The Value of Vitamin E in the Treatment of Toxaemia of Late Pregnancy

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In a recent article under this heading in Gynaecologia, 134, 391, Mastboom and Sikkell referate on page 392 an experimental investigation published by Ingelman-Sundberg in 1949 in a manner that must be corrected.

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They write: "The experimental work of Ingelman-Sundberg (Acta Endocrinol. 2, 335, 1949) is not convincing either. In this experiment pregnant guinea pigs, on a vitamin E-free diet, received 1.2–1.6 mg. alpha-tocopherol daily, and in some cases a complete or partial abruptio placentae developed. Further investigation revealed changes in the maternal vessels under the influence of which the abruptio could have occurred. We wish to point out that, while, on one hand, in these experiments no measures were taken against other coincidental deficiencies, there is, on the other hand, no evidence, which makes a hypovitaminosis E probable in cases of abruptio placentae." The truth is, that a series of guinea pigs were reared on a special diet containing all vitamins necessary for guinea pigs except vitamin E (Ingelman-Sundberg, Acta Physiol. Scand. 16, 250, 1948). The animals were given exact amounts of alpha tocopherol varying in an almost logarithmic scale from 0 to 1.6 mg. daily. After 3 months they were mated, and the pregnancies were studied. All measures were taken to avoid other coincidental deficiencies, which is proved by the fact, that the diet used, after many experiments, had been found to contain all the vitamins necessary for guinea pigs except vitamin E, and the fact that the animals receiving 1.6 mg. of tocopherol daily, having quite normal placentae, continued to full term. The other animals all showed a total or partial premature separation of the placentae, and special vascular changes in the maternal part of the placenta often followed by the deposition of a metabolic type of pigment. The same type of placental separation and vascular changes including the deposition of pigment were found in normal pregnant guinea pigs treated with oestrogens suggesting that the cause of the vascular changes in avitaminosis E in guinea pigs might be an increased oestrogenic action (Ingelman-Sundberg, Acta Endocrinol. 5, 54, 1950). Further studies about this problem are being published later.