Missed pill conception: fact or fiction?

Sir,—Following the correspondence (13 July, p. 136) on the paper by McB G Mulley and others (18 May, p. 1474) we would like to express a cautionary note. We would agree with the points expressed on overt ovarian folliculitis, which occurs to a similar extent in the first seven days of spontaneous cycles as in the seven pill free days of combined oral contraceptive cycles. Some women seem less receptive to gonadotrophin suppression than others during their pill taking days. These points were made some considerable time ago by endocrine assessment.1 More recently ultrasonographic evidence for this has come from McEvoy and others and Van der Vange et al (personal communication) and from our own results so far. It remains also to establish what potential for ovulation these ultrasonically demonstrated ovarian cysts have. There are considerable difficulties in the design of research protocols to show this.

However, the suppression of gonadotrophin induced ovarian folliculitis is not the only mode of action of the combined oral contraceptive pill. Ancillary contraceptive effect is provided by impermeable cervical mucus, which inhibits sperm transport, and by rendering the endometrium unfavourable for implantation. Hence, follicular development cannot be the only factor implicated in the mechanism of pill failure and any study of the latter must ideally incorporate concurrent endocrine variables, ultrasonographic measurements, and assessments of cervical mucus.

Recommendations to women who inadvertently miss pills must inevitably, for the time being at least, be largely empirical. However, within the constraints of the data available2 the following advice should be given. If the omission of a pill served to extend the pill free period and hence the time available for folliculitis and effects similar to those of the next pill, the woman should be advised not to take a break at all. Arbitrary rules to the prolonged use of barrier contraception in the women who occasionally omit their pills have unfortunate results, for example, their placing during the time of omission and until the progestagenic effect on the cervical mucous has become manifest. From our published data3 and further studies in progress the current barrier effect persists even with one or two days of pill omission. The time taken for the development of these changes during a course of pills needs to be firmly established.

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Smoking, sugar, and inflammatory bowel disease

Sir,—In their paper on smoking, sugar, and inflammatory bowel disease Dr J R Thomson and others (15 June, p. 1786) emphasise again the recently reported relations between smoking and inflammatory bowel disease.1 The conclusions, however, that smoking may reduce some protection against ulcerative colitis may still be premature and needs additional evidence.

We would like to report on the smoking habits of 93 patients with ulcerative colitis. The control group consisted of 177 consecutive patients matched for age and sex from an orthopaedic clinic. Seventy one (76%) of the 93 patients with ulcerative colitis never smoked compared with 112 (66%) of the control group (p<0.005). Also significant was the difference among smokers: nine (9%) patients with ulcerative colitis compared with 79 (12%) in the control group (p<0.05) smoked between a half and two puffs of cigarettes daily.

Surprisingly, in the group of ex-smokers (those who stopped smoking at least one year before the onset of the disease) we found a lower mortality than in the patients who never smoked. Does, therefore, smoking in the past confer some protection against the development of ulcerative colitis?

Is there any relation between smoking and the aetiology of the disease? Apparently not. In our series 71 (76%) of 148 patients with total colitis were non-smokers compared with 60 (76%) of 79 who had proctitis or left sided colitis.

Sir Thoms and others, we found smoking to be more common among our 10 patients with Crohn's disease than in the control group.

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Selective consumption of large platelets during massive bleeding

Sir,—Dr C.B Thompson reported that the thrombocytopaenia after massive trauma and blood loss is associated with a reduction in mean platelet volume (13 July, p. 95). He attributed this reduction to the selective consumption of the larger more haematoctically effective platelets from the tail of the platelet volume distribution. At a consequence he has implied that a preferential consumption of small platelets, proposed earlier,1 is unlikely after acute myocardial infarction. This latter statement echoes our own conclusions.2 Dr Thompson suggests therefore that the increased mean platelet volume after acute myocardial infarction arises from the production of larger platelets, which supports our previous observations that large platelets arise from large megakaryocytes after acute myocardial infarction. Similarly, larger than normal megakaryocytes have been demonstrated immediately after (within three hours) sudden cardiac death,3 suggesting that both megakaryocytes and their progeny are larger than normal at the time of acute myocardial infarction and sudden cardiac death and are not necessarily secondary to these events. Polymorphonuclear leucocytes provide a link between the large platelets and megakaryocytes.

This hypothesis raises a further question. Why should thrombocytopenia be altered before acute myocardial infarction or sudden cardiac death? Possible answers that occur to us are that (a) some people are genetically predisposed to large megakaryocytes and as a consequence are at increased risk of acute myocardial infarction; (b) the large megakaryocytes are transformed cells; (c) megakaryocytes may be larger than normal in response to increased platelet consumption associated with the development of disseminated intravascular coagulation; and (d) the megakaryocytes increase in size in response to some environmental factor. In support of (c) and (d) we showed recently that colon carcinoma, experimentally induced by a high cholesterol diet, was associated with an increase in megakaryocyte size and changes in platelet production.4