Breast-feeding practices of women with breast cancer and control women

Parity	Percentage of women not feeding at all		Percentage of women feeding for more than 16 weeks		Mean duration of feeding (weeks)	
	Cancer	Control	Cancer	Control	Cancer	Control
Feeding of first child only:						
1	39·7	32·3	12·4	18·8	6·4	9·3
2	25·0	26·6	25·0	23·4	11·9	9·8
3	22·5	20·3	31·7	26·8	13·0	12·5
4	17·2	16·7	34·5	33·3	13·9	13·9
Feeding of all children considered together:						
1	39·7	32·3	12·4	18·8	6·4	9·3
2	19·5	21·7	40·6	35·6	19·7	17·5
3	14·8	17·1	51·4	47·9	32·4	27·7
4	10·3	7·4	63·8	68·5	47·7	39·0

confounding effect of age at first-term birth, using the method of Mantel and Haenszel,[3] produced only minor changes. Further analyses were carried out using different measures of lactation and examining various patterns of feeding (for example, first and second child fed, later children not fed). In none was there any significant evidence that lactation is related in any way to the risk of breast cancer.

Comment

Our data on lactation and breast cancer are extensive and relate exclusively to married women up to 50 years of age. There are two possible advantages in concentrating attention on younger women. Firstly, their recall of breast-feeding practices is likely to be better. Secondly, if lactation has any relevance to the risk of breast cancer it might perhaps be more likely to express an effect in younger women. In the event, like MacMahon and his colleagues,[1] we have found no evidence for such a relationship.

We thank Miss Keena Jones, Mrs Moya Simmonds, and Mrs Judith Young for interviewing the patients.

[1] MacMahon B, Lin TM, Lowe CR, *et al.* Lactation and cancer of the breast. A summary of an international study. *Bull WHO* 1970;**42**:185-94.
[2] Vessey MP, Doll R, Jones K, McPherson K, Yeates D. An epidemiological study of oral contraceptives and breast cancer. *Br Med J* 1979;i:1755-8.
[3] Mantel N, Haenszel W. Statistical aspects of the analysis of data from retrospective studies of disease. *J Natl Cancer Inst* 1959;**22**:719-48.

(*Accepted 15 November 1979*)

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DDAVP in the prevention of headache after lumbar puncture

Unpleasant side effects of lumbar puncture include headache, nausea, and vomiting. Continuing leak of cerebrospinal fluid (CSF) through the hole in the theca is probably significant. Low CSF pressure may result in traction on pain-sensitive structures such as arteries and veins. An antidiuretic agent tends to retain fluid in extracellular spaces, including CSF. Administration of vasopressin should ameliorate these side effects. Vasopressin is expensive, scarce, and has unpleasant pressor side effects such as diarrhoea, abdominal cramps, and sweating. Aziz *et al*[1] found that vasopressin injection reduced the frequency of side effects of lumbar puncture but that 27% of the patients had diarrhoea, abdominal cramps, and sweating of varying severity. The incidence of headache found by Aziz *et al* was 26% and that found by Wolff[2] in four large series was 25%. Thus a group of patients given vasopressin to prevent the side effects of lumbar puncture will probably not show net benefit. The synthetic vasopressin analogue 1-desamino-8-D-arginine vasopressin (DDAVP) is free of pressor side effects but has significant antidiuretic activity. The results of Aziz *et al*[1] imply that prophylaxis with DDAVP would benefit patients having lumbar puncture.

Patients, methods, and results

Fifty patients requiring diagnostic lumbar puncture were studied. Patients with cardiac failure, ischaemic heart disease, renal failure, hypertension, or taking corticosteroids were excluded lest even mild fluid retention might be harmful. DDAVP or isotonic saline was given on a random double-blind basis, each dose of DDAVP being 4 μg. One ampoule was given intramuscularly every 12 hours, beginning four hours before lumbar puncture in the lateral position. In each case an 18- or 20-gauge needle was used to withdraw 5 ml CSF. Patients then rested in bed, apart from toilet purposes, for 24 hours. Blood pressure was recorded every 12 hours. Serum urea, electrolytes and osmolality together with urine osmolality were measured at the time of giving and four hours after the first and third ampoules. Fluid intake was maintained at about 2 l/24 h. Headache, nausea, vomiting, and other symptoms were recorded 12-hourly for 48 hours after the first ampoule—that is, until 24 hours after the patient was fully mobile. When headache was reported the patient indicated its severity by the analogue method. The result was recorded as a percentage score and then classified as "mild" (0-33%), "moderate" (34-66%), or "severe" (67-100%). Six patients in each group of 25 patients had headache after lumbar puncture—an incidence of 24%, which corresponds with the experience of others.

The record (table) of the total number of headaches of given severity reflects duration as well as severity because the same headache lasting 24 hours will be recorded at least twice, and so on. The combined frequencies of mild and moderate headaches examined by the Fisher exact probability test gives a value of 0·0097 (significant). No side effects were attributable to treatment. Serum sodium concentrations fell somewhat in patients given DDAVP but never below 130 mmol (mEq)/l. No patient's blood pressure rose significantly.

Total number of headaches of given severity recorded by 50 patients given DDAVP or placebo during diagnostic lumbar puncture

Drug	No of patients	Headache		
		Mild	Moderate	Severe
DDAVP	25	9	3	0
Placebo	25	5	2	6

Comment

This study confirms that DDAVP does not affect the incidence of headache after lumbar puncture but disability is significantly lessened. We gave DDAVP parenterally but it could be given intranasally instead in a higher dose (20 μg). Giving DDAVP for an *established* headache after lumbar puncture is probably worth trying and safe, but further investigation is required. It also merits trial in other clinical situations associated with lumbar puncture including myelography, lumbar air encephalography, and epidural anaesthesia.

We thank Ferring Pharmaceuticals for supplying DDAVP and placebo in a form suitable for this trial, our colleagues who permitted their patients to take part, and Dr S Hansen for statistical analysis.

[1] Aziz H, Pearce J, Miller E. Vasopressin in prevention of lumbar puncture headache. *Br Med J* 1968;iv:677-8.
[2] Wolff HG, *Headache and other head pain.* 2nd ed. New York: Oxford University Press, 1963:112.

(*Accepted 1 November 1979*)

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Correction

Immunoreactive calcitonin in leukaemia

An error occurred in this article by Dr C J Hillyard and others (1 December 1979, p 1392). The key in the figure legend should have read "●=studied in transformation. ○=studied in chronic phase."

Br Med J: first published as 10.1136/bmj.280.6209.224-a on 26 January 1980. Downloaded from http://www.bmj.com/ on 16 April 2024 by guest. Protected by copyright.