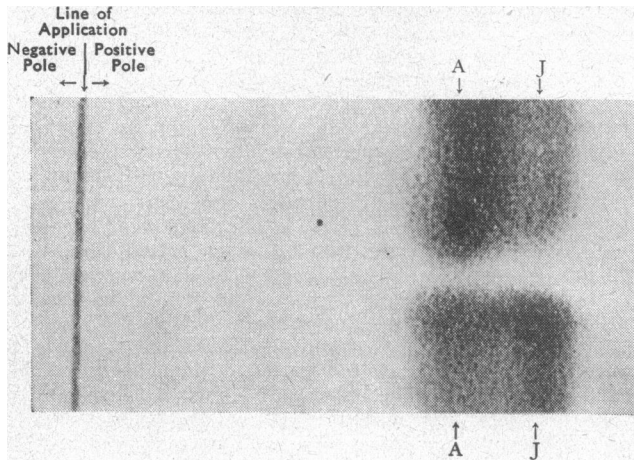


FIG. 2.—Comparison by paper electrophoresis at pH 8.6 of the haemoglobin of Mrs. K. (above) with a haemoglobin A+J control. At the end of the electrophoresis (hanging-strip technique) the paper was dried and the haemoglobin bands were photographed unstained.

Mrs. K. and in Mrs. P. However, in our experience a rise of the haemoglobin A₂ level may be indicative of thalassaemia, but a normal haemoglobin A₂ level does not exclude this condition.

Summary

Haemoglobin J was seen in two unrelated women of Gujerati-speaking Lohana stock. In one of them the haemoglobin J trait was present together with thalassaemia minor. There was no evidence for a detrimental interaction between the genes for thalassaemia and for haemoglobin J—that is, for a hypothetical haemoglobin J thalassaemia disease.

We are grateful to Dr. G. D. Adhia for referring the two children to us, and to Dr. R. P. Vasani for his help in collecting samples of blood. We thank Dr. V. R. Khanolkar, Director, Indian Cancer Research Centre, for the interest he has shown in this investigation and for his encouragement.

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The report of the committee of the Scottish Health Services Council appointed to consider the application to Scotland of the major recommendations of the Royal Commission on the Law Relating to Mental Illness and Mental Deficiency has now been published (*Mental Health Legislation*, H.M.S.O., Edinburgh, price 1s. net). The committee recommends the adoption in Scotland of the Royal Commission's two main legislative proposals—the removal of existing formalities for the admission and discharge of voluntary patients, and the removal of statutory distinctions between mental and general hospitals. The committee advises the retention, however, of the present Scottish system of requiring a sheriff's order before a patient is placed in compulsory care, and also the retention of the General Board of Control for Scotland as a body mainly to safeguard patients' interests.

BREAST AND NIPPLE PAIN IN EARLY STAGES OF LACTATION

BY

BRUNO GANS, M.D., M.R.C.P.

Consultant Paediatrician, Lewisham Hospital, London

It is well known that throughout Great Britain only about one-half of all mothers can breast-feed their babies for more than two months. Very probably the most important reason for this is genetic (Hughes, 1948; Dummer, 1949; Hytten, 1954; Wickes and Curwen, 1957). Other factors known to influence breast-feeding performance are the mother's socio-economic status (Illsley, 1953), her age and obstetric history (Miller, 1952), and her place of confinement. Delivery at home or in hospital (James and Coles, 1955), in towns or in small villages (Hughes, 1948; Royal College of Obstetricians and Gynaecologists, 1948; Westropp, 1953), are all known to have an effect on the mother's willingness or ability to breast-feed her baby. At least 10% of all lactational failures are attributed by most investigators to breast pain or discomfort experienced by the mother whilst suckling her infant.

At present there is no known method of increasing the milk yield of the largest group of women with hypogalactia—namely, those genetically unable to produce an adequate amount of milk. It was therefore decided to investigate what effect, if any, on lactation would be produced by measures designed to decrease the incidence of breast and nipple pain. To this end three types of nipple care were carried out in rotation in each of the three maternity wards of Lewisham Hospital during one year, each method being tried for a period of roughly four months in each ward. The routines employed were: (1) the application to the nipple of a 0.5% stilboestrol cream in hydrous ointment B.P.; (2) the application to the nipple of a water-repellent silicone barrier cream ("reasil 7"); and (3) the avoidance of all "treatment," the mothers being asked merely to wash their nipples with water, but without soap, followed by drying with a towel, as suggested by Newton (1952).

This paper deals with the frequency, type, and duration of breast and nipple pain experienced by 1,027 mothers, the effect of the treatment routines on the breast complications, and the effect of these complications on the infants. There was no selection as to age, parity, social class, or obstetric complications of the mothers admitted to each of the three wards. Table I shows the age and parity of the 1,027 mothers.

TABLE I.—Age and Parity

Age	Primiparae		Multiparae		Total	
	No.	%	No.	%	No.	%
10-19	60	12	8	2	68	7
20-29	345	67	241	47	586	57
30-39	103	19	225	44	328	32
40-49	8	2	37	7	45	4
Total	516	100	511	100	1,027	100

Results

Only 31 (3%) of the mothers declared themselves reluctant to breast-feed their infants. Of these, 18 had a "good" reason, such as breast pain, to account for their attitude. Most other investigators report a higher percentage of mothers who for emotional, domestic, or economic reasons prefer to bottle-feed their infants. The Lewisham figures

agree closely with those of Wickes and Curwen (1957), who found that 5% of their series declared themselves unwilling to breast-feed when asked about their attitude at antenatal clinic interviews.

The various types of breast complications were recorded as "engorgement," "simple nipple pain," "cracked nipple," and "mastitis." 429 mothers (42%) had one or more of these complications, so that a total of 522 abnormalities were observed. Engorgement occurred 253 times (48% of all complications), simple pain 175 times (34%), cracked nipple 82 times (16%), and mastitis 12 times (2%).

Mastitis with engorgement and mastitis without engorgement were each found in 6 women, cracked nipple with engorgement in 19, and without engorgement in 63. Simple pain with engorgement occurred in 68 cases, and 107 mothers had simple pain without engorgement. Engorgement alone occurred 160 times.

Engorgement was the most commonly found complication. Its incidence was greater in primiparae of over 30 (31% as compared with 25% in the whole series). It was not related to the infant's birth weight or sex. Simple pain, for which no naked-eye cause could be discovered, was the next most common complaint. As in the case of engorgement, it occurred more often in elderly primiparae than in the younger mothers (26% as compared with 17% in the whole series). Cracked nipples were slightly less common in the older as compared with the younger mother, but the difference was not significant. There was no association between cracked nipple and the infant's birth weight. It was, however, more common in mothers with male infants. The overall sex distribution in the series was 518 males to 519 females, but cracked nipples occurred in the mothers of 50 male babies and in the mothers of only 32 female babies. This finding may not be due to chance and could be due to more vigorous sucking by the male infant, particularly as birth weight has been excluded as a possible cause.

As there were only 12 cases of mastitis no conclusions can be drawn about aetiological factors or the effect of the treatment routines on this complication. All but two of the breast infections occurred in multiparae, six were associated with engorgement and six were not. Cracked nipples preceded the mastitis in three cases, and two were associated with simple nipple pain.

Obstetrical factors appeared to have no effect on the incidence of breast or nipple pain. The numbers involved were small, there being 33 cases of toxæmia, 35 cases of caesarean section, 34 forceps deliveries, and 110 cases of artificial rupture of membranes or version.

Towards the end of the investigation the impression arose that fair-haired and red-haired women were more likely to develop cracked nipples than brunettes. This clinical impression was not confirmed by an analysis of the relatively small number of cases in which the hair colour was recorded. It is felt, however, that further investigation of the relation of skin and hair colour to nipple damage might be of interest.

Effects of Treatment

The effects of the three types of treatment are set out in Table II. It will be seen that there was a considerable variation between the recorded incidence of the complications in the three wards. This difference persisted throughout the three periods of roughly four months during which any one treatment was carried out in any one ward. It will be noted that the incidence of each complication was persistently higher in ward A, irrespective of the treatment used. The case material admitted to this ward did not differ from that of the other two. The difference in the recorded complications is the result of the greater interest shown in the investigation in ward A, which resulted in a more careful record being kept in that ward. This finding is worth commenting on. It should serve as a warning to others embarking on a lengthy investigation to call in

TABLE II.—Complications According to Ward and Treatment

Treatment	Ward	No. of Cases	Proportions of Cases with Complications				
			Total %	Mastitis %	Cracked Nipple %	Simple Pain %	Engorgement %
Barrier cream	A	109	63	6	13	14	49
	B	138	35	—	7	13	23
	C	105	33	1	8	10	23
	Total	352	43	2	9	12	31
Stilboestrol cream	A	146	66	1	9	35	36
	B	110	27	—	3	15	24
	C	108	37	2	6	17	18
	Total	364	46	1	7	24	27
No treatment	A	106	41	1	10	16	23
	B	86	35	—	7	22	7
	C	119	30	1	8	8	14
	Total	311	35	1	8	15	15

expert statistical help to plan the trial before it is started. A "blind," let alone a "double blind," method of recording data is exceedingly difficult to carry out in a non-teaching hospital department staffed by a willing but chronically overworked nursing staff.

In view of this difference of incidence in the three wards, it was decided to group together all types of breast complication (Table II, last column). From this it will be seen that in two wards "no treatment" gave the lowest complication rate, although a marked difference was found only in ward A (63% and 66% for barrier cream and oestrogen cream respectively, compared with 41% for "no treatment"). From Table II it appears that all wards agreed that stilboestrol cream gave very slightly better results in avoiding cracked nipples. The figures for simple nipple pain show less consistency, but stilboestrol cream resulted in a high incidence in all wards. There was agreement that "no treatment" was the best method of avoiding engorgement, the overall incidence being 15% as compared with 27% for stilboestrol cream and 31% with barrier cream. The figures available for mastitis are too few to draw any valid conclusions concerning the best method of avoiding this type of complication.

Discussion

It was thought that certain practical conclusions could be drawn from a consideration of the time of onset and the duration of the various complications of breast-feeding. The findings are set out in Table III. It appears that most com-

TABLE III

	Total No.	Time of Onset			Duration (Days)	
		< 4 Days	4-6 Days	7+ Days	< 4	4 or More
Engorgement ..	253	43%	52%	5%	87%	13%
Simple pain ..	175	54%	33%	13%	77%	23%
Cracked nipple ..	82	37%	41%	22%	56%	44%
Mastitis* ..	12	25%	58%	8%	58%	42%

* Time of onset was not recorded in one case of mastitis.

plications occurred within the week following delivery, and that 80% of all these complications lasted less than four days; the only exception to this rule being cracked nipples, which tended to last longer, but even so, 56% of mothers with this complication recovered within four days. As simple nipple pain and engorgement account for 428 out of a total of 522 episodes of breast or nipple discomfort, and as these two conditions were relatively short-lived, it was possible to assure mothers that their pain was unlikely to last more than four days, and to encourage them to persist with their efforts to breast-feed their infants.

When we come to consider the effects of breast complications on the infants' weight gain during the first 10 days of life, and on the introduction of bottle-feeds, the available data are difficult to interpret. For instance, in the case of engorgement, a complication not associated with pain during suckling, the recognized treatment is complete emptying of the breast and a continuance of breast-feeding. Conversely,

painful conditions of the nipple, such as simple pain or cracked nipple, will be expected to lead to a decrease of breast-feeding, but not necessarily to failure to gain in the infant, as a complement would be offered to avoid this. Further, it must be remembered that changes in weight gain and the introduction of bottle-feeds may be either the result or the cause of breast and nipple complications.

Table IV shows that only a small number of infants were adversely affected by their mothers' breast complications as judged by the weight criterion. On the other hand, a painful

TABLE IV

	Total	Infants Over Birth Weight on 10th Day	Infants Breast-fed on 10th Day
Complications with pain	258	52%	61%
" without pain	171	58%	78%
No. complications	598	56%	73%

or cracked nipple led to a fall in the breast-feeding rate from 73% to 61%. Common sense would suggest that this should be attributed to the pain experienced by the mother, but it is equally possible that failure to breast-feed was responsible for some of the instances of pain recorded. In any event, it can be stated that out of 306 mothers not breast-feeding on the 10th day, 33% suffered breast pain, where of the 721 mothers who were breast-feeding on the 10th day, only 23% had either a painful breast or nipple.

Summary and Conclusions

Of 1,027 mothers observed during the 10 days following delivery, 42% were found to have one or more breast or nipple complications during that time. Engorgement was most frequently encountered, particularly in elderly primiparae. This complication was not related to the infant's birth weight or the infant's sex, nor to the mother's obstetrical history. The same findings held for the next most common complication, simple nipple pain. Cracked nipples were slightly more common in the younger than the older primipara. Its incidence was unrelated to the infant's birth weight or the mother's obstetric history, but the trouble was distinctly more common in mothers with male babies.

As regards treatment of the breast complications, stilboestrol cream applied to the nipple did not decrease the incidence of simple nipple pain, but did prove slightly more useful than other methods in avoiding fissured nipples. A "no treatment" routine was found to be the best all-round method of avoiding the various complications of breast-feeding. Most of these complications were of short duration, the great majority lasting less than four days. Because of this, and because of the relatively smaller incidence of painful as opposed to painless breast complications, there was little effect on the introduction of complementary bottle-feeds. The infants' weight gain was not interfered with, as bottle-feeds were offered when necessary.

I am grateful to Mr. M. P. Curwen, statistician, St. Bartholomew's Hospital, for his expert help. I am indebted to the maternity sisters and staff nurses of Lewisham Hospital for their enthusiasm and co-operation, and to Midland Silicones Ltd. for the supply of the silicone barrier cream.

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APPENDICITIS IN THE AGED

BY

ERIK CHRISTENSEN, M.B., B.S.

From Surgical Department A of the Frederiksberg Hospital, Copenhagen

Appendicitis is still a serious disease even if its mortality has fallen considerably. During 1952 there were 127 deaths from appendicitis in Denmark. The British figure for 1948 given by the Registrar-General was 1,257—that is, more than 100 people die from appendicitis every month in England and Wales (Rees, 1952). With the generally rising life expectancy, a corresponding rise has taken place in the number of appendicitis cases among older persons admitted to hospital (Stalker, 1940; Simpson, 1946; Schullinger, 1950; Boyce, 1954; Brotherus, 1955).

In Surgical Department A of Frederiksberg Hospital this rise has also been registered. As it was felt that a higher percentage of complicated cases occurred among this group of patients, the cases of appendicitis occurring in the period 1948 to 1952 were investigated.

Present Investigation

Among 1,254 cases of acute appendicitis there were 9 (0.7%) deaths (all in the group of appendicitis with perforation). Ninety (7%) of the cases occurred in patients aged 60 years and above (7%), distributed as follows: 56 aged 60–69 years, 30 aged 70–79 years, and 4 aged 80 and above, the average age being 68 years. Five of the 90 patients died, a mortality of 5.6%, while the mortality among the 1,164 patients below 60 was 0.34%.

In Table I these results are compared with the figures from similar published series.

TABLE I.—Appendicitis in the Aged

	No.	Mortality
Fitch (1928)	13	54%
Lewin (1931)		28%
Wood (1934)	43	28%
Taylor (1935)		20%
Stalker (1940)	82	15.9%
Simpson (1946)		25%
Schiebel and Moise (1949)	53	13%
Wolff and Hindman (1952)	88	4.5%
Surgical Dept. A, Frederiksberg Hospital (1955)	90	5.6%

In Table II a comparison is made between the 142 patients aged 30–39 years and the 90 patients aged 60 or more. The incidence of complicated cases is four times greater in the older group. This is in complete agreement with the findings of Wolff and Hindman (1952).

The cause of this high incidence of perforation in the older age group is to be sought in diagnostic difficulties. Hoffman and Suzuki (1954) maintain that "the diagnosis of appendicitis is frequently difficult in the very young, the very old, the obese, and the pregnant patient." According to Lewin (1931) and others the peritoneum of the aged reacts only slightly, and muscular guarding is seldom to be elicited, perhaps owing to slackness of the abdominal wall. He points out that the sense of pain is blunted and the bowel reflexes are weakened; this leads to less nausea and vomiting. Since many of these elderly patients are suffering from habitual constipation, the symptoms are not taken into account and perhaps only an aperient is used. The disease is thus allowed to progress before medical advice is sought. As Rolleston (1932) puts it: "The organs suffer in silence without any local or general disturbance."

From the standpoint of pathology the more widespread arteriosclerosis found leads to vascular occlusion and a correspondingly earlier onset of ischaemic gangrene and perforation. Thus Brotherus (1955), in his series of appendi-