

inches (1.3-1.5 m.). The facial appearance is as mature as would be expected for the age of the patient, although there may be some underdevelopment of chin and mandible. There is a complete failure to develop the female secondary sex characteristics, and the nipples, breasts, vagina, and uterus remain infantile in appearance. Sexual hair, however, is usually developed by the age of 14 to 16 years. Other characteristics are webbing of the skin of the neck and often coarctation of the aorta with some degree of hypertension, which is not necessarily due to the coarctation. Details of treatment may be obtained from Lawson Wilkins's book.² In outline, cyclical therapy with oestrogens and progesterone may be worth-while from the age of 12 or 14 years onwards in order to produce periods, but it is somewhat doubtful whether any present-day therapy is of real value.

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Hyperthermia for Rheumatic Complaints

Q.—*Is hyperthermia, in which the whole body temperature is raised, as a treatment for rheumatic complaints ever used nowadays?*

A.—It is used very seldom. The chief indication for hyperthermia used to be in gonococcal arthritis, which is now satisfactorily treated by antibiotics. It is still sometimes used in Reiter's syndrome, the patient's temperature being raised by intravenous injections of T.A.B.

Black Widow's Might

Q.—*The bite of spiders produces rapid and complete paralysis of insects' musculature. What is the toxin or venom that is injected by the spider's bite?*

A.—Most of the scientific studies of spider venom have concerned those species harmful to man, and a great deal of the work is on toxic symptoms, pathology, and treatment. The venom of the black widow spider, *Latrodectus* species, contains neurotoxins said to be fifteen times stronger than rattlesnake venom and thought to be toxalbumins.¹ Electrophoretic analysis of the venom of *L. tridecimguttatus* showed that it contains six different proteins as well as two other constituents, probably amino-acids.² Studies on the Brazilian spiders *Lycosa raptora* and *Ctenus nigriventer* have shown that their venoms have proteolytic action, rather similar to hyaluronidase.³ From these investigations it seems that spider venoms are mixtures of complex toxins not well understood.

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NOTES AND COMMENTS

Progesterone Deficiency and Abortion.—Dr. G. I. M. SWYER (London N.W.1) writes: Though I agree with the general thesis of your expert in replying to the question on progesterone deficiency and abortion ("Any Questions?" October 21, p. 1095), I would point out that diabetes, unless uncontrolled, is not a cause of abortion, and I would question whether progesterone deficiency is unimportant as a causal factor. True it is that detection of this deficiency raises problems, and pregnanediol determination is scarcely a practical way to solve them, if only because of the long time which must elapse between beginning the 24-hour urine collection and obtaining the laboratory result. On the other hand, the use of the pyknotic index of the vaginal smear or of the fern crystallization test in cervical mucus obviates this difficulty and is of real value in this problem. Thus, Langer and Hochsteadt,¹ who regard a pyknotic index of less than 20%, with most cells folded and clumped or a markedly cytolytic picture, as characteristic of

normal pregnancy, found 128 patients (81% of a series) who had had at least three consecutive abortions within the first four months of pregnancy and in whom anatomical factors had been excluded to have progesterone insufficiency. Admittedly this seems to be a high figure. Using the cervical mucus fern test, Jacobson² found a positive result, believed to indicate progesterone insufficiency, in 59% of 949 pregnant patients. Abortion threatened in 19% of these patients—three times more often than in the negative patients.

Mr. A. SHARMAN (Royal Samaritan Hospital for Women, Glasgow) writes: May I be allowed to add briefly to your expert's reply to the question of progesterone deficiency and abortion ("Any Questions?" October 21, p. 1095)? Treatment of habitual abortion with progesterone is regarded with suspicion because of conflicting results after indiscriminate use of the hormone. Progesterone deficiency has been assessed by vaginal smears and, as indicated by your expert, pregnanediol excretion has also been used. With regard to the latter, Russell *et al.*³ were unable to make any prediction of impending abortion from a large number of cases of early pregnancy. Macdonald and Sharman⁴ also found that serial pregnanediol estimations bore no relation whatever to the subsequent outcome of the pregnancies. However, a simple method of selecting patients suitable for progesterone therapy has been described by these latter authors, using cervical-mucus smears. Two or more unstained dried smears showing salt crystals or "ferning" under the low-power microscope indicate an oestrogen-progesterone imbalance which carries an approximately 50% risk of abortion in any patient. These patients responded extremely well to progesterone therapy, and prolonged trial along these lines has proved the real value of progesterone. Conversely, unless the foetus is abnormal the absence of "ferning" carries a good prognosis without any treatment. This method of selection is suitable for general use, since the test and the interpretation of the findings are both very simple. Jacobson,⁵ in a study of 385 cases in the first and second trimesters of pregnancy, has confirmed these findings.

OUR EXPERT replies: Dr. Swyer and Mr. Sharman provide useful additions to a brief reply about a patient who did not qualify as a habitual aborter. Diabetes and pre-diabetes do cause abortion, more often from being undiagnosed than from being uncontrolled. The value of progesterone in threatened abortion is difficult to evaluate because it is often impossible to differentiate clinically at the time between the threatened abortion of a living pregnancy and the threatened expulsion of an already dead pregnancy. Progesterone deficiency has not been proved to be an important causal factor, as opposed to a concomitant, of threatened or habitual abortion. As Dr. Swyer says, the proportion of women said to have been shown to have progesterone deficiency is high, yet he himself has shown that the spontaneous cure-rate in habitual abortion is even higher.

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Correction.—We regret we wrongly stated (November 11, p. 1299) that the Ciba Foundation would be publishing the Proceedings of the symposium on hypertension and coronary disease held by the Chelmsford Medical Society and the Mid-Essex Division of the B.M.A. It is Ciba Laboratories Ltd. which is assisting with the publication of the Proceedings.

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