cially taking into consideration the subsequent progress of the case? For, after the lapse of twenty-four hours more, we have the stage of engorgement established in the more superficial portions of the lung, but no consolidation. I need not refer to the second case, for it presents features similar to those of the first.

I feel convinced that, in the two cases which I have detailed to you, this harsh respiration was an initial symptom of pneumonia; and, although it may not be a constant precursor of the crepitating *râle*, I believe it would be much more frequently met with, if we had more opportunities of auscultating our pneumonic patients in the early stages of their disease.

But now, as to the manner in which the crepitating *râle* is produced: I believe that its seat is in the air-sacs, and that it is caused by their expansion at the time when their walls are covered with the secretion which is poured out upon them. The expansion of the sacs at the time when they are partially filled with fluid appears to me to afford the conditions necessary for the production of the *râle*. That it has its seat in the finest bronchial tubes, I cannot admit; for in some cases these tubes are found after death free from exudation.

There are conditions under which the crepitating *râle* may be heard when no pneumonia is present. In certain cases of œdema of the lung, I have heard a crepitation as pure as anything I have ever heard in the most typical pneumonia; and trusting, therefore, to this sign alone, you might in some cases be misled as to the nature of the disease; but, generally speaking, there is no difficulty. The ordinary symptoms of pneumonia are absent in these cases; there are dropsical effusions in various parts of the body, and other conditions which enable you to form a correct diagnosis. Still some cases are very puzzling, and at first are apt to mislead us; such, for instance, was that of Scott, who died in L. Ward, and who, whilst in the hospital for valvular disease of the heart and dropsy, was seized with pneumonia. When I first heard the crepitating *râle* in this man, I thought it was the result of œdema of the lung; and it was only when other symptoms and signs developed themselves, that I became sure of the existence of pneumonia.

You may perhaps ask me how it happens that we hear the same sound in œdema of the lung as in pneumonia. The fact is, that the seat of exudation in the two diseases is the same; and in both conditions we have present, in the air-sacs, a certain amount of air and liquid exudation; the only difference being, that in one instance the liquid is somewhat more viscid than in the other.

RATE OF MORTALITY IN NEW YORK. Dr. Harris, the registrar of vital statistics, states in his report to the New York Board of Health that the number of deaths in the year 1866 was 21,206; this would make the death-rate about 34 to 1,000, which is greater than that of London, and double what is considered a normal rate in England. Nearly one-half (43.73 per cent.) of all the deaths are of those under five years of age, amounting to 10,123; while 29.51 per cent. are of those in the first year of their existence. Dr. Harris states that there is little doubt that of the 2500 children born alive each year, death takes nearly one-third before they reach their first birthday. In New York, one child is lost for every 75 or 80 of the population. There is no such infant mortality known anywhere in the Christian world; and, the registrar observes, it is considered the most sure indication of the growing insalubrity of the city.—*New York Paper.*

ON THE INTERNAL USE OF TARTAR EMETIC IN ACUTE INFLAMMATIONS.*

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A LITTLE more than three months ago, I attended a lady, comparatively young, in her eighth labour. She had recently come to Bath, and it was therefore the first labour in which I had attended her; but she gave a history of severe and even dangerous floodings after nearly every childbirth, and this time was no exception to the rule. Life seemed in peril for an hour or two, but she ultimately rallied completely, and at the end of forty-eight hours she did not appear much injured by the great loss of blood.

Now, in all cases of unusual *post partum* hæmorrhage, it is well to be watchful for events of a pyæmic kind. These consist either of what is called pelvic cellulitis, or of diffuse inflammation of the breast; the latter is probably more common, and is erysipela-toid in its suddenness and activity. And it is highly philosophical to speak (with Dr. Barnes) of inflammation of the breast occurring very soon after labour, as essentially a form of puerperal fever.

On the afternoon of September 5th, exactly fifty-eight hours after delivery, the patient whose case is my present text began to show signs of mammary inflammation on the left side. Late at night, or about six hours afterwards, I was summoned to see her on account of the violence with which this inflammation had set in. Before leaving home, I pondered what I should do. Calomel was out of the question; saline purges seemed inapplicable by reason of the recent hæmorrhage; nauseating doses of antimony appeared no less improper; and if any one has faith in belladonna for curing these cases, I pity his credulity. In quiet despair I took up the fourth edition of Dr. Churchill on *Diseases of Women*, and on page 752 I found an apposite quotation from Dr. Beatty, who says that, on the accession of inflammation in the breast, he has given one-sixteenth of a grain of tartar emetic every hour, with the result that in ordinary cases the pain and fever are mitigated, and the breasts are smaller and softer. He says that these doses may induce slight nausea, but never or very rarely free vomiting. Dr. Churchill ratifies Dr. Beatty's opinion by saying that tartar emetic, given in this form, has a more powerful effect in abating inflammation of the breast than any medicine he has ever tried.

Armed with this knowledge, but slightly sceptical as to its entire truth, I visited my patient, and discovered that acute lobular inflammation of the breast had vehemently set in, and was marked by all the usual symptoms. Fifteen drops of tartar emetic wine (one-sixteenth of a grain) were ordered to be given in half a wineglassful of water every hour through the night, until 11 o'clock the next morning, a period of exactly twelve hours. Nothing local was applied, except a piece of hot wet flannel covered with oiled silk.

After twelve doses of this medicine, administered with unflinching punctuality, it is no exaggeration to say that the inflammatory hyperæmia was almost gone; the breast was only a little more swollen than the other, and there was scarcely any pain. It is pleasant to add, that there had been not only not the

* Read before the Bath and Bristol Branch, Dec. 13th, 1866.

slightest vomiting, but even no appreciable nausea. Indeed, for anything that appeared to the contrary, (barring a trifling diaphoresis) the patient might have been taking so many rations of pure water. The medicine was given in the same quantity every two hours until the next day; then every four hours for another day; and in less than four days from the beginning of the treatment, all signs of mammary inflammation had vanished.

On September 25th, I attended in a very rapid labour another lady, who recovered without a bad symptom, except that on the fourth day after delivery signs of inflammation of the left breast were suddenly developed. The chief characteristic of this patient is an extreme sensitiveness to pain, so that an ordinary neuralgia causes a quasi-delirium, requiring opium to subdue it, and to restore healthy function. In this case, therefore, on account both of the tendency to delirium and an irritability of bowels, I combined one drop of tincture of opium with fifteen drops of tartar emetic wine, and administered it in water every hour for fourteen hours. After five doses had been given, profuse diaphoresis occurred; coincident with this the pain suddenly went away, and sleep followed; and in three days from the time at which the treatment was begun, there was scarcely a relic of what had happened. Here, as in the first case, the doses of medicine were reduced in frequency by degrees, and no local means were used except the wet flannel and oiled silk.

Within the first week of October, a sempstress applied to me at the Eastern Dispensary, on account of a common whitlow of the thumb, in the very first stage of heat, swelling, and pain. The tartar emetic wine was given in the same doses, and with the same result of complete success.

A week afterwards, I was asked to see a domestic servant in a gentleman's family, with a whitlow of the index finger. She, too, had all the classical symptoms of whitlow (which, you may remember, *Erichsen* calls an erysipelatous disease), and she obediently took the tartar emetic medicine every two hours for a day and a night. So much better was she then, that she called herself "well"; but, alas for her prognosis! the result of her abandoning the medicine too soon was, that the disease returned, and ran the usual course of whitlow, in spite of the medicine being diligently taken again, and in spite of every local means, scientific and empirical.

About the end of October, a married woman came to the Dispensary with threatening lobular inflammation of the right breast in the tenth month of lactation; the pathological sequel of over-nursing in a weak constitution. For three days she took the tartar emetic medicine (in the dose already specified) every three hours, and being well supplied with nutritious food, she seemed nearly well at the time of the next attendance. Here my own prognosis was at fault, for I rashly ventured to leave off the tartar emetic mixture, and substitute a ferruginous tonic; and a complete failure it was, for I had at last to deal with a chronic mammary abscess in its usual troublesome form.

In nearly all these cases, a mild aperient was the only other medicine given. If there had been time, I might have related other cases of external inflammation cured by precisely the same method.

On reviewing the histories just narrated, it is noticeable that the inflammation is of an external and visible kind, and that it has in it something of a pyæmic or erysipelatous quality. These two circumstances seem to be the chief factors on the part of the patient. On the side of the remedy, we observe that it is administered in very frequent and minute doses, and that its successful therapeutic effect can

be produced without the physiological discomforts of the slightest vomiting or nausea.

First, then, as to the nature and extent of the inflammation; it is familiar to everyone how antimony can abate and utterly abolish inflammation of viscera and of mucous membranes by its depressing and shock-like power—acting distinctly on the nervous system. We seek to illustrate this power by the old antiphlogistic terminology—or as *Pereira* expresses it, tartar emetic is useful in inflammation and fever by its contrastimulant, sedative, and, sudorific influence. I have spoken in this paper, however, solely of external inflammations, for as yet I have made no inquiry into the effects of minute and frequent doses of tartar emetic in the internal inflammations.

Note, then, that tartar emetic, given in the dose of one-sixteenth of a grain every hour at the very outset of a cutaneous inflammation, may control and cure that inflammation with its attendant pyrexia. How does it do so? The action of this medicine has been well expounded by *Dr. Billing* and *Dr. Headland*. *Dr. Headland* lays emphasis on its neurotic influence; and *Dr. Billing* has entered largely into the subject, and with a certain boldness of language speaks of the tonic properties of antimony and calomel. That is to say, the capillary blood-vessels, being distended in normal inflammation by the stasis of their contained blood, are reduced in size by the action of antimony on the vaso-motor nerves—the blood is propelled onwards—exudation is checked—and heat, pain, redness, and swelling go away. In brief, the inflammation is summarily put an end to, and that not by any weakening of the nerves of the capillaries, but by endowing them with more life. Any substance which does this must be described as an instrument of tone and power.

I believe that the influence of medicines given in very small and very frequent doses has not been sufficiently studied. I have long been engaged in investigating this subject, especially with reference to opium. There are many and obvious hindrances, such as the trouble imposed on the attendants, the difficulty of testing regularity of administration, and the possibility of dangerous accumulation in the system; but the advantages are often enormous—and sometimes only in this way can we gather all the good out of a medicine without any of its harm.

Studying the action of tartar emetic in an enlarged manner, and with special reference to the physiology of inflammation, we can make no claim to its having particular control over inflammation of the breast more than inflammation elsewhere, as some obstetric authors have imagined. It cures inflammation, as we see it on the outside of the body, by an orderly sequence of phenomena, by its toning power on the vaso-motor nerves, by the return of the capillary bloodvessels to a healthy size, and by absorption of the inflammatory effusion. The occurrence of suppuration is a signal that the remedy can be of no use. There need be no nausea and no vomiting, and nothing beyond a general diaphoresis and possibly diuresis. And the rest of the treatment consists in the application of common sense to every emergency that may arise.

STARCH INJECTIONS IN URETHRITIS. *M. Luc* uses a tolerably thick solution of starch in acute urethritis, and, he says, with great success. It is, of course, simply prepared and easily used. To introduce it into the syringe, it is best to withdraw the piston first. "It never produces pain, and avoids strictures."—*Recueil des Mémoires de Médecine et de Chirurgie Militaires*.