Relief of Pain in Childbirth

A Handbook for the General Practitioner

by W. C. W. NIXON

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PREFACE

This small book is not intended for the specialist. Nor, is it hoped, will it be regarded as an incursion by specialists into the field of general practice. It is merely the result of the opportunity for whole-time observation of a large number of patients. Though designed primarily for the needs of general practice we have included wider considerations wherever clarity or interest seemed to demand it.

We have endeavoured to give a fair trial to the most widely used agents and methods; but it would be best to confess at the outset that as a result of observation we have become biased in favour of methods which seek the co-operation of the mother herself, and have therefore come to prefer those drugs which help this co-operation to those which hinder it. As well as to doctors engaged in domiciliary practice, we hope that some of this book (Chapter Five for example) may be of help to midwives.

We have many people to thank. Colleagues in general practice were very generous with suggestions and the medical and nursing staff of the Obstetric Unit of University College Hospital have stimulated many fruitful discussions. The makers of the apparatus described were most courteous in lending all these for trial and in lending blocks for the illustrations, in particular The British Oxygen Co., Ltd., Messrs. A. Charles King, Ltd., Medical Pneumatics, Ltd., H. G. Carsberg & Son (London) Ltd., Messrs. Siebe Gorman & Co., Ltd., Cyprane Ltd., Blackwell Scientific Publications, Ltd., Down Bros. and Mayer & Phelps, Ltd.

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CHAPTER ONE

THE PRESENT POSITION

In the survey of maternity services in Great Britain made jointly by the Royal College of Obstetricians and Gynæcologists and the Population Investigation Committee (1948) the subject of analgesia was carefully analysed. There was clear evidence that an extraordinary and widespread indifference to this question still existed, resisting the lengthy campaigning that many workers have carried on. However, the national conscience is becoming increasingly awake to the problem and public demand for a more satisfactory service is growing. Considerable progress has been made, but unevenly. For example, there was a large difference between local services according to the conscience and enterprise of the authorities; one local authority owned no gas and air machines and had made no plans to secure any, others were providing a full service.

In both domiciliary and institutional midwifery, the analgesia rate was much higher where a doctor was in attendance; this was due not only to the larger range of agents legally available to him but also to the reluctance of the midwives to use what they could. Not that doctors were found blameless—far from it; some, for example, were habitually stitching perineal tears without a general or local anæsthetic.

Social class was another factor which affected unduly the percentage of patients given analgesia.

Improvement has continued even since this survey was published, and the disparity between the groups is lessening. The position, however, is still far from satisfactory.

The rest of this book is concerned with present opinions of the value and use of different methods of relieving pain. There is one problem, however, to which we must first briefly refer: that of producing the best team work amongst those engaged in looking after the mother.

The Midwife.—During the year 1947 there were over 17,000 practising midwives. More than 600,000 deliveries were conducted by them; in addition there were 240,000 deliveries managed by maternity nurses with a doctor in charge. The National Health Service is temporarily changing this proportion, but midwives still bear the greatest responsibility for the conduct of normal labour.

In the hour to hour management of labour, the midwife who stays with the patient is in a much better position to help her over her discomforts and anxieties than the doctor who looks in only two or three times a day, or who may even postpone his visit until the second stage when the worst is often over. This intimate knowledge which midwives have of all the changes and variations of normal labour should be respected and used to the full. Without it, no successful scheme of analgesia is possible.

We appreciate the difficulties that face the midwife in the practice of her profession, especially in domiciliary midwifery. The shortage of trained midwives imposes a severe test on those who have continued their work in the maternity service. The community should be grateful to them for having performed their duties in the face of what at times seemed insuperable odds.

Certain local authorities are dilatory and to blame for not providing adequate transport for analgesic apparatus. Or they run their maternity service in a niggardly way, economising on personnel. The midwife who has the misfortune to be employed by such an authority must inevitably

suffer frustration. She cannot give all the time she should to preparing and training the expectant mother for the act of birth. She is often too busy with other duties to encourage or control her patients during the process of parturition. And for the same reason she is often prevented from making the best use of the various means at her disposal for the relief of pain. According to the Minister of Health we may now expect a progressive improvement in this state of affairs.

Possibly in the near future one of the new Trilene inhalers which give fixed percentages of the vapour will be passed as safe for midwives to administer. This would eliminate the need for the heavy gas and air machines. It would be an even more useful advance if an analgesic drug such as pethidine, in specified amounts, were made available to midwives after they had been thoroughly instructed in its use. We strongly support the present move to legalise this addition to the midwives' resources.

Despite present limitations midwives already have means of relief in their power which they could use if they would. But some are still reluctant to do this and must accordingly accept the blame for much unnecessary suffering in labour. Such midwives must recognise, if they are honest, that they are too conservative. It is not that they lack goodness of heart but that they have become too accustomed to fixed ways and methods, even to the idea that suffering in labour is normal. They should open their minds, seek opportunities to consider fresh ideas, make better use of the opportunities which they have. We recall the resistance on the part of midwives to the use of Minnitt's gas and air apparatus. They made all sorts of excuses: the mothers did not want it and would not co-operate, the labour was delayed, perineal lacerations were increased, the third stage was prolonged and there was more bleeding. But the real reason for their obstructive attitude was prejudice.

There should be more co-operation between the doctor

and midwife. For example, the patient should not suffer because it is regarded as a loss of prestige to call in a doctor.

The successful adoption of a nation-wide analgesia service in midwifery still rests largely in the hands of the midwife.

The Doctor.—The doctor should recognise and avail himself of the midwife's special knowledge gained by virtue of her intimate contact with the mother. The midwife develops a clinical sense which is of inestimable value in the management of labour. In the antenatal preparation there should be more liaison between doctor and midwife and the doctor would do well to help and guide the midwife to undertake much of this important work herself.

The doctor, like the midwife, must be prepared to break new ground, and to be not too rigid and resistant to new ideas. He can do much to maintain the morale of both mother and midwife.

The Mother.—The attitude the expectant mother adopts towards her pregnancy and labour will often determine the type of experience she will have during her delivery. If there is need for her to modify this attitude she can be helped to do so by right antenatal care.

One of the great advances of the present day is the growing recognition of the value of some antenatal preparation of the patient—i.e. of teaching and training her for childbirth. But such preparation may fail in its purpose unless it forms part of a continuous process which culminates in the management of labour and the puerperium. It falls far short of the ideal when the patient is interviewed during the antenatal period by some person who will never see the labour or even learn how it has progressed; or if the attendant in labour is someone whom the patient has never seen before and has played no part in her antenatal prepara-

tions. Although we are here considering especially the relief of pain in labour, our observations apply to the whole of midwifery; indeed lack of continuity in the supervision of patients must be regarded as among the greatest weaknesses of our present maternity services.

Real co-operation between mother, midwife and doctor is a most potent weapon for alleviating the pains of labour; without it no real advance can be made.

CHAPTER TWO

ANTENATAL PREPARATION

The process of being born, of leaving intra-uterine existence and continuing growth as a separate entity, is so obviously an inescapable and natural part of life's cycle that it is strange that it has come to be regarded almost as an illness.

The healthy accomplishment of a natural bodily process gives a sense of well-being. We must assume therefore that childbirth amongst civilised people has become unnatural. There is some confusion of thought about the reaction of primitive people but there is an accumulation of evidence that healthy, undegenerate primitive women in their natural surroundings have easy labour. However, we cannot go backwards; for better as well as for worse we have become civilised: but perhaps what we once did unconsciously we can deliberately learn to do consciously, and in this, as in other matters, can return to natural function at a higher level.

Many have given thought to this question. What is chiefly at fault? Is it our diet? Posture? Way of living? Is it our upbringing and attitude of mind, or a combination of all these and of other factors of which we are not yet aware? Can civilised people, with their increased complexity and sensitivity, ever have completely painless labour? We do not know the answer to most of these questions, but there are some lines of inquiry well worth pursuing.

Hopeful results have been obtained by certain methods but a great deal more investigation remains to be done.

We may conveniently take as subjects for further consideration the three components of what Dr. Grantly Dick Read (1933, 1942) terms the Pain-Fear-Tension syndrome. Most readers will have heard of this worker and his theory that disturbance of natural function may be attributed to this syndrome. We will take tension first.

Tension

The word 'relaxation' is used nowadays in an almost magical sense, and this has led to its being regarded with suspicion. It means, simply, letting go the shortening or tension of voluntary muscle fibres. The interest in relaxation lies in the proof that it is associated with visceral, and mental and emotional processes.

The best known scientific worker in this field is Edmund Jacobson (1929, 1934). His interest began in 1908 with experiments on the 'nervous start'. This is the involuntary, sometimes excessive response to a sudden, unexpected stimulus. It often involves straightening of the back by contraction of the erector spinæ. He fixed up apparatus to measure this response, using a stimulus of constant intensity. It was found to be greater when the subject was mentally attentive, but psychological theories for this were laid aside when closer observation showed that it could be explained on the much simpler basis of muscle tonus. When actively engaged mentally a person shows evidence of muscle tonus; with a subjective sensation of effortlessness there is muscular relaxation, and conversely, with advancing relaxation the cerebral activity is diminished. Other workers showed that the sudden stimulus which will set off the nervous start also affects pulse and respiration, systolic blood pressure, cerebrospinal fluid pressure, bladder musculature, colon and œsophagus. The 'start phenomena' in viscera seem to be diminished with relaxation in the same way as they are

in skeletal muscle. When the voluntary system is relaxed the vegetative system follows. The process is reciprocal.

Jacobson carried the study of these phenomena further. For example he studied the effect on the knee-jerk of different degrees of muscle tone and he devised a galvanometer that would register very small muscular contractions. With this instrument he was able to disprove the old view that healthy human muscle is always in a state of slight contraction. A group of normal college students, untrained in relaxation, when tested with the galvanometer over a thirty minute period showed varying ability to let go their muscles completely, none achieving this for the whole period. A group of patients suffering from nervous disorders showed marked inability to relax, but after some months' training showed greater ability to do so than had the untrained students.

The diminished response to and appreciation of pain in the relaxed subject was studied.

What is meant here by 'training to relax'? It should be easy enough to relax. But in fact the average person does not appreciate what muscles he is contracting, and so does not know what it is he has to let go. It is common observation that one can lie down apparently quietly without real refreshment. Close observation will show many fine movements, especially of the muscles of the face and hands. It was this 'residual tension' in Jacobson's students and patients which proved to have such a surprising effect on bodily and mental processes, even though itself small in degree. This probably accounted for the failure of some of the so-called rest cures; it was futile simply to tell the patient to 'relax'. He had to become aware of 'muscle sense', and to distinguish this from other sensations such as the stretch of the tendons or strain in extended joints. Many people, for example musicians and athletes, have already become aware of this muscle sense. Cultivated relaxation is identical with ordinary relaxation, but is further developed.

Jacobson stresses that there was no question of suggestion in this experimental work. The patient was not told what to expect when he relaxed, he was merely educated to recognise muscle tension.

This accomplishment, this re-acquired art of letting go tension, can undo some of the bad consequences of the stress and strain of civilisation. The effect in labour can be far-reaching: it relieves spasm of the uterus as of other organs, thus allowing the cervix to dilate and the contractions to be more effective and less painful. Whether the actual pain, or the interpretation of it, or both, are concerned does not matter; the effect on the mother is to calm her, ease and rest her, and give her the confidence that she has herself some control over her progress.

FEAR

It is the emotional aspect of this subject which Dr. Grantly Dick Read has especially stressed, regarding it as the most vulnerable point of attack in the Pain-Fear-Tension syndrome. It is well established that emotions can powerfully affect bodily processes, though as to how they do so our psychiatric colleagues do not yet fully agree. But if it is sometimes a little difficult for the non-expert to follow the intricacies of psycho-somatic medicine, when we come to some of the variations that can take place in the progress of labour the response to emotional states is so obvious that the most casual observer must acknowledge it.

This whole subject is so rich in emotional content, charged as it is from sources ranging from the horrific tales of great-grandmother to the symbolic representation of childbirth as one of the highest human joys, that it seems practical to make use of those emotions which are helpful and constructive, and to modify those which are harmful. The fear of the unknown, and the misconceptions engendered by these alarming stories can be counteracted by a simple and clear explanation of the events of labour and