PERINATAL LESSONS FROM THE PAST

Adam Neale (c1780–1832) and ergot of rye

Peter M Dunn

Adam Neale, MD, was born in Scotland around 1780. He was educated in Edinburgh and qualified in medicine in 1802. In 1806 he was appointed as a physician to the army and saw considerable service during the Peninsula War under Sir John Moore and Sir Arthur Wellesley. In 1809 he published an account of his experiences in Letters from Portugal and Spain. In 1814 he settled in Exeter where he remained for the next 10 years apart from a tour of Germany, Poland, Moldavia, and Turkey in 1818 and a short sojourn in Cheltenham in 1820, made brief by the fact that he rashly and publicly questioned the medicinal value of the spa waters of that town. In 1828 he published a monograph on the use of ergot of rye as a remedy in certain states of the uterus.1 Four years later he died in Dunkirk in 1832.

Epidemics of St Anthony's fire due to ergot of rye had been recognised since the middle ages but the effect of ergot on the uterus was not recognised by the medical profession until 1688 when Camerarius mentioned that women in certain parts of Germany were in the habit of employing this sort of diseased grain to accelerate parturition. One hundred years passed before Tessier in France once more drew the attention of doctors to a similar practice among the midwives around Lyon. From then on medical interest in the subject increased and 50 years later Neale was able to review 720 reported cases in which ergot had been used in Europe and North America, mostly with success, either to expedite delivery of the baby or placenta or to control postpartum haemorrhage. Neale wrote:

'... the spurred rye or ergot which chiefly shows itself in wet seasons, and is generally considered to be a diseased change in the common grain ... has been employed for a length of time in cases of lingering parturition ... when introduced into the stomach, or even the rectum, in doses of from 20 to 60 grains, it produces in a few minutes, by a stimulating or sympathetic action, strong and continued contractions of the uterus, followed by speedy and safe delivery ... provided always that the medicine be administered under suitable circumstances, and only when the labour has been delayed or suspended in consequence of feebleness of the womb'.

'The child being born, the womb continues to contract, closing upon itself, either by means of its natural contractability, or from the effect of the remedy ... we know of no case where the ergot has been employed a second time to procure the expulsion of the placenta, after having already been given to hasten the birth of the child ... we are induced to conclude that the uterine contractions produced by the ergot continue sufficiently long in all cases to bring about the expulsion of the placenta, as well as to hinder all subsequent hemorrhages'.

Neale was aware of the potential dangers of ergot to the mother and child when ergot was administered incorrectly or in inappropriate circumstances. As he wrote:

'But this substance has also been accused of injuring the child mechanically, and even of causing its death, in consequence of the violence of the uterine contractions thus artificially excited, which, it has been said, may even produce asphyxia, by obliterating the circulation between the placenta and the infant'.

Much of Neale's book is devoted to defining the situation in which ergot may be safely...
used and the contraindications to its administra-
tion:

'This remedy can only be administered with
success in cases of parturition under particu-
lar circumstances, which may be classed
under the following provisos:

1st Provided always, that there exists no
fault in the conformation of the bones of the
pelvis, or of the soft parts of the mother,
which can oppose any remarkable obstacle
to the passage of the foetus...

2dly Provided, that the neck of the womb be
quite supple and yielding, and partly dilated;
and that the time of parturition shall have
decidedly commenced, or already existed for
some hours... we ought not to administer
this remedy in cases of premature accouche-
ment; where the waters continue to drain
away several days before parturition has
really commenced; where there is neither
any dilatation of the os uteri, nor any real
pains. In a word, here, as in all other
instances, 'art should never precede nature'
in hastening the natural act of delivery.
There is only, perhaps, one case of exception
from this general rule, and that is, where the
foetus, whatever may be the state of preg-
nancy, has been dead for some time... 

3dly Provided also, that the foetus is pre-
senting in such a manner as to be expelled
naturally; or without any necessity for the
interference of art to change its position, and

that its bulk is not too great for the natural
passages... wherever parturition is consid-
erably advanced, or the os uteri is sufficiently
dilatable, and the lower extremities of the
child are presenting, it would always be more
advisable to pull down the feet, and deliver
the woman than to try to excite the action of
the womb by means of the spurred rye'.

Neale adds that ergot is contraindicated in a
number of other circumstances including
when: 'the umbilical cord be twisted several
times round the neck of the foetus, and is thus
causing an obstacle to delivery'. Maternal con-
traindications include convulsive and precon-
vulsive states. He writes:

'The most frequent obstacle which presents
itself is a state of plethora, or turgidity of the
blood vessels; as characterised by discolor-
ation of the countenance, head-ache, full-
ness and hardness of the pulse, accompanied
by strong uterine pains, without any expul-
sive efficacy... The actual presence, or even
the threatening, of spasm and convulsion,
either of the whole frame, or of the womb
alone, form also a contraindication to the
employment of spurred rye'.

Other contraindications included an extreme
degree of nervous susceptibility, general debil-
ity, a liability to vomiting, and a past history of
metritis or peritonitis.

1 Neale A. Researches respecting the natural history, chemical
analysis and medicinal virtues of the spar, or ergot of rye, when
administered as a remedy in certain states of the uterus.
London, 1828.
Adam Neale (c1780-1832) and ergot of rye.

P M Dunn

Arch Dis Child 1993 68: 617-618
doi: 10.1136/adc.68.5_Spec_No.617

Updated information and services can be found at:
http://adc.bmj.com/content/68/5_Spec_No/617.citation

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/