and repeat thyroxine and thyroid stimulating hormone concentrations were analysed in the same laboratory using the same kit and in the same assay. Patients who had a low concentration of thyroxine and a high concentration of thyroid stimulating hormone were withdrawn from the trial and restarted on thyroxine slowly because of the possible cardiovascular effects.[4] In elderly patients a dose of 25 µg daily, increasing by 25 µg every three weeks, was used. Patients who remained clinically and biochemically euthyroid after 21 days were kept off treatment, but arrangements for a full reassessment by Crooks' index and repeat thyroxine and thyroid stimulating hormone estimations were again made at three months or sooner if necessary.

Results

Seven investigators took part in this study, and 78 patients were entered. Three people withdrew from the trial, thus 75 were studied, 65 women and 10 men. The mean age of the patients entered was 63 years (range: men 47-78, women 26-86). The average duration of treatment was 9·5 years (range: two to 32 years). The reason for starting treatment varied from laboratory confirmation in 40 to clinical confirmation in 15 and for other reasons in 23. The dosage of thyroxine varied from 50 to 300 µg. Of the initial free thyroxine results 51 were normal, 18 were high, and six were low.

The table summarises the results after 21 days. Even though six patients were clinically and biochemically euthyroid, their request to return to treatment was respected, but their "usual" doctor was informed. Thyroid antibodies were found in 40% of the group. Of the 46 patients who were truly hypothyroid, 54% had circulating antibodies, whereas in the 21 euthyroid patients only 24% had antibodies ($p<0·05$).

There was no significant relation between the groups for the presence of antibodies, previous surgery, radiodoine therapy, or previous laboratory confirmation. The changes in thyroxine and thyroid stimulating hormone concentrations before and after withdrawal of treatment for the true hypothyroid group are shown in fig 1 and in fig 2 for the euthyroid group.

Clinical, biochemical, and serological details of the 75 patients

	Total No	No of women	No of men	Antibodies present	Previous surgery	Previous radiodoine treatment	Previous biochemical proof
True hypothyroid group returned to treatment	46	41	5	25	9	2	29
Clinically and biochemically euthyroid group							
Kept off treatment	15	14	1	5	5	1	5
Wanted to return to treatment	6	5	1	2	2	0	4
Group with low thyroxine and normal thyroid stimulating hormone concentrations	8	5	3	0	1	1	2

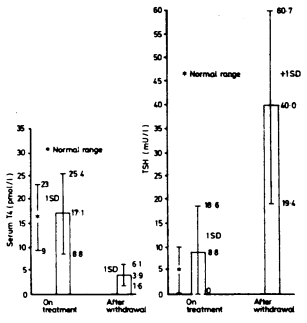

FIG 1—Change in serum thyroxine (T4) concentrations and concentrations of thyroid stimulating hormone (TSH) in the true hypothyroid group before and after withdrawal of treatment

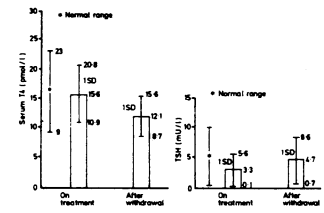

FIG 2—Change in serum concentrations of thyroid stimulating hormone (TSH) and thyroxine (T4) in combined euthyroid group before and after withdrawal of treatment

Discussion

The overall analysis after the 21 day withdrawal test of thyroid treatment shows that the patients fell into four categories. In the first are those who were truly hypothyroid and needed to return to treatment, some before the 21 days were over. The response of the pituitary-thyroid axis in these patients is shown clearly, even when some patients had been on thyroxine for many years. In this group 29 (63%) patients had previous biochemical proof of hypothyroidism compared with nine (43%) patients ($p<0·001$) in the euthyroid group. The second category comprises the 15 patients who were clinically and biochemically euthyroid and who subsequently did not receive treatment. The third consists of the six patients who were proved to be clinically and biochemically euthyroid at day 21, but for various reasons wanted to return to treatment. Some patients, particularly the elderly, were reluctant to refrain from taking medication that had been prescribed for many years by their usual doctor. Exemption from prescription charges for patients who take thyroxine may also have been a contributing factor.

Eight patients had a low thyroxine concentration but a normal thyroid stimulating hormone concentration after withdrawal. Because they all felt symptomatically hypothyroid they were all returned to treatment. Some of these patients may have had hypothalamic-pituitary disease, but it was not considered justifiable in the absence of clinical features to pursue this diagnosis. Of the 21 patients in the combined euthyroid groups, nine had previously documented biochemical evidence of hypothyroidism, and seven had had previous surgery and one treatment with radioactive iodine. It is assumed that the remaining nine (43%) had a transient hypothyroid state related either to viral thyroiditis or to pregnancy, or this was possibly due to medication or laboratory error. As this part of the study was retrospective, there was no way of substantiating the cause. There were no cardiovascular problems recorded in the group restarted on thyroxine.

The Crooks' hypothyroid index proved to be unreliable as there was no statistical relation between the values and the thyroxine and thyroid stimulating hormone results. The difference between

The significance of any results was at $p<0·05$, using χ^2 and Yates's correction for low numbers where needed.

The results of the follow up of the babies to the age of about 5 years will be reported for age 18 months and 4½ to 5 years.

Results

In the five years from 1978 to 1983 the names of 486 mothers were submitted for entry into the survey. Of these, eight miscarried or moved away from Essex. Of the remaining 478, 234 were booked for a home delivery, 206 for a hospital delivery, and 38 for a general practitioner unit. Thirty two in the home group, 21 in the hospital group, and five in the general practitioner unit group were not within the protocol for various reasons, most commonly being that they were aged over 35 or under 20, under 155 cm in height, or were nulliparas. There remained therefore 202 in the home group and 185 in the hospital group, who are reported on here. Table I shows that the two groups were comparable except for parity.

TABLE I—*Details of women who were booked for either a home delivery or a hospital delivery*

	Home group	Hospital group
No of women	202	185
Average age (years)	28·80	28·52
Percentage of smokers (numbers)	22·44	18·34
Average social class	2·58	2·58
Parity as per cent (numbers):		
1	49·99	74·125
2	39·78	21·38
3	12·25	5·11
Average birth weight of baby (kg)	3·47	3·48

Of women in the home group, 24 were delivered elsewhere: 17 were transferred for hospital delivery before the onset of labour and seven after the onset of labour (see table II). The remaining 178 were delivered at home, six (3%) being induced, usually with buccal oxytocin, and four had a low forceps delivery for delay in second stage. There was one face delivery and three face to pubes. One hundred and sixty four had a normal spontaneous vertex delivery, 163 by the attending midwife, and one by her husband before the midwife or doctor arrived. None was delivered by the general practitioner, although he or she was usually present in the second stage at least. Overall, in the home group, including those who were transferred, 17 (8%) were induced.

TABLE II—*Details of women who had booked for a home delivery but were delivered in hospital*

17 transferred before the onset of labour because of:
Postmature, all were induced 9
Antepartum haemorrhage 2 caesarean 1
Malpresentation 1
Patients request: both had spontaneous vertex delivery 2
Breech 1
Fibroid 1
Seven transferred after the onset of labour because of:
Prematurity, one delivered in ambulance by general practitioner 5
Delay in second stage: persistent occipitoposterior position—
spontaneous rotation during pushes and low forceps 1
Ruptured membranes and not in labour after 16 hours 1
Inertia 1
Brow presentation in first stage: caesarean 1

In the hospital group two had a spontaneous normal delivery at home at their request, and the remaining 183 were delivered in hospital, of whom 35 (19%) were induced. There were two forceps for delay in the second stage, two breech deliveries, and three recorded as face to pubes. There were no caesarean deliveries.

There were no perinatal deaths in either group. Table III lists the complications in the two groups, but except for induction none of the differences was significant. In the home group 61 (30%) mothers had 79 complications, of whom 51 (25%) had some complication, including induction, during labour, whereas 67 (36%) mothers in the hospital group had 97 complications, 59 (32%) having complications during labour. Table IV shows some differences in Apgar scores. Significantly fewer babies had an Apgar score of 7 or less in the home delivery group than in the other group, and the number of episiotomies and second degree tears was also significantly less in this group (table IV). The percentage of mothers who were breast feeding at four weeks was high in both groups, and, although higher in those who were booked for delivery at home, the difference was not significant. When broken down to smoking habit, however, there was a pronounced difference between the two groups, and 84% of the non-smokers in the home group were still breast feeding at four weeks, whereas only 45% of the smokers were (see table V).

Thirty two mothers in the home group were excluded from the main survey for not complying with the protocol. They were followed up and also

TABLE III—*Complications during delivery in the two groups*

Complications	Home group	Hospital group
Induction	17	35
Breech	1	2
Malpresentation	2	
Face	1	
Face to pubes	3	3
Ruptured membranes and not in labour 16 hours	1	
Delay in second stage without inertia	1	
Forceps	4	2
Caesarean section	3	
Pre-eclamptic toxaemia		3
Antepartum haemorrhage	3	
Inertia	3	6
Antepartum haemorrhage in labour		1
Cord round neck	6	3
Shoulder dystocia		2
Postpartum haemorrhage (500 ml or more)	10	14
Retained placenta and manual removal	2	4
Retained placenta—other	3	
Retained products with dilatation and curettage	1	3
Small secondary postpartum haemorrhage	2	1
Subinvolution	1	4
Perineal infection or breakdown	1	6
Mastitis	2	1
Other infection	3	3
Superficial thrombophlebitis		2
Postnatal depression	9	4

TABLE IV—*Details of episiotomy, tears, and Apgar scores in both groups*

	Home group	Hospital group	
	No (%)	No (%)	Significance
Episiotomy and tears:			
Total No with details recorded	197	183	
Intact perineum	86 (44)	53 (29)	p< 0·01
First degree tear	67 (34)	48 (26)	NS
Second degree tear	19 (9)	31 (17)	p<0·05
Episiotomy	25 (13)	51 (28)	p< 0·001
Episiotomy or second degree tear	44 (22)	82 (45)	p< 0·001
Apgar score of babies:			
No with details recorded	186	185	
7 or less at birth	32 (17)	48 (26)	p< 0·05
8 or less at 5 min	10 (5)	15 (8)	NS

TABLE V—*Breast feeding*

	Home group	Hospital group
No for whom details were recorded	197	182
All mothers		
Never breast fed: No	16	18
Still breast feeding at four weeks: %	76	67
Smokers		
No	44	33
Never breast fed: No	32	21
Still breast feeding at four weeks: %	45	67
Non-smokers		
No	153	149
Never breast fed: No	10	17
Still breast feeding at four weeks: %	84	67

symptoms and signs was, however, significant: $p<0·01$. The withdrawal test was quick, safe, and reliable for assessing the need for continued thyroid medication, even after several years of treatment.'

We found that 21 (28%) of the 75 patients studied were not hypothyroid. Rizzolo and Fischer showed that six of their 10 patients were euthyroid after the withdrawal test.[5] Few of our patients had been started on treatment for nebulous reasons, and our study supports the view that transient hypothyroidism does occur after surgery. The economic effects of such a rate of misdiagnosis (28%) are not great, though all patients taking thyroxine are exempt from prescription charges. More important, however, are the clinical implications of potentially dangerous side effects, largely cardiovascular, caused by the unnecessary prescribing of long term thyroxine treatment.

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Five year prospective survey of risk of booking for a home birth in Essex

J M L SHEARER

Abstract

A prospective survey was undertaken in 26 practices in Essex to assess the risks associated with a home birth. The 202 women who were booked for a home confinement were compared with a similar group of 185 women who were booked for hospital delivery under consultant care. The principal difference in outcome was the induction rate of 19% in the hospital group compared with 8% in the group booked for delivery at home. A higher rate of episiotomy and second degree tears and more Apgar scores of 7 or below were found in those who were booked for hospital. There were no perinatal deaths in either group. The results of this study showed no evidence of an increased risk associated with home confinements but indicated that there were fewer problems than were encountered in the deliveries in mothers confined in hospital.

Introduction

When I started in general practice in 1954 about a third of all babies were born at home, and only women with problems and a few primiparas were able to book a bed in the local hospital, St John's, Chelmsford. By the early 1970s this had changed greatly, and it was possible to book all mothers who wished for or needed a bed in the consultant unit. Although my partners and I continued to look after home deliveries, we were often asked about the risk of a home birth, and in the past decade or so the usual reason given by low risk mothers for a request for a hospital delivery was "because it is safer." But is this in fact the case? There appears to be no firm evidence for this view, although Peel, Short,[1] and Feroze[2] base their recommendations for the phasing out of home deliveries on this apparent "self evident" assumption. Munro more recently stated with firm conviction "that the present practice whereby practically all mothers have their babies in hospital should continue to be promoted in the interests of the safety and welfare of the mother and her baby."[3] The case is far from clear cut, however, and there is increasing evidence that planned home confinements with good antenatal care are no less safe than hospital deliveries.[4-6]

Although the use of modern obstetric technology is of undoubted value in the management of the fetus "at risk" or a complicated delivery, its increasing use for the care of the low risk mother may carry with it not inconsequential dangers. Because it is impossible, in my opinion, to carry out a randomised controlled trial the question of the relative safety of home or hospital birth can be satisfactorily quantified only by a prospective survey. This survey was undertaken when I realised that many practices were no longer booking home births and that they could provide the necessary "controls."

Method

Twenty six practices throughout Essex agreed to take part in the study. The criteria for inclusion were that the mothers were between the ages of 20 and 35 at the time of delivery, of 155 cm (5 ft 1 in) or more in height, and in their second, third, or fourth viable pregnancy. Reasons for exclusion were previous specific obstetric complications such as caesarean section, mid-cavity forceps, prolonged labour, retained placenta, third degree tears, toxaemia, thrombophlebitis, blood group antibodies, and stillbirth or neonatal death. Also excluded were those with uterine abnormalities, including fibroids or a past history of major pelvic surgery or infection, and those with medical conditions that might appreciably complicate labour or affect the infant. The place of delivery at the time of booking was selected by the mother or her general practitioner, or both, and was not randomised.

Women were accepted after a form was submitted at the time of booking, which gave sufficient details to establish compliance with the protocol. It also included data on, for instance, smoking habits, medication since their last menstrual period, occupation of the mother and her spouse to indicate social class, and her wish for a home birth or otherwise. A second form was submitted after the postnatal examination.

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did well. Their average age was slightly higher at 30·0 only 12% (4) were smokers, and their average social class was 2·7. The average weight of their babies was 3·50 kg, and 85% were breast feeding at four weeks. Seven (19%) were transferred for hospital delivery: four before the onset of labour, one each for postmaturity, breech and previous caesarean section, and severe depression, and the fourth for pre-eclamptic toxaemia. Three were transferred after the onset of labour, one for inertia, one for delay in second stage with persistent occipitoposterior position, and one for inertia and delay in second stage. Their perineas suffered in much the same way as that in the rest of the home group, and they had a lower percentage of other complications (eight mothers with 10 complications). Again there were no perinatal deaths.

Overall 218 women started a planned labour at home and only 10 of these had their babies in hospital, three of whom were for prematurity.

Discussion

In a survey with 26 different general practices participating it is difficult to adhere strictly to the protocol and collect sufficient numbers to make the study worthwhile. About six women in the hospital group were entered, although both forms had been sent to me at the same time so that the outcome was known at the time of acceptance. None had complications, and at the time I was short of controls. Otherwise no entry was accepted after the outcome was known, and all the women and control women entered have been included in the analysis. There being no lost or hidden disasters in any of the women for whom data were incomplete (such as smoking habits or social class).

Some bias occurs with the second form submitted after the postnatal examination because the hospital reports were often incomplete or sketchy, and, unless specifically asked for, complications may have been forgotten by the mother. The general practitioner may not in fact have seen the "control" mother since her delivery, although he or she would have seen the mother who was delivered at home many times in the early postnatal period as well as probably having been present at the birth. The general practitioner will therefore be well aware of any problems or complications in the home group. These are probably the reasons for the apparent increased incidence of postnatal depression in the home group, for example, as this almost always occurs when the mothers have been discharged home, and general practitioners may have been aware only of severe postnatal depression in this latter group of mothers. When I entered data that had been missed out in the report on hospital deliveries, such as Apgar scores, by referring to the hospital notes I frequently found complications recorded that had not been entered on the form submitted by the general practitioner, presumably because the details had not been put in the hospital discharge note. Because I studied only a minority of the hospital deliveries I think that this certainly was a bias in favour of the safety of the hospital births.

Although the numbers are too small to draw firm conclusions, the results suggest that there is no appreciable increased risk to the mothers or their babies in booking for a home birth. They certainly do not support any "self evident" risk that has been suggested in the reports mentioned above. As the number of requests for home confinement falls the skills of the general practitioners who undertake intrapartum care at home will inevitably diminish. Without such skills, and particularly the skills of the domiciliary midwives, the results of such a survey might in future be rather different, as many of the general practitioners who took part in this study had been in practice when home confinements represented at least a fifth of all deliveries.

The results of this survey again highlight the lack of reliable data about home births and the need to collect and publish such data. Perhaps then there might be a reversal of the swing that has taken place during my practice lifetime from 20 to 30% planned home births towards 100% hospital births.

I thank the many midwives who delivered most of these mothers so successfully, all the general practitioners in the 26 Essex practices who kindly contributed details of the women and control women, the research committee of the Essex Faculty of the Royal College of General Practitioners, the Chelmsford Medical Academic and Research Trust for financial support, my partners for their support, in particular Dr Nigel Towson for help and the use of his computer in the early stages of analysis, and Dr L I Zander for helpful criticism and advice.

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Multicultural medicine

Language—Eskimos have 10 words for snow. The type of snow is important to an Eskimo's well being, and language reflects that which is important in a culture. In the Western European/North American cultures there is a multitude of names for "unhappy" emotions—sad, depressed, melancholic, morose, and so on. This is not reflected in other cultures, which are perhaps not as obsessed with the individual. In Urdu, in contrast with the English, there are precise words for members of the family, who would be called in laws or cousins in English, reflecting the importance of family structure in Pakistan. In Yoruba (from Nigeria) there are no words for depression and anxiety. The equivalent phrases in Yoruba translated back into English come out as "the heart is heavy" and "the heart is not at rest." Because the words do not exist does not mean the emotions are not felt, but it may be difficult for a member of a non-European culture to express emotions when speaking in English.—J H S FULLER, general practitioner and lecturer, Department of General Practice, St Bartholomew's Hospital, London EC1.

Drugs for Passover—Strict observance of Jewish law requires that nothing that might have been contaminated with leaven is eaten during Passover. For this reason orthodox Jewish patients may request a particular proprietary brand of their usual drugs for Passover use and request a separate supply that may be kept sealed until the feast to avoid accidental contamination. Generic substitution is not appropriate in such circumstances.—PETER D TOON, general practitioner, London.

100 YEARS AGO

Orators and poets have not in any age been backward to draw upon the fund of medical lore for similes and illustrations. The great school of Alexandria taught the world to talk about its spirits, high or low. Later theories were reflected in the smiling or splenetic humours which troubled our more immediate ancestors. "The heart of the city" is a phrase in every day use, and the simile has, indeed, been worn rather threadbare by its numerous applications at the hands of descriptive leader-writers or eloquent auctioneers. Prince Albert Victor is to be congratulated on striking into a different path when he spoke the other day of the City of London as "the nerve-centre of our trade and national life, whose intricate network is woven over the surface of the globe." The simile is apt, perhaps new; certainly it is a sign of the times, as marking the triumph of popular pathological and physiological theories. (*British Medical Journal* 1885;ii:25.)