

chief reliance, for by this means the tube can be opened and an escape of the pus effected. It must be remembered that the Eustachian tube is not only relatively, but absolutely, wider than in adults.

This method of inflating the tympanum is far preferable to all others, since it can be employed at all ages, and in the face of the most determined resistance on the part of the child.

TEDIOUS LABOUR FROM DEBILITY, AND ITS TREATMENT.

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THE remarks in this paper apply exclusively to labours protracted from debility, but, in other respects, natural. I therefore, expressly exclude from consideration all cases in which the delay arises from the position of the child, or from an abnormal condition of the passages, and also cases complicated with rigid os uteri, or with spasmodic contractions of a tetanic nature, as well as those in which there exist obstructions arising from surgical interference. My remarks have reference solely to cases in which the delay is due to enfeeblement or failure of the natural powers of the organs specially called into action during the process of parturition.

Most obstetric writers apply the term "tedious" to all labours protracted beyond a certain period, whatever be the cause of the delay. While it appears to me that the physiological conditions of the case preclude the possibility of fixing for all cases a definite period, many obstetricians, following Dr. Ramsbotham, limit the definition of the term "natural labour" to those cases "in which not more than twenty-four hours are occupied from the commencement of true uterine action to the termination of the process." And the same author, in defining lingering or tedious labour, says that it denotes those cases "in which nothing calling for anxiety occurs, except the length of time that elapses under the continuance, so that it differs from a natural labour only in respect of its duration." Is not this method of basing a classification of labours on the element of time highly unscientific? It is in the first stage of labour that the longest time is occupied, and it is in that very stage that the consideration of the factor time is of the least consequence. It is to the natural differences of temperament that we must attribute the greatly diverse energies with which the organs act in different individuals. The standard of natural labour is one, therefore, that should have reference to the conditions under which the organ contracts, and, assuming no unnatural formation to obstruct its progress, it should not be held to have passed into the category of non-natural labour as long as the pains are active, and labour progressive.

Uterine action may be said to be a violent effort to expel a body in contact with the cavity which is no longer in harmony with it. The action is kindred to that of the bladder in evacuating urine, or to that of the heart during the systole. Taking the latter as the type of uterine action, analogy would teach that labour pains result only when the distension is sufficient to produce uniform contraction; and,

having once set in, the action proceeds in a truly peristaltic manner until the organ has been emptied of its contents. The rapidity of the action causes it to be mistaken for a simultaneous general contraction. The nerves which control the womb's action are not those of common sensation, but the sympathetic, which becomes a nerve of sensation only in special circumstances. The true contractions of the uterus originate among the fibres of the cervix and end at the fundus. Were the functions of this organ, like that of the other organs, performed by muscles composed of involuntary fibre, the contractions would be painless. Labour-pains, however, are spasms—violent effort by an organ to throw out a substance which has ceased to be in harmony with it. Recent observations show that the onset of uterine action is due to a decadence of the membranes, or of the membranes and placenta, and each recurring pain indicates a renewed effort to effect expulsion. Painless uterine contractions do take place, as, for instance, in primiparæ after delivery; but this lack the force to expel other than liquid substances. Under healthy uterine action, then, the rapidity of the delivery bears a direct ratio to the force and frequency of the pains. In certain cases, no doubt, natural labour is hastened or retarded by other circumstances. Thus, in primiparæ, it is usually prolonged from an obvious cause, while, in phthisical cases, it may be accelerated from the attenuated state of the passages. In the case of a woman of average strength, where the pains are regular and effective, the uterus of a multipara may perform its function with sufficient vigour to complete the parturient act within two hours. Dr. Haughton of Dublin and Dr. Duncan of Edinburgh have made independent investigations on the propelling power of the uterus. The maximum power of an uterine contraction is estimated by Dr. Duncan to be equal to 50 lbs., and by Dr. Haughton 54 lbs. The uterus has thus three times the amount of power necessary to complete an uncomplicated labour. Now, to this uterine power nature has superadded the expulsive strength of the abdominal muscles, and the further force resulting from what is called "bearing down;" in this way, an economy of uterine muscular action is provided for, and provision made for the exertion by a healthy woman, in cases of emergency, of a force equal to 80 lbs. (Duncan), or as a quarter of a ton (Haughton). But, in large cities, there are forces at work which prevent this healthy standard from being reached, and to the extent to which the patient suffers from constitutional debility will we find her disqualified for continued exertion. It is in consequence of this that many ordinary labours are prolonged unduly. These cases are met with, not only amongst the poorer classes, as the result of insufficient food and overwork, but amongst the working classes, from their indoor life, early sedentary occupations, and their ill-cooked meals; and even among the middle and upper classes, from inactivity and artificial habits of life. The constitutions of a certain proportion of women are thus so deteriorated, that there results a very serious impairment of the parturient powers. Such women are unable to complete labour without