"Miss K.", he says, "first consulted me in February 1824. There was enlargement of the right side of the abdomen, and, twelve months before, she had experienced pain and heat in the situation of the ovary, followed by gradually increasing fulness; but, until the enlargement was so great as to excite remark, she had taken very little notice of it. At this period, her general health was not good, and I therefore adopted no treatment directed especially to the seat of disease. After a time, her health having improved, and the enlargement continuing to increase, the opinion of my late friend Dr. T—— was taken. He suggested the use of active purgatives and diuretics, the result of which was emaciation and failure of the general health, without any effect on the disease. The enlargement was now so considerable that the friends were anxious for the operation of tapping to be performed. I dissuaded them from it, and recommended them to consult Sir Charles Clarke, who agreed with me. From this time to September 1830, no further treatment was adopted beyond occasional constitutional treatment, the swelling slowly increasing. About the 20th of September, while in the act of descending the stairs, she fell, and struck the abdomen with considerable force. She felt no immediate inconvenience from this, but shortly afterwards experienced a strange sensation in the abdomen, with frequent inclination to make water. More than a gallon was passed in the twenty-four hours. No treatment was employed; the increased secretion of urine continued; and, in about ten days, the swellings had disappeared. Rapid emaciation then supervened, and she became exceedingly weak; and for some time it was doubtful whether she would not sink under the enormous drain from the kidneys. Under tonic treatment, however, she gradually recovered. In 1834, there was a slight return of heat and tenderness, with some fulness, in the old seat of the disease, which was quickly subdued by antiphlogistic remedies; and she has since remained quite well."

I may state that the patient subsequently married, and has several children. My father has frequently attended her, but never for any return of the ovarian disease. At present she is the hard-working wife of one of our Indian missionaries, and, from all accounts, appears to be in perfect health. It seems scarcely probable that the kidneys could have been the medium for absorbing so vast a quantity of fluid; and I am inclined to regard the case as one of rupture directly, or by the intervention of some infundibuliform band, into the bladder itself. The contrast between this termination and that of the woman lately a patient in our Hospital confirms the truth of Dr. Farrar's remarks on malignant affections of the ovary.

24, George Street, Hanover Square, November 8th, 1853.

THE USE OF ERGOT OF RYE IN PARTURITION: WITH AN INQUIRY INTO ITS SUPPOSED INJURIOUS INFLUENCE ON FETAL LIFE.

By H. LLEWELLYN WILLIAMS, M.D., late Physician to the
Beverly Dispensary and Maternity Charity,
St. Leonard's-on-Sea.

[Read before the East Sussex Medico-Chirurgical Society, Nov. 2nd, 1858.]

THE subject I have proposed for our consideration on this occasion is one of considerable importance, not so much on account of its novelty as to the interest attached to the determination of the actual value of a remedy admitted to possess many claims upon the attention of the profession.

It is not a little singular that ergot of rye, as a medicinal agent, was known to ignorant pretenders for many years before it was acknowledged as possessing any specific properties; and, before entering on the special object of this paper, I may be excused for alluding to what is known of its earlier history.

Ergota, or ergot of rye, as is now well known, is an undetermined fungus, with the degenerated seed of *Secale cereale*; and, according to the late Dr. Royle, the ergot employed in medicine is the grain of the rye stimulated into diseased action by the presence of the sporidia or spores of a fungus. This diseased action is not confined to the rye, but is met with amongst many other grasses, damp situations and moist warm seasons favouring its development.

Ergot of rye, or spurred rye, as it is also called, from its shape somewhat resembling the spur of a cock, is cylindrical in form, tapering towards both extremities, varying in length from half an inch to an inch, and from two to three lines in

diameter; whilst two furrows run along its whole length, often terminating at its apex by a greyish projection. Externally, it is purplish in colour; internally, grey, with a tinge of red. It is possessed of a peculiar musty smell, whilst its taste is slightly bitter and acrid; it is brittle, and, when dry, can easily be reduced to powder. It readily attracts moisture on exposure to the air, swells, and becomes mouldy, in which state it is liable to be attacked by a small insect, a species of *acarus*, which eats up the interior, and leaves the grain a mere husk, unfit for medicinal purposes: hence the necessity for its being kept in well-stoppered bottles.

At the conclusion of this short sketch of the natural history of this drug, I have now to request your attention for a brief period to the chemical composition of ergot of rye, as on a correct knowledge of this the elimination of the poisonous properties possessed by it must depend.

The analysis I have made use of is that of Dr. Wright, published in the *Edinburgh Monthly Medical Journal* for July 1840; which shows the component parts of this drug to consist of 31 per cent. of a thick white oil, 5.50 of osmazone, 9 of mucilage, 7 of gluten, 11.40 of fungin, 26 of fecula, 3.50 of colouring matter, and 3.10 of salts. The fixed oil contained in it is the principle on which Dr. Wright, in the paper already referred to, alleges that its active properties depend: this is of a bright brown colour, lighter than water, soluble in alcohol, ether, volatile oils, and caustic alkalies, and is readily separated from its powder by ether and subsequent evaporation. Its effect on the human body is to depress the heart's action. Ergot has also been subjected to analysis by M. Bonjean, a celebrated French chemist; the result of his investigations leads to the conclusion that, in reality, ergot possesses two active principles—1, an essential oil, highly poisonous; and 2, an aqueous extract, brown, of a thick consistence and musty smell, and which he has found possesses very decided anti-hæmorrhagic and obstetrical properties. To this extractive principle he has given the name of *ergotin*.

It is not a little remarkable that, like several other valuable medicines, the knowledge of this drug was, for upwards of a century, confined entirely to its poisonous qualities; and, according to Ramsbotham, the first intimation we have of its employment as an uterine remedy is not until the year 1774, when Parmentier, in a letter to the Abbé Rosier, published in the fourth volume of the *Journal de Physique*, made it known as a remedy often used in childbed by a certain Madame Depille, a midwife of Chamont. The credit of first taking it out of the hands of the women is due to M. Desgranges, an obstetrical practitioner who flourished at Lyons about the year 1777. Having published the results of his practice, the American physicians speedily adopted its use, and with marked success; but it was not until several years later, viz., in 1820, that it came prominently before the profession in this country, in a fresh edition of Dr. Merriman's *Synopsis* published in that year. Its actions and uses are now so well understood that it would be superfluous for me to occupy your time in enumerating them.

Like many other important remedies, in the first introduction of ergot into English practice, the accounts of the virtues it was said to possess were received with much distrust; and it was not until a mass of evidence had been accumulated on the subject, that the majority were obliged to acknowledge that it did indeed possess a specific uterine action, manifesting itself entirely through the nervous system, and not necessarily interfering with the circulation in any degree, though Dr. Wright states that it has often been known to diminish the frequency of the pulse. This probably was owing to the preparation employed being strongly impregnated with its essential oil. The most serious objection to its employment ever brought forward is its supposed dangerous influence on the life of the fetus; and there are many practitioners of large experience who even at the present time hesitate to employ it on these grounds, stating that, if fatal results do not ensue previous to the birth of the infant, convulsive disorders attributable to its use frequently occur, which carry off the child within some of the earlier hours of its existence, these being due to the transmission from the mother to her offspring of the poisonous properties possessed by this drug. It is impossible to deny that the effects of remedies administered to the mother are capable of transmission through her to her child; though how the poisonous properties of a drug can be exhibited in the child, no manifestation of such an effect being visible in the mother, I confess I am at a loss to imagine.

It is highly probable that the different results witnessed by various practitioners in the use of ergot depend not so much

on any real difference of effect, as on the medicinal preparation employed. This is the conclusion M. Bonjean's experiment leads us to, proving as he does the existence of two active principles, the one poisonous, and the other possessing special influence on the uterine nerves.

Dr. Churchill, in his *Manual of Midwifery*, attributes the injurious effects occasionally met with after the administration of ergot solely to the greater pressure of the uterine parietes on the fetus arresting the circulation in the cord. That this may be the occasional cause of death, I shall not attempt to deny, my object being to endeavour to satisfy your minds that no poisonous effects possessed by this drug are likely to be manifested in the fetus: certainly I have not witnessed any symptoms that would lead to such a conclusion. It is probable that the view promulgated by M. Bonjean—that the extractive active principle of ergot is readily obtained by the action of boiling water, leaving its essential oil behind—accounts for the small proportion of still-born children occurring amongst those cases in which I have administered ergot, as I am in the habit invariably of employing a decoction. During the past eleven years, I have made use of the ergot of rye in three hundred and forty-seven cases of labour, the number of still-born children following its use amounting to twenty-eight, or about 9 per cent. Of these, no less than thirteen occurred in cases of accidental hæmorrhage; three cases also were met with in breech presentations; and in five cases there was conclusive evidence of the fetus having been long dead, the putrefactive process being more or less advanced in them all. According to the evidence of Drs. Merriman, Ramsbotham, and Lee, one out of every three cases of accidental hæmorrhage proved fatal to the child, whilst nearly one out of every ten of the mothers also fell a sacrifice—a rate of mortality I never witnessed, fortunately, never having lost any patient from this cause.

Breech presentations, under ordinary circumstances, are found, according to the statistics of the Edinburgh Hospital, to prove fatal to one out of every four cases. My experience is not sufficient either to admit or deny that, amongst those cases where ergot has been administered in breech cases, the mortality is not in proportion large; and it would seem highly probable that the more continuous pressure of the uterine parietes on the fetus might occasion a greater mortality.

Of the remaining seven fatal cases, the result of my individual experience, they all occurred where the delivery had been protracted, from insufficient uterine action, from eight to, on one occasion, thirty-two hours—a fact sufficient in itself to peril the life of the child. I therefore do not imagine that death in any of these cases can be fairly attributed to the direct action of this drug.

In conclusion, I may be permitted to observe, that I am not aware of ever having witnessed any untoward event, either to mother or child, resulting from the use of ergot; whilst, on the other hand, I have frequently known its proper administration highly useful in cases of accidental floodings, and also occasionally to avert the necessity of using instruments in cases of tedious labour; and have likewise frequently witnessed its beneficial effects in patients of an hæmorrhagic diathesis, who, on previous occasions, had had their lives placed in the greatest peril from *post partum* hæmorrhage. Though a strong advocate for the employment of ergot in suitable cases, I cannot at all coincide with Mr. Mitchell, who, in a pamphlet on its use published in 1828, was so loud in its favour as to declare that, "in his opinion, its general introduction into practice would completely supersede the use of forceps"; and I am equally unwilling that you should imbibe the impression that I am an enthusiastic advocate for its indiscriminate use. It is a powerful remedy, requiring considerable judgment, not alone as to what class of cases it should be administered to, but especially the stage of labour and the condition of the parts involved in this process. It is too true that, neglect of due consideration being bestowed on these points, disasters have occasionally been known to follow its use; but it is neither sound logic nor fair argument to adduce as an objection against this valuable remedy the possibility of its abuse. I would ask you, Has not the use of both bleeding and mercury been misapplied? and do we in consequence discard their employment? I would, therefore, strongly recommend to my professional brethren the use, not the abuse, of ergot as a remedy by its specific powers capable of diminishing the duration of labour, without injury either to the mother or her child, and certainly possessing to a wonderful degree the power of diminishing an hæmorrhagic tendency.

Transactions of Branches.

SOUTH-MIDLAND BRANCH.

CASES OF PROTRACTED RETENTION OF THE PLACENTA IN ABORTION.

By BENJAMIN DULLEY, Esq., Wellingborough.

[Read September 30th.]

CASE I. Mrs. C. D., aged 46, the mother of a large family, a small, spare and active woman, was taken with flooding on July 2nd, 1857; she had not menstruated for three months, and considered herself pregnant. This flooding continued up to July 17th, on alternate days, and then subsided. She so far recovered as to go about her usual duties until August 9th, when, uterine pains coming regularly, I was sent for.

The os uteri was but little dilated; and no part of the child or membranes could be felt. The pains had subsided before my arrival; and after waiting for some hours in vain for their return, I left with directions to be sent for when necessary.

Upon the following morning's visit, I learnt that the child had been suddenly expelled during the night. The nurse had divided the cord; and the placenta was still retained in the uterine cavity. The child, of from four to five months growth, was natural in appearance, and showed no signs of decomposition. Examination above the pubes showed the uterus contracted and no larger than an orange. Examination *per vaginam* found the os uteri firmly closed around the thin cord. There was little or no discharge; and the patient was cheerful and talkative.

Some few hours afterwards, the cord came away with a small root of placenta attached: it had no doubt been glued to the clothes by coagula, and been torn away when the patient turned in bed. The os uteri would not admit the point of the finger. Thus things proceeded until August 13th, four days after delivery, when symptoms of peritonitis appeared, and were checked by calomel and opium. After this, up to the beginning of September, there was very little irritative fever and as little constitutional disturbance. The patient persisted in going down stairs and even went out in a carriage.

In the night of September 9th, thirty-one days from the birth of the child, fearful hæmorrhage came on, accompanied with slight pains. The os uteri was as firmly closed as on the second day, resisting all attempts at dilatation. The vagina was plugged, cold was applied, and all the usual remedies resorted to, the most effectual being opium in large doses. The bleeding gradually diminished, and had ceased by the 20th of September. But it returned again in less degree on the 26th; and on the 29th, in such excessive quantity was the discharge, that death itself seemed almost inevitable. The pulse was imperceptible, or nearly so; the countenance pallid; the breathing short, and the extremities cold. After the use of stimulants, the patient rallied, and it was thought safe to ascertain the condition of the uterus.

The vagina was well plugged by coagula, which were rapidly displaced, and the os uteri was found somewhat relaxed. Not one moment was to be lost; the right hand was placed upon the abdomen (the arm passing between the thighs), grasping and pressing the uterus downwards in the direction of the left hand, which had now been introduced into the vagina. First one finger, then a second and third, were gradually worked up into the uterus, detaching as they proceeded some firm adhesions, until the fundus was reached. The fingers were then hooked down; and, to the satisfaction of the operator, brought away the whole of the placenta, which was of about the size and shape of a tolerably large jargonelle pear. It had not undergone any decomposition, excepting at the lower end and back part, from where the cord had been torn away, and from whence no doubt the hæmorrhage had proceeded. There was no opportunity of examining it more particularly, for when engaged in attending to the more immediate wants of the patient, it was swept away with some coagula and seen no more.

This occurred seven weeks and four days after the birth of the child. The patient recovered slowly, it is true, but without an untoward symptom.

CASE II. Two other cases of a parallel kind have occurred in the practice of Mr. Stowe of Buckingham, who has kindly given the following particulars. Both were furnished by one patient, who was the wife of a farmer living three miles from Mr. Stowe's residence. She was of delicate frame, had borne