

appeared. Five grains of quinine were ordered every two hours. I was again called about midnight, shortly after which the fœtus was expelled. She informed me that about an hour after she had taken the second dose of her medicine (quinine), and almost coincident with symptoms of cinchonism, labor pains set in, and continued to gradually increase in severity up to the time of my visit, the medicine being taken at the regular times.

From the action of quinine in these two cases, which I think is sufficiently definite, I infer that in certain rare instances quinine overlaps its ordinary physiological area, so to speak, and, as is well known, it exceptionally produces an erythematous eruption on the skin, commonly called the "quinine rash," so it will exceptionally produce uterine contractions. When this does occur, its action seems to conform more to the natural rhythmical intermittent contractions of that organ than to the tonic ecboic action of ergot. But this action of quinine is certainly an unusual one, and the premature expulsion of the embryo or fœtus occurring after the administration of this drug is not due, in the great majority of cases, to the remedy, but to the poison for which it has been administered. Therefore, I believe, quinine should be administered freely in malaria-complicating pregnancy, with the precaution, however, of either administering a preliminary dose of opium, or of giving the patient a dose to be kept conveniently by and taken at the first indication of pain referable to the uterus; not so much on account of the occasional undesirable action of quinine upon the womb, but more particularly to assist its action in preventing premature labor, which is so likely to occur during an attack of malaria.

The fourth and last controversial point upon this subject which I desire to refer to, is the effect of labor upon a malarious attack. Ritter believes that the tendency of parturition is to arrest a malarious attack, in explanation of which he suggests that the hemorrhage may be the cause of the arrest, whilst Goth, on the other hand, states that an attack will be prolonged by child-birth. My own cases induce me to concur with the last-named observer, the following history, which I transcribe from

my case-book, being one of several bearing out this opinion:

Feb. 14th, 1886. Mrs D., aged 37, seven and a half months pregnant. Every afternoon during the past week she has felt feverish, her bones ached, she had a general feeling of malaria, and her urine was highly colored. About two months ago she was treated for intermittent fever. She was taken in labor during the past night. I saw her about eleven o'clock this morning, when pains were quite strong, and coming regularly about every five minutes. The os uteri was not dilated, and there had been no discharge either of blood or water. Temperature 100°F., pulse 104. I injected hypodermically  $\frac{1}{4}$  gr. of morphia, and ordered a 3-grain capsule of quinine every two hours. Shortly after the morphia was used the pains subsided, and she slept for a couple of hours. She had a slight chill about four o'clock, and about five labor pains again came on more severe than before, terminating the second stage of labor about half-past six: When I reached the patient about seven o'clock, being absent from home when sent for during the afternoon, I found labor completed, the child, still attached to the placenta, lying on the bed. A careful examination of the placenta revealed it to be perfectly intact. There was very slight hemorrhage accompanying delivery. The uterus was hard and well contracted. Her temperature was 102°F., but otherwise she felt comparatively comfortable. About half-past eight o'clock she had a very severe rigor, and shortly afterwards became maniacal, requiring several persons to maintain her in bed. When I saw her again, about half an hour afterwards, she was more tranquil and rational, but her temperature was 105.5°F. The quantity of quinine she had been taking was doubled, six grains being ordered every two hours, and twenty grains of antipyrine administered at once, ten grains to be repeated every four hours until her temperature fell. Vaginal lotions of carbolic acid (1 in 30) were also ordered every four hours.

Feb. 15th, 8 a.m. Axillary temperature normal. After the second dose of antipyrine, the fever rapidly subsided, and she sweat profusely. The quinine to be continued, the dose reduced to 4 grs. every second hour.