LETTERS TO THE EDITOR

UNDERREPRESENTATION IN GRADUATE MEDICAL EDUCATION AND MEDICAL RESEARCH

To the Editor:

I am a student who entered Howard University last fall to major in zoology and to further pursue a career in research. In reading an article in the journal (J Natl Med Assoc 1984; 9:857-862) entitled "The Underrepresented in Graduate Medical Education and Medical Research," I was thoroughly engrossed by what Dr. Pinn had written, and I felt strongly that I had to respond because of my interest in science.

Yes, I strongly feel that the academic role model of women should be increased through programs that will show their participation and visibility in the medical world.

Yes, I strongly feel that minorities should be aware of the other aspects of medicine. This summer, I had the opportunity to meet several doctors and to see the different areas involved with medicine as a research apprentice at Children's Hospital. Too many times, when young people who have expressed an interest in medicine are asked what area they would like to specialize in, the answer is pediatrics. Pediatrics is fine, but what about virology, endocrinology, and nephrology? And yes, what about research?

As an individual, I know that my inquisitiveness has helped me to become involved in many new experiences that I would not otherwise have known about. Yet in order for us, as youngsters, to learn about other areas of medicine, doctors in the community need to guide us as role models and help us gain the experience needed.

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ORAL ABSORPTION OF PROGESTERONE

To the Editor:

Since many synthetic progestins are known to be luteolytic,[1] and while progesterone itself exerts a positive feedback influence on steroidogenic tissue,[2] it is clear that it would be useful to have an effective way to administer progesterone orally.

It is well known that fat-soluble substances are absorbed primarily by way of the lymphatic system, entering the general circulation directly rather than passing first through the liver.[3] Progesterone is insoluble in water, but it is soluble in lipids. If the solution is stable, it seems clear that the progesterone will be preferentially absorbed by the lymphatic route.

I have investigated the oral use of progesterone in tocopherol, a nontoxic stable solvent, in cycling women with a luteal phase deficiency and in postmenopausal women.

In younger women, who are still producing large amounts of estrogen, a therapeutic effective oral dose (50 to 200 mg daily during the luteal phase of their cycles) was found to prevent the symptoms associated with premenstrual decrease in serum progesterone ob-

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served in previous cycles, but in some women the effective dose caused the blood levels to rise somewhat above the levels usually considered normal for the luteal phase.

Postmenopausal women, who have much lower average levels of estrogen and who produce little progesterone, show much more clearly the effects of administered progesterone. Seven women who had gone through "natural" menopause at least two years previously, and whose serum progesterone was either below the sensitivity limit of the competitive protein-binding technique or in the typically low postmenopausal range of measurement by radioimmunoassay, were given oral doses of 50 or 100 mg of progesterone in tocopherol.

The earliest any blood was drawn after an oral dose of progesterone was 20 minutes; in this case, the progesterone had risen from 0.2 ng/mL before to 0.7 ng/mL after a dose of 100 mg. When blood was drawn from four to eight hours after an oral dose of 50 to 100 mg, the blood levels were between 6 and 16 ng/mL. No attempt was made to assure that the progesterone was taken on an empty stomach; meals were eaten as usual while waiting for blood to be drawn. The progesterone was administered by the women's physicians, and the measurement was done by commercial medical laboratories.

In two cases in which blood was drawn 24 hours after a single dose of 100 mg, the progesterone level was still in the normal luteal phase range.

Since the observations were made over a period of several years, with progesterone measurements made at several different laboratories by different techniques, the numbers are not strictly comparable. We recently got a clearer picture of the rate of absorption in a fasting person. A middle-aged man, with a fasting level of 0.2 took 100 mg. At the first hour, the progesterone level was already 7.0 ng/mL; the concentration rose each hour to a peak at the sixth hour of 14.0 ng/mL, and the last measurement, at the seventh hour, was 7.0 ng/mL. On average, men's livers are quicker to remove substances from the blood, and the fact that no food was taken during the test very likely caused the rate of increase and the rate of decrease to be greater than in a nonfasting person.

In summary, when dissolved in tocopherol, progesterone is orally active. A single oral dose of 50 to 200 mg given to women with luteal phase insufficiency or to postmenopausal women brings their blood progesterone levels up to at least the normal luteal phase range and maintains it in that range for at least 12 hours.

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Literature Cited

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3. Simmonds WJ. Absorption of lipids. In: Jacobson ED, ed. Gastrointestinal Physiology. Baltimore: Butterworths, University Park Press, 1974, p 343.