

	No. of Cases	No. per 10,000 Deliveries
Superficial venous thrombosis	1	0.25
Deep vein thrombosis	2	0.5
Pulmonary embolism	3	0.7
Cerebral thrombosis	1	0.25
Total	7	1.7

the Mayo Clinic¹ indicated a prevalence of 134.7 per 10,000 deliveries. This apparent low prevalence of thromboembolism in the Thai series could be due to one or more of the following factors. (1) The period of postpartum hospitalization in Thailand is only two to three days. No cases occurring three or more days after delivery would be detected. The Mayo Clinic study showed that 34.4% of cases occurred three or more days after delivery. Thus the present study may have underestimated the prevalence of thromboembolism. (2) There may have been a failure to diagnose or record thromboembolism owing to diagnostic bias on the part of the physicians, especially in mild cases. It is noteworthy that the prevalence of superficial venous thrombosis was only 0.25 per 10,000 deliveries in the Chulalongkorn study, whereas it was 118.1 per 10,000 deliveries in the Mayo Clinic study. This suggests under-notification of mild cases. (3) The prevalence of postpartum thrombosis may be lower in Thailand owing to nutritional or ethnic factors.

The results indicate that while postpartum thromboembolism does occur in Thai women, the prevalence is lower than in the United States. However, the prevalence shown in the table is undoubtedly an underestimate owing to the short period of hospitalization and diagnostic artefacts. Studies are in progress to detect clinical and occult postoperative thromboembolism in Thai women using the ¹²⁵I-fibrinogen uptake test.—I am, etc.,

TERMSRI CHUMNIJARAKI

W.H.O. Research Team,
Chulalongkorn Hospital Medical School,
Bangkok

¹ Aaro, L. A., and Juergens, J. L., *American Journal of Obstetrics and Gynecology*, 1971, 109, 1128.

Breast Milk Substitute

SIR,—The recent article by Dr. A. T. Willis and others on a planned "breast milk substitute" (13 October, p. 67) is an example of the type of tunnel-vision simplicism which can only amaze and dismay.

This group's earlier investigations into the protective functions of human milk in the maintenance of a *Lactobacillus bifidus* flora, a low faecal pH, the inhibitory effect of lactoferrin, etc. are very important contributions to the rapidly increasing knowledge concerning host resistance factors in breast milk.¹ From this background, Dr. Willis and his colleagues have pursued the valuable, but circumscribed, holy grail of a breast milk substitute (or cow's-milk-based "formula") geared to the production of acid stools and to a bifidogenic effect on intestinal flora. These aims are indeed important and desirable. At the same time, they represent once again an attempt to "humanize" a cow's milk formula based on one or two considerations only. In the past such ventures have often been related to major proximate prin-

ciples or to mineral balance. The present authors approach the problem mainly from an anti-infective point of view, and, as they concede, the nutritional and metabolic implications of this particular mixture are left rather indefinite. One wonders, for example, if they are aware of the outbreak of pyridoxine-related convulsions that occurred in infants fed on another "formula" some 20 years ago² or of the vitamin E haemolytic anaemia story.³

The type of study described in this paper does have importance, as perhaps introducing a degree of artificial chemotherapy into artificial feeding, which may have particular value in some circumstances, especially where environmental hygiene is poor and the risks of diarrhoea and other infections are great. However, the dangers of an approach geared to the solution of a single problem need stressing. Human milk is an exceedingly complex mixture of over 100 different nutrients and of large numbers of protective substances. Research work into the least inappropriate cow's milk formula invariably poses problems because the investigators almost necessarily focus on trying to reach a "solution" of one problem, whether this be a bifidogenic effect or a reduction in curd-tension or increased calcium absorption.

The fact is that all mammal milks are both highly complex and differ greatly from one another—their numerous constituents are species-specific and in balance with one another. Planned alterations of ingredients in the mixtures that constitute cow's milk formulas to achieve a particular specific purpose are only too likely to lead to further unappreciated metabolic imbalances and other interference phenomena. The literature is full of such examples—pyridoxine-dependent convulsions have already been mentioned. The manufacturers of so-called "breast milk substitutes" kid themselves. There is no way at all for cow's milk to be transmuted into human milk. Minor changes and tinkering can certainly make cow's milk formulas more acceptable, safer, and metabolically tolerable. However, these modifications are inevitably at partial and gross levels, as becomes increasingly evident as recent scientific work continually adds to knowledge of the complex nature and species specificity of the very large number of inter-related constituents and nutrients found in all mammalian milks.⁴—We are, etc.,

A. IFEKWUNIGWE
D. B. JELLIFFE

Division of Population, Family and International Health,
University of California School of Public Health,
Los Angeles

¹ Hanson, L. A., and Winberg, J., *Archives of Disease in Childhood*, 1972, 47, 845.

² Coursin, D. B., *Journal of the American Medical Association*, 1954, 154, 406.

³ Ritchie, J. H., Fish, M. B., McMasters, V., and Grossman, M., *New England Journal of Medicine*, 1968, 279, 1185.

⁴ Jelliffe, D. B., and Jelliffe, E. F. P., (editors), *American Journal of Clinical Nutrition*, 1971, 24, 968.

Rheumatoid Arthritis

SIR,—Your leading article on rheumatoid arthritis of the temporo-mandibular joint (18 August, p. 369) credits Sir Archibald Garrod with the introduction of the term rheumatoid arthritis. This, of course, is incorrect by one whole generation, since it was Sir Archibald's father, Sir Alfred Baring

Garrod, who coined the term and nicely described the disease in 1859.—I am, etc.,

GERALD P. RODNAN

Department of Medicine,
University of Pittsburgh,
Pennsylvania.

¹ Garrod, A. B. *The Nature and Treatment of Gout and Rheumatic Gout*. Walton and Maberley, London, 1859.

Possible Hazard of Methacrylate Monomer

SIR,—The letter from Dr. R. Routledge (24 February 1973, p. 487) on a possible hazard to workers manufacturing contact lenses may be relevant to orthopaedic surgeons. The author suggested that the inhalation of methyl methacrylate monomer might be potentially dangerous. The increasing use of this material in the insertion of artificial joints subjects not only the orthopaedic surgeon but the anaesthetist and, especially, the scrub nurse to repeated inhalation of the monomer. Its sweet smell is already well known in our theatres.

As a result of the warning we have adopted the simple expedient of applying suction to the air immediately about the bowl of methacrylate while the monomer is being mixed with the polymer. It has proved easy to remove the smell of the vaporized monomer almost completely by this means. The introduction of a Charnley tent into the orthopaedic theatre of Frimley Park Hospital will allow us to include a small sterile exclusion cupboard with vacuum extractor at its apex within the tent. We hope by this means to reduce the inhalation of monomer by the theatre staff to a minimum.—I am, etc.,

DAVID GRUEBEL LEE

Farnham, Surrey.

Preleukaemic Syndrome and Marrow Hypoplasia

SIR,—Your leading article (22 December, p. 691) mentions that a hypocellular bone marrow has been found in about a quarter of the reported cases of preleukaemia. We have recently seen two patients with marrow hypoplasia in whom there were haematological features resembling those of acute leukaemia.

The first patient was an 8-year-old boy who presented with prolonged bleeding on dental extraction and was found to have pancytopenia, haemoglobin 4.7 g/100 ml, leucocytes 2,000/mm³ (neutrophils 20%), and platelets 10,000/mm³. The blood smear showed lymphoid cells with atypical features, some containing nucleoli and resembling lymphoblasts. Bone marrow aspiration showed marked hypocellularity, the predominant cell being the atypical lymphoid cell seen in the peripheral blood. He was treated with blood transfusion, steroids, and antibiotics and over a period of 18 months underwent remission. There has been no further clinical or haematological evidence of leukaemia.

The second patient was a 20-year-old woman who developed pancytopenia while being treated with sulphasalazine for ulcerative colitis. She presented with a haemoglobin 10.8 g/100 ml, leucocytes 2,600/mm³ (neutrophils 20%), and platelets 40,000/mm³. Bone marrow showed an increased cellularity, myeloid:erythroid ratio 7:1 and 30% atypical promyelocytes, some with nucleoli. Three days later the peripheral blood leucocyte count had risen to 4,000/mm³ and platelets to 120,000/mm³. Repeat bone marrow aspiration still showed increased cellularity but with a myeloid:erythroid