hours cleared the other three. His total time in the water for the nine dives was 44 minutes (figure). His subsequent neurological and musculoskeletal decompression sickness was successfully treated with hyperbaric oxygen according to the US Navy table No 6.

Dive profile, case 1. Total time in water (A + B) was 44 minutes (US Navy no stops time at 18 metres = 60 mins)

Case 2—Five descents and ascents to and from 15 metres took diver 2 a total of 48 minutes and were completed without decompression stops. Subsequent musculoskeletal decompression sickness was successfully treated with reference to US Navy table 6.

Case 3—Over two weeks diver 3 made 14 dives a day in rapid succession with no decompression stops. The first six dives were to 18 metres with an average time spent on the bottom of 10 minutes, followed by eight dives to 9 metres with times spent on the bottom ranging from five to 10 minutes. He continued to dive to this pattern despite developing neurological decompression sickness. When his illness was brought to medical attention he was successfully treated, 56 hours after surfacing from his last dive, according to an extended US Navy table 6 and had follow up hyperbaric oxygen treatments.

Comment

Three professionally trained divers followed widely used decompression tables but sustained decompression sickness from depths considered shallow and from

total times at depth within safe limits for a single descent and ascent. Repeated descending and ascending along the series of cages was the factor that caused decompression sickness.

The absorption, distribution, and release of nitrogen from the body during a dive with normal air is a complex event. Doppler studies have shown that "symptomless" bubbles are formed even after shallow dives, which do not cause decompression sickness.² In "yo-yo" diving, on subsequent descents bubbles may not be completely returned to solution, and they may become coated by clotting proteins.³ These rheological seeds may grow more quickly with subsequent dives in a sequence and cause tissue damage through embolisation of blood vessels. Symptomless patent foramen ovale causing arterialisation of bubbles has been postulated as a mechanism of bubble distribution,⁴ and clinical studies suggest permanent neurological deficits may remain after treatment for decompression sickness.⁵

The long term health hazards of diving are not completely known; we believe that the diving techniques used in fish farming are dangerous. A dive conducted while the increased nitrogen from a preceding dive is still being offloaded introduces a more complex pattern into decompression than is catered for in current decompression procedures.

Fish farm diving carries risks from contaminated water and from net entrapment, which has already resulted in the death of a diver. These problems can be eliminated by fish husbandry methods that use special nets rather than divers to clear dead fish.

- 1 Douglas JDM. Medical problems of sport diving. *BMJ* 1985;291:1224-6.
- 2 Spencer MP. Decompression limits for compressed air determined by ultrasonically detected blood bubbles. *J Appl Physiol* 1976;40:229-35.
- 3 Hallenbeck JM, Anderson JC. Pathogenesis of decompression sickness. In: Bennett PB, Elliott DH, eds. *Physiology and medicine of diving*. 3rd ed. London: Baillière Tindall, 1982:435-60.
- 4 Wilmshurst PT, Byrne JC, Webb-Peploe MM. Patent foramen ovale and decompression sickness in divers. *Lancet* 1989;ii:513-4.
- 5 Adkisson GH, MacLeod MA, Hodgson M, et al. Cerebral perfusion deficits in dysbaric illness. *Lancet* 1989;ii:119-22.

(Accepted 13 November 1990)

Care of women with puerperal psychiatric disorders in England and Wales

R J Prettyman, T Friedman

Leicester General Hospital, Leicester LE5 4PW
R J Prettyman, MRCP, senior house officer
T Friedman, MRCPsych, consultant liaison psychiatrist

Correspondence to: Dr Friedman.

BMJ 1991;302:1245-6

Women are known to have a high incidence of mental disorder in the puerperium.¹ Mothers are admitted to hospital with serious mental illness including puerperal psychosis after childbirth at a rate of about 1 in 450 pregnancies.² A population of 500 000 might be expected to produce 10 cases of puerperal psychosis needing admission each year.

Over the past 40 years specialist units for the care of mentally ill mothers and their babies have emerged in Britain. We present a survey of the current provision of psychiatric mother and baby inpatient facilities among the health authorities of England and Wales.

Methods

A brief questionnaire was circulated to the unit general managers for psychiatric services in 201 health authorities in England and Wales. Questions were asked about the current facilities for care of women with puerperal psychiatric disorders; the number of

consultants caring for such women; plans for changing or upgrading the facilities; and perceived priority of providing a specialised service.

Results

We received 194 completed questionnaires, a response rate of 97%. Thirty eight districts (19%) reported having dedicated facilities for mentally ill mothers and their babies. Ninety four (48%) reported that mothers with babies were admitted to acute general psychiatric wards, using existing facilities, and 50 (27%) used facilities in another district. Twenty one districts (10%) reported that there was no provision for any sort of joint admission. These categories are not mutually exclusive. The table shows the distribution of these types of facility by health region. Almost half the dedicated facilities (18) were stated to consist of one or two beds, with a few units having over six beds.

Of the 38 districts with dedicated mother and baby facilities, 21 (55%) indicated that mothers were admitted under the care of consultant(s) with a special interest in puerperal psychiatry. Only 58 (35%) districts with no dedicated mother and baby facilities stated that admissions were under the care of consultant(s) with a special interest ($\chi^2=6.46$, $df=1$; $p=0.01$).

Thirty districts indicated that they planned to set up a dedicated mother and baby inpatient facility and 63

Regional health authority (n=No of districts)	No of dedicated mother and baby beds	No (%) of districts with dedicated mother and baby unit	No (%) of districts using general facilities	No (%) of districts using other districts' facilities	No (%) of districts with no joint admission facilities	No of districts not responding
Northern (n=16)	9	2 (13)	11 (69)	2 (13)	1 (6)	
Yorkshire (n=17)	13	5 (31)	7 (44)	2 (13)	2 (13)	1
Trent (n=12)	8	2 (18)	7 (64)	1 (9)	2 (18)	1
East Anglian (n=8)	3	2 (29)	5 (71)	2 (29)	1 (14)	1
North West Thames (n=13)	22	5 (38)	4 (30)	6 (46)	2 (15)	
North East Thames (n=16)	11	4 (25)	6 (38)	5 (31)	1 (6)	
South East Thames (n=17)*	12	2 (13)	6 (38)	5 (31)	3 (19)	
South West Thames (n=13)	8	1 (8)	8 (66)	1 (8)	2 (16)	1
Wessex (n=10)	10	3 (30)	5 (50)	3 (30)		
Oxford (n=8)	5	2 (25)	3 (38)	2 (25)	1 (13)	
South Western (n=11)	11	2 (20)	4 (40)	5 (50)		1
West Midlands (n=22)	5	3 (14)	11 (50)	6 (27)	2 (9)	
Mersey (n=10)		1 (13)	5 (63)	1 (13)	2 (25)	2
North Western (n=19)	9	1 (5)	8 (42)	7 (37)	2 (11)	
Wales (n=9)	7	3 (33)	4 (44)	2 (22)		

*Includes Bethlem Royal Hospital and Maudsley Hospital Health Authority.

that their existing facilities were under review; 97 districts had no plans to alter the service provided. Only nine districts had no facilities for joint admission and no plans to change or upgrade the service. The provision of a specialised mother and baby facility was thought to be important and a resource priority by 140 authorities.

Comment

Our results seem to indicate a general acknowledgment of the importance of providing a psychiatric mother and baby facility of some sort. A few districts were unable to offer any provision at all for joint admission of mother and child, and in areas with a low number of births specialised facilities may be uneconomical.

Though most of the specialised facilities were small, a few were much larger. These larger units fulfil a slightly different role, being for the most part regional

facilities accepting admissions from several districts.

There seems to have been a general move towards providing joint admission for mothers and their babies, partly because of the opportunities presented by the opening of new psychiatric units as older hospitals close. Little research has been done into the best way of organising the service for this group of patients, although some evidence suggests that intensive community nursing and support can be a viable alternative to inpatient management.³ More research is needed into the different patterns of care and organisation of postnatal mental illness services.

1 Marce LV. *Traite de la folie des femmes enceintes, des nouvelles accouchées et des norrices*. Paris: Baillière, 1858.

2 Kendall RE, Chalmers JC, Platts C. Epidemiology of puerperal psychoses. *Br J Psychiatr* 1987;150:662-73.

3 Oates M. The development of an integrated community-orientated service for severe post natal mental illness. In: Kumar R, Brockington IF, eds. *Motherhood and mental illness*. Vol 2. London: Wright, 1988:138-58.

(Accepted 12 March 1991)

ONE HUNDRED YEARS AGO

His Royal Highness the Duke of Connaught, in the graceful speech he made at Netley at the presentation of prizes at the close of the winter session, referred to the fact that, by the Queen's command, it had been his pleasing duty to present the Victoria Cross to a medical officer of the Bombay Staff. We have before us two interesting volumes, published so far back as the year 1829, entitled *Twelve Years' Military Adventure in Three Quarters of the Globe*. The author of this work was Captain Blakiston, of the Madras Engineers, who saw important service under Wellington in India, afterwards at the taking of Bourbon, Isle of France; and, under Sir Samuel Auchmuty, at the capture of Java; and finally, again under Wellington, in Spain. The author gives an interesting account of the mutiny at Vellore, in which, on a small scale, some of the worst features of the Sepy mutiny of the Bengal army were foreshadowed. This serious affair took place on the morning of July 10th, 1806. At page 291, vol. i, the author relates that some of the officers of the 69th Regiment—one of whom had displayed great courage in rallying the men—"withdrew with some of the soldiers to the hill-fort, which was at the opposite end of the pettah or town." Captain Blakiston adds: "Happily, however, they could not persuade many of the men to accompany them. Nearly a hundred of the 69th who, after leaving the barracks, had behaved with great spirit, preferred remaining with two

assistant-surgeons. These two gallant young men—Jones and Dean—whose names deserve a less perishable record than mine, leaving a party to keep possession of the gateway, boldly pushed forward along the ramparts with about sixty men, and after some hard fighting gained the flag-staff, from which they pulled down the rebellious standard." The mutiny was, as is well known, suppressed and the mutineers punished with exemplary severity by the famous Colonel Rollo Gillespie, of the 19th Dragoons. At page 301 Captain Blakiston says: "Next to him I think those two assistant-surgeons, whom I have already mentioned, deserve the largest share of praise, for had it not been for them the fort would have been abandoned to the mutineers long before Colonel Gillespie came up. As it was, they did not receive the credit due to them for their services"—which he explains by saying that Gillespie was not an eye-witness of the manner in which they fought their way to the flag-staff. And so it was that this gallant bit of "non-combatant" service went without notice or reward. We are glad of the chance to lay this our "poor garland" on the graves of Assistant-Surgeons Jones and Dean:

Ah! my son,
Thou dost not know what perils and injustice
Await the poor men's valour.

(*British Medical Journal* 1891;i:364)