P.A.C. are not seen in serum hepatitis. But there are other examples of this. For instance, it is well known that herpes simplex infection affects almost everyone during childhood and adolescence but few present the cutaneous, mucosal, lymph-node, visceral, and general symptoms of the primary disease.

We suggest that the cycle of HBsAg infection (see fig.) is such that when it occurs in children it is asymptomatic in most cases but in others it causes H.B.A.C. When an infection is acquired by parenteral inoculation (blood transfusion or subcutaneous or intramuscular injections) the papular dermatitis and lymphadenopathy do not develop, either because the infection begins directly in the blood or because the subject has already experienced primary HBsAg infection. For these reasons HB antibody is not found in the serum of children with P.A.C., whereas HBsAg is always detectable in the dermatitis phase, while HBsAg is not always found in long-incubation hepatitis and polyarteritis nodosa, in which HB antibodies or immune complex are present. The rareness of icterus in P.A.C. and its frequent presence in long-incubation hepatitis should be noted.—I am, etc.,

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1 Gianotti, F., *Giornale Italiano di Dermatologia*, 1955, 96, 678.

2 Gianotti, F., *Archives of Disease in Childhood*, 1973, 48, 794.

3 Pinol Aguade, J., and Mascaro, J. M., *Actas Dermosifiliograficas*, 1971, 62, 95.

Doctors, Drivers, and Confidentiality

SIR,—I certainly had no wish to sadden Dr. R. McL. Archibald (22 June, p. 670), nor to cast any kind of slur on all who work in occupational medicine. But, yes, I have myself been approached by telephone by firms' medical officers asking for information about my patients without the patient himself having given his consent. I have never thought that these doctors were villains, but simply ordinary, honourable doctors doing a routine job and—like most of us—not considering the ethical implications of every little act.

Dr. Archibald invites me to examine my motivation in writing. One would have thought that this subject is worthy of discussion in your columns for two reasons. Firstly, doctors who seek information in this roundabout manner may welcome the chance to consider its ethical implications. Secondly, young general practitioners may wish to be forewarned and forearmed against this sort of irregular inquiry. Speaking—as Dr. Archibald would wish—from my own experience, I know how routine and normal such a request for information can sound when it comes from a genial, honoured, and senior medical colleague.

To end pedantically, the doctor *technically* in breach of our ethical code would be the one giving information without the patient's permission, and not the one seeking this information.—I am, etc.,

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Abdominal Decompression in Pregnancy

SIR,—I am pleased that Mr. D. D. Mathews (29 June, p. 725) agrees with many of the points which I made (1 June, p. 499). He then goes on to make two additional ones: (1) that observer bias still seems to offer a plausible interpretation of the difference in results which we obtained in our decompressed and control groups; (2) that the observed results in the decompressed patients may have been better because they received less bed rest.

I would concede that observer bias might conceivably have affected the cephalometry results, which were all measured by the same person who knew whether patients belonged to the test or control groups. However, it seems most unlikely to have affected the results of the urinary oestrogen assays, which were performed by two technicians unaware of which group patients belonged to. Furthermore, it seems frankly absurd even to consider the possibility that observer bias might have influenced the birth weights of the babies, who were weighed by midwives not involved in the project.

Turning to the matter of bed rest and exercise, since we were aware of the possible effects of these factors on fetal growth we

drew attention to the fact that the mean duration of bed rest was 1.5 days longer in the control group.¹ Our patients did not walk to the decompression suits; they were taken by wheelchair, and we know that the nursing staff did not allow them "considerably more freedom about the wards." Mr. Mathews implies that abdominal decompression involves patients in considerable exertion. I would disagree, while recognizing that we are both expressing opinions without any supporting ergonomic data. In short, I am not persuaded by his arguments that the better results in the decompressed groups of patients are likely to have been due to "the lesser amount of enforced bed rest to which they were subjected."—I am, etc.,

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¹ Varma, T. R., and Curzen, P., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1973, 80, 1086.

Infertility and Rubella Infection Prophylaxis

SIR,—The investigation and treatment of infertility are fraught with disappointments for both patient and doctor. Any pregnancy finally conceived brings both a sense of achievement and relief to all concerned.

Maternal rubella infection, even at a sub-clinical level, undoubtedly carries some risk of fetal malformation, enough perhaps to justify a couple to request and the doctor to grant termination of pregnancy. For this to occur in an infertile patient is an immense tragedy and waste. Two such infections in patients attending the infertility clinic at this hospital recently has brought this to our attention. We therefore suggest that, though as an ideal every woman of child-bearing age should have been tested for rubella infection and if necessary vaccinated, at the very least such measures should be carried out before referral to an infertility clinic. This would avoid any delay caused by the necessary tests and treatment having to be carried out later in the infertility clinic. A test for rubella antibodies should be available to all practitioners and will indicate if vaccination is required.

Vaccination will give the necessary protection, but contraceptive measures should be used to prevent pregnancy and possible teratogenesis for three months afterwards. Only by such prophylactic measures can our patients be best served and potential heart-break avoided.—We are, etc.,

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Vitamin A and the Teratogenic Risks of Oral Contraceptives

SIR,—Dr. Isabel Gal (8 June, p. 560) continues to warn that the high level of vitamin A (retinol) found in the serum or plasma of women taking oestrogen-containing oral contraceptives¹⁻³ may constitute a teratogenic hazard to women who become pregnant during, or shortly after stopping, treatment

with oral contraceptives. Without being able categorically to deny this possibility I think it unlikely for the following reasons.

Retinol in human blood is predominantly bound to a specific transport-protein known as the retinol-binding protein (RBP). Under physiological conditions RBP binds to pre-albumin.⁴ The amount of free retinol is very small indeed. Using a fluorescence assay⁵ measurements have been made of the amount of RBP in plasma from 10 women before starting to take a combined oral contraceptive (Minovlar: 1 mg norethisterone acetate and 50 µg ethynylestradiol) and again after three months' treatment. The mean pretreatment level of RBP was 42±8 (S.D.) µg/ml, but this rose to 75±10 µg/ml during treatment.

This finding indicates that the rise in serum vitamin A level during the taking of oral contraceptives is due to an increased concentration of RBP. The amount of free retinol is unchanged. Hypervitaminosis A and the teratogenic effects of the vitamin in pregnant animals are seen with doses which far exceed the binding capacity of RBP. It seems unlikely that an increase in protein-bound retinol is hazardous. A very analogous situation occurs with corticosteroids, where plasma levels are very high in women taking oral contraceptives owing to an increase in transcortin.⁶

The increase in plasma RBP seen in women taking oral contraceptives is probably due to the oestrogen component, for plasma retinol is not increased by progestogens alone.² Serum vitamin A is also raised in volunteers exposed to DDT,⁷ for this compound yields oestrogenic metabolites.—I am, etc.,

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- Gal, I., Parkinson, C., and Craft, I., *British Medical Journal*, 1971, 2, 436.
- Briggs, M. H., Briggs, M., and Bennun, M., *Contraception*, 1972, 6, 275.
- Wild, J., Schorah, C. J., and Smithells, R. W., *British Medical Journal*, 1974, 1, 57.
- Vahlquist, A., and Peterson, P. A., *Biochemistry*, 1972, 11, 4526.
- Glover, J., et al., *Clinica Chimica Acta*, 1974, 50, 371.
- Musa, B. U., Doe, R. P., and Seal, U. S., *Journal of Clinical Endocrinology and Metabolism*, 1967, 27, 1463.
- Keil, J. E., et al., *Bulletin of Environmental Contamination and Toxicology*, 1972, 8, 317.

Effect of Natural Oestrogens on Coagulation

SIR,—A recent leading article (9 February, p. 213) concluded that the oestrogen component of the oral contraceptive is the agent responsible for the thrombotic episodes associated with the taking of steroid contraceptives. It was further stated that the untoward effect was probably due to the nature of the oestrogen used and that substitution with a natural oestrogen might avoid the problem of thrombosis altogether.

We have recently completed a study which has shown that natural oestrogens (Premarin) when administered to postmenopausal women for a period of one year had no adverse effect on their coagulation mechanism.

The subjects were 30 postmenopausal patients (mean age 50.53 years) attending the climacteric clinic at Addington Hospital, Durban. Baseline observations were taken for the assessment of the following coagulation factors: fibrinogen, platelet count, single

Mean Coagulation Values (±S.E.M.) in 30 Postmenopausal Women, Before, During, and After Treatment with Natural Oestrogen

Test	Baseline:	After 3/12 treatment	After 9/12 treatment	1/12 after stopping treatment
Fibrinogen (mg/100 ml)	360.8 ± 17.8	300.5 ± 10.7	325.6 ± 12.2	371.0 ± 13.1
Platelets (/mm ³)	281,500 ± 17,100	231,700 ± 12,100	203,800 ± 14,700	222,600 ± 14,100
Factor V (%)	109.9 ± 5.0	103.2 ± 5.5	102.0 ± 4.1	108.2 ± 4.5
Factor X (%)	114.5 ± 4.9	112.6 ± 4.0	117.4 ± 6.0	112.2 ± 4.9
S.S.P.T. (sec.)	12.23 ± 0.11	12.19 ± 0.11	12.37 ± 0.10	12.12 ± 0.13
K.P.T.T. (sec.)	43.97 ± 0.97	45.99 ± 0.88	45.56 ± 0.89	50.40 ± 1.15

stage prothrombin time (S.S.P.T.), kaolin partial thromboplastin time (K.P.T.T.), factor V and X assays, and euglobulinolysis time. Standard haematological techniques were employed.¹ The patients were then started on treatment (Premarin 1.25 mg daily, given cyclically for three weeks at a time) and the tests repeated at the end of three months and nine months. At the end of a year's treatment medication was suspended for a month and the tests repeated.

The results are shown in the table. The only statistically significant feature was a progressive fall in the platelet count ($P < 0.05$, < 0.01 , and < 0.02 after three months' and nine months' treatment and one month after stopping treatment respectively).

The natural oestrogens had no effect on the "dynamic" tests of coagulation. The values for the S.S.P.T. and K.P.T.T. in our patients were similar to those in normal controls tested at the same time. Though factor X has been reported to be increased in women on prolonged treatment with oral contraceptives,² no change in this parameter was noted in the present study. This may be of considerable importance in view of the possible key role of this factor in thrombogenesis.³ Fibrinolysis was similarly unaffected by treatment with the natural oestrogens as the euglobulinolysis time remained consistently greater than two hours throughout the series.

This is a preliminary report on the first documented prospective investigation of the long-term effect of natural oestrogens on coagulation. Though the significance of the depressant effect of these steroids on the platelet count is not known, it may be concluded that treatment of a group of menopausal women with natural oestrogens for one year had no adverse effect on their coagulation mechanism. As suggested in your leading article, it might well be that the substitution of a natural oestrogen would in fact avoid the problem of thrombosis associated with oral contraception.—We are, etc.,

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- Biggs, R. (ed.), *Human Blood Coagulation, Haemostasis and Thrombosis*. Oxford, Blackwell, 1972.
- Dugdale, M., and Masi, A. T., *Journal of Chronic Diseases*, 1971, 23, 775.
- Wessler, S., and Yin, E. T., in *Progress in Haematology*, ed. E. B. Brown and C. V. Moore, vol. 6, p. 201. London, Heinemann, 1969.

The Coroners' So-called 24-hour Rule

SIR,—Dr. J. F. Heggie (22 June, p. 667) has quoted the Human Tissue Act 1961 section

2(1) as giving clear permission for post-mortem examination to be carried out on any patient dying within 24 hours in hospital.

However, the provisions of the Coroners Act 1887, Coroners Amendment Act 1926, and the Coroners' Rules 1953, together with regulations and statutory instruments thereunder, establish coroners' practice, which is that there is a legal obligation upon the coroner to inquire into all sudden and unexpected deaths or deaths of which the cause is unknown.

The Human Tissue Act provision is permissive; the law relating to coroners is obligatory. The so-called "24-hour rule" is merely a rough guide; the doctor is obliged by common law to report all sudden and unexpected deaths and deaths the cause of which are unknown to the coroner, irrespective of any "rule." The coroner has the right to appoint any pathologist of his choosing to conduct any post-mortem examination, irrespective of the Human Tissue Act. All these matters (and many others) were dealt with at length in the Brodnick Report.¹—I am, etc.,

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¹ Home Office. *Report of the Committee on Death Certification and Coroners*, Cmnd. 4810. London, H.M.S.O., 1971.

Maternal Blood Group A and Pre-eclampsia

SIR,—Mr. D. P. L. May (22 December 1973, p. 738) has reported a preponderance of blood group A among patients with pre-eclampsia. His finding could support the intravascular coagulation hypothesis¹ of the aetiology of toxæmia since it parallels the observations that group A subjects tend to be more at risk for venous thromboembolic disease associated with pregnancy and use of oral contraceptives,² as well as for coronary artery thrombosis.³

We have measured the frequency of eclampsia and pre-eclampsia, as recorded in labour ward books, among 10,180 women delivering in West Jerusalem's four hospitals in 1965-9 for whom blood group data were available. These blood group data were added to a sample⁴ of the computer-stored files in the ongoing Jerusalem Perinatal Study.⁵ There was no excess of toxæmia recorded among group A mothers, but there was an apparent interaction between rhesus and O types, with O+ mothers having fewer and O— mothers more cases of toxæmia than expected (table I). Apart from the excess recorded in O— women, these differences in toxæmia