

Letters to the Editor

BIRTH AFTER THE REIMPLANTATION OF A HUMAN EMBRYO

SIR,—We wish to report that one of our patients, a 30-year-old nulliparous married woman, was safely delivered by caesarean section on July 25, 1978, of a normal healthy infant girl weighing 2700 g. The patient had been referred to one of us (P.C.S.) in 1976 with a history of 9 years' infertility, tubal occlusions, and unsuccessful salpingostomies done in 1970 with excision of the ampullae of both oviducts followed by persistent tubal blockages. Laparoscopy in February, 1977, revealed grossly distorted tubal remnants with occlusion and peritubal and ovarian adhesions. Laparotomy in August, 1977, was done with excision of the remains of both tubes, adhesiolysis, and suspension of the ovaries in good position for oocyte recovery.

Pregnancy was established after laparoscopic recovery of an oocyte on Nov. 10, 1977, in-vitro fertilisation and normal cleavage in culture media, and the reimplantation of the 8-cell embryo into the uterus 2½ days later. Amniocentesis at 16 weeks' pregnancy revealed normal α -fetoprotein levels, with no chromosome abnormalities in a 46 XX fetus. On the day of delivery the mother was 38 weeks and 5 days by dates from her last menstrual period, and she had pre-eclamptic toxæmia. Blood-pressure was fluctuating around 140/95, œdema involved both legs up to knee level together with the abdomen, back, hands, and face; the blood-uric-acid was 390 μ mol/l, and albumin 0.5 g/l of urine. Ultrasonic scanning and radiographic appearances showed that the fetus had grown slowly for several weeks from week 30. Blood-œstriols and human placental lactogen levels also dropped below the normal levels during this period. However, the fetus grew considerably during the last 10 days before delivery while placental function improved greatly. On the day of delivery the biparietal diameter had reached 9.6 cm, and 5 ml of amniotic fluid was removed safely under sonic control. The lecithin: sphingomyelin ratio was 3.9:1, indicative of maturity and a low risk of the respiratory-distress syndrome.

We hope to publish further medical and scientific details in your columns at a later date.

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SPERM BASIC PROTEINS IN CERVICAL CARCINOGENESIS

SIR,—Dr Reid and his colleagues (July 8, p. 60) have calculated a product-moment correlation coefficient (r) between sperm histone/protamine ratio and socioeconomic class, but this test is not applicable where one of the variables, socioeconomic class, though represented by a number, is really a category, which cannot be used arithmetically. A more appropriate test would be the non-parametric Kruskal-Wallis one-way analysis of variance by ranks, but even this is not applicable when, as here, the relationship between socioeconomic class and two variables (sperm concentrations of histone and protamine) are being examined. Fig. 2 of their paper shows diagrammatically the sperm histone/protamine ratios for the different socioeconomic classes, with what we assume to be the arithmetic means of the ratios; the vertical lines above and below the means, from their symmetry, suggest standard deviations or "normal ranges". We suspect that this ratio fits a skewed, rather than a normal, distribution. In any case the data ought to have been presented in a manner which is clear to readers and permits independent analysis.

The classification of phenomena according to the Registrar General's social classes was a useful procedure when introduced in the 1911 Census and in later medical studies. For instance, it was used to demonstrate neatly and clearly an association between socioeconomic disadvantage and infant ill-health and death. In other words higher rates of infant mortality were associated with evils indicated roughly by the social-class classification which indicated lack of education, poverty, poor housing, hygiene, and nutrition, and so on. This association of low incidence in the professional classes and high incidence in the unskilled was found in many other conditions (e.g., tuberculosis).

Since 1911 jobs have tended to be reclassified because of the illness experienced by those who do them, so statements drawing on the system have tended to become circular. Moreover, socioeconomic changes have rendered the classification less useful. What were often virtually hereditary occupational castes in 1911 (e.g., mining, fishing, and farming) have now so changed that people may be employed in them for only short periods. Mobility, both within and between classes, is common. Income gaps have closed—e.g., in 1948 a consultant in the N.H.S. without a merit award was paid 5 times as much as a coalminer, whereas now, making similar allowances for income tax and other deductions, the differential is 2–2½. Differences in education and skill often remain, especially between social classes IV and V and the rest, and it is often these and the ideologies that accompany them that determine the life-style of the different groups.

Some people have suggested that social-class classification asserts differences which have their origins at conception, and we suspect that this is what Reid et al. are on about, though their paper is not clear on this point. This view, once confidently held by the more favoured members of society, can no longer be entertained. A more plausible statement is that social class is a classification of occupations which put their mark on their members in all sorts of obvious and in many subtle ways. For example, there is indeed a social-class association with cervical cancer but it is not as marked as associations between, for instance, the incidence of cervical cancer and early, frequent, and varied experience of sexual intercourse. What a social-class classification can never do is lend itself to precognition. True, medical students will become classified to social class I, provided they pass their exams, but future membership of a profession cannot have any bearing on a protein ratio in sperm. This Aristotelean way of thinking was abandoned by science centuries ago.

How a social-class classification is carried out is important, but Reid et al. give insufficient details of their method. For instance the U.K. subjects are said to have been classified "using the system of the U.K. registrar general"; but 100 of them were students who, in the Classification of Occupations 1970,² "are coded to the economic position 'Student' and excluded from the classification by occupation". Also in these days of high unemployment it would be astonishing if all the cases could be successfully classified, but all the men studied fit neatly into one or other of the five social classes.

This paper, we feel, fails to match standards we expect from *The Lancet* in respect of its statistics and in its epidemiology.

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ANTURANE REINFARCTION TRIAL

SIR,—Your admirable leader on stroke prevention (July 29, p. 245) concludes with a question which seems to imply tacit acceptance of claims that sulphinpyrazone is of benefit in

1. Reid, B. L., French, P. W., Singer, A., Hagan, B. E., Coppleson, M. *Lancet*, 1978, ii, 60.
2. Office of Population Censuses and Surveys. Classification of Occupations 1970. H.M. Stationery Office, 1970.