Ergot.

Of all the drugs needed in obstetric emergencies, ergot is certainly the most valuable. It is the duty of a midwife to know the indications for its administration, the dose, action, and dangers.

The deleterious effects of ergot were recognised as early as 1096, but it was only after an epidemic of ergot poisoning in Hesse in the year 1596 that a German physician gave an exact description of it. In mediæval times there were periodical epidemics of a peculiar character among the peasantry in different parts of Europe. It was through these that the first knowledge of ergot was won; out of the scourge came a great boon.

It was discovered that the disease was due to a poison, and that it was strictly limited to the people who ate the coarse rye bread; on analysing this it was found that in many cases a substance other than rye was present. This turned out to be ergot, or "spurred rye." The botanists then came to the rescue. In the ovary of the common rye was found a parasite, a fungus—*claviceps purpurea*—replacing the ovary. It is also found in some other grasses, such as wheat, barley, oats, maize, etc.

The epidemics took two forms, each occurring in different districts; in one the patient complained of curious creeping sensations in the limbs as if an insect were running along the skin, there was severe cramp, and the gait became staggering; convulsions sometimes ensued. One of the symptoms was the suppression of milk in nursing women; the same result followed in cows fed on meal containing the drug. This property has been utilised in severe cases of polygalactia or excess of milk leading to debility of the patient; it is then given frequently in small doses. In the other form of ergotism, the patient complained of severe pain, the extremities, usually the feet, hands, and ears, became extremely cold, sloughing and gangrene ensued. Hogs fed on ergotised rye had gangrened ears, and in cockerels the combs and wattels were affected. Cattle feeding in pastures where ergot is found have been known to have dry gangrene, causing them to lose hoofs and horns.

The only feasible explanation of these two different forms of the disease lies in the variation in the chemical composition of ergot. Two of the active principles are cornutine, giving rise to cramp symptoms, and sphacelotoxin which, according to Jacobi, occasions gangrene. Both of these constituents stimulate the uterus to contract.

The fungus is found in Great Britain, but it is chiefly collected in Spain and Southern Russia; the Spanish is considered the finest. It is most abundant in wet seasons; the grain of rye attacked grows out of all proportion to the rest; in a spike there may only be one or two diseased; there are three stages in its development. In the primary stage, when the rye flowers, the ovary becomes covered with what is known as the honey dew of rye, which consists of minute cells containing much sugar, formed by numerous filamentous cells. In the secondary stage these unite and form a triangular tapering body at the base of the ovary—purplish black in colour. When fully developed this is known as the sclerotium or spawn. In the final stage, when the fungus is mature, it much resembles a mushroom, only it is, of course, very small. The ergot (French: ergot—a spur, from its fancied resemblance to the spur of a cock) is collected when it reaches the second stage of its development. The grains vary in length, measuring from one-third of an inch to one and a half inches in length; they taper towards the ends, and are furrowed on each side. They are pinkish-white internally, and have a peculiar, heavy, disagreeable odour; the dry grains have, however, very little smell. The taste is oily and unpleasant; when broken across they snap like dried almonds. The powder is ashen grey in colour.

It is a remarkable thing that in the accounts of epidemics occasioned by ergot, no mention is made of abortions or premature labour, as sequelæ of its absorption. It is now generally admitted that the ergot of rye has no action upon the uterus except during parturition, prematurely or at full term; though it is still mentioned in many books as a drug used to procure criminal abortion. There is no notice of ergot as a drug acting upon the uterus till 1688, when one Camerarius stated that women took a decoction of the grains to hasten delivery. It is interesting that the first hint of its use in obstetrics was the announcement of the fact that it was used by a midwife in Chaumont, which appeared in a medical journal.

Monsieur Desgranges, an able obstetrician of Lyons, was the first who communicated the singular properties of the drug to the scientific world; he had met with several midwives who, from knowledge handed down from their forbears, used it in lingering labours. He made trials of it, and published his observations widely; we owe, therefore, a debt to this enthusiast, who spared no pains to demonstrate the value and efficacy of ergot, when rightly administered.

It is curious to find that Madame la Chapelle, after trying it in fifty-four cases, puts it down as inefficacious; in only two does she admit it was successful.

There is now a whole mass of literature upon

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