normal values for the partial thromboplastin time (less than 40 seconds) and the kaolin clotting time (less than 120 seconds). In five pregnancies, normalization of the test results was not achieved, and intrauterine deaths occurred. Many women with the lupus anticoagulant may not manifest problems other than repeated intrauterine deaths; in our series, 40 per cent had repeated intrauterine deaths as the only manifestation of clinical disorder.

The experience of Lockshin et al. with the anticardiolipin antibody is supported by our observations. We have been able to test 11 of our patients who have the lupus anticoagulant for anticardiolipin antibody and have found abnormal titers (1/150 to 1/400) in all of them. Not all women with anticardiolipin antibody have the lupus anticoagulant, but the data of Lockshin et al. suggest that measurement of the antibody may serve as a suitable screening test for these high-risk pregnancies.

The treatment of pregnant women with high doses of prednisone for prolonged periods is daunting. Marked cushingoid features developed in all the women treated, glucose intolerance developed in two, hypertension with proteinuria developed in two, and pneumonia in one. When there is a history of a mid- or third-trimester fetal loss or repeated first-trimester losses, we believe it is no longer justified to withhold treatment once the presence of lupus anticoagulant has been established. Maternal prednisone treatment has been lifesaving for the fetuses, with a relatively low incidence of side effects in the mothers and no discernible adverse effects in the 10 newborn infants.

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The above letter was referred to the authors of the article in question, who offer the following reply:

To the Editor: We appreciate the new data submitted by Lubbe, Pattison, and Liggins. We find it particularly striking that they also found placentas with infarctions insufficient to account for fetal death, and that they report an apparently high toxicity of corticosteroid therapy during pregnancy.

Since our initial report in the *Journal*, we have had the opportunity to study a total of 58 pregnancies in patients with systemic lupus erythematosus, and we disagree with the conclusion of Lubbe et al. that "it is no longer justified to withhold treatment." We have seen at least four false positive results, including at least one in a woman who has successfully carried two pregnancies to term without treatment, after having lost three. We have also corrected, with corticosteroid, the anticoagulant (but not the antibody to cardiolipin) and failed to save the fetus. What the best treatment for these patients may be, remains, in our opinion, to be determined.

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EFFECT OF "COKE" ON SPERM MOTILITY

To the Editor: Various methods of vaginal contraception have been used since antiquity. The Egyptians recommended honey and sodium bicarbonate; acid fruit juices and a variety of oils have also been used throughout history.[1] Postcoital douching with household substances was a popular form of contraception at the beginning of this century, and Coca-Cola is still said to be used in developing countries for this purpose.[2] The efficacy of Coca-Cola as a postcoital contraceptive appears dubious since its use has been perpetuated through folklore rather than scientific evidence. We could find no study measuring the effect of Coca-Cola on sperm motility in vitro. In addition, there has recently been controversy over the attributes of old-formula ("Classic") Coke and those of "New Coke." We therefore compared the effect of various modern formulations of Coca-Cola on sperm motility.

Table 1. Effects of Various Types of Coca-Cola on Sperm Motility in Vitro.

	SPERM MOTILITY AT 1 MINUTE	pH OF COKE
	*% control**	
Old ("Classic") Coke	8.5	2.38
New Coke	41.6	2.37
New Coke — caffeine-free	16.6	2.25
Diet Coke	0	2.89

*Average of four measurements.

We used semen from a healthy, fertile donor and various formulations of Coca-Cola (Table 1). The semen was liquefied at 37°C, and 0.05-ml aliquots were transferred to test tubes containing 0.25 ml of the formulations (newly opened and at room temperature). Samples were incubated at room temperature, and the percentage of sperm motility was evaluated at one minute by direct microscopical observation.

The results are summarized in Table 1. All samples of Coca-Cola markedly reduced sperm motility, whereas saline had no spermicidal effect after the one-minute interval. Diet Coke had the strongest effect, and Classic Coke was shown to have five times the spermicidal effect of New Coke.

The effectiveness of Coca-Cola as a spermicidal agent in vaginal douching has been attributed to its acidic pH.[2] Although the spermicidal effect varied with the different formulations of Coca-Cola, we found no significant difference in their pH values, suggesting that a component of the Coca-Cola "secret formula" may be a cofactor in the effect. Although not recommended for postcoital contraception, partly because sperm can be found in the oviducts within minutes after intercourse,[3] Coca-Cola products do appear to have a spermicidal effect. Furthermore, our data indicate that at least in the area of spermicidal effect, "Classic" Coke "is it."

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SUCCESSFUL PREGNANCY AFTER IN VITRO FERTILIZATION AND EMBRYO TRANSFER FROM AN INFERTILE WOMAN TO A SURROGATE

To the Editor: We wish to present a report of a pregnancy in which fertilization of an ovum obtained from a woman who had had a hysterectomy was followed by transfer of the embryo to a surrogate.

A 37-year-old woman had undergone bilateral salpingectomy for tubo-ovarian abscesses in 1972 and hysteroscopic resection of a submucous fibroid in 1982. Shortly after the resection she had undergone in vitro fertilization and embryo transfer. Although the procedure was successful, the uterus spontaneously ruptured at 28 weeks of gestation, necessitating cesarean hysterectomy. The baby girl subsequently died of the respiratory distress syndrome.