in these cases, it would have been subject to strong suspicion, if not to actual blame, as the cause of death.

Lastly, there is an important point connected with the numerous alleged deaths from chloroform which seems to be overlooked or set aside, as undeserving of notice; and that is the extreme discrepancy prevailing in the account of *post mortem* appearances. In the case of any other poison producing death, we find certain specific and uniform indications of its peculiar toxic action; whereas in those ascribed to chloroform the *post mortem* appearances range from those presented by death from syncope, on the one hand, to those produced by asphyxia, or those of the very opposite characters to syncope, on the other; arguing it to be extremely probable that one or other of them was during, and not owing to, anæsthesia from this agent. I will add a single other quotation on this topic from the paper to which I have so largely ventured to refer. It is as follows.

"In the fifty cases collected by the late Dr. Snow, the condition of the heart was very various. In nearly twenty, it was either gorged or tolerably filled with blood. In others, it was empty, but stained with blood, showing that probably it had been emptied only at the *post mortem* examination. Dr. Berend of Hanover details, among others, ten cases, in all of which the heart was empty, flaccid, collapsed, and doubled upon itself. In other cases from time to time recorded, the heart was firmly contracted. In many it was diseased, and in not a few the cause of death was found in some other organ altogether, such as the spinal cord. Again, the opinions as to the mode of death are not less various. Dr. Sibson, in 1848, attributed the fatal result to death of the heart; Dr. Snow, to what he termed cardiac syncope; Dr. Black, to asphyxia; Caspar, to neuro-paralysis; Sansom, to both syncope and asphyxia, etc. A conflicting mass of evidence, from which it appears impossible to derive any other conclusion than that the deaths described were due to no one cause, but had been produced in a manner widely different, according to the circumstances of the case."

A word here may be said regarding nitrous oxide as an anæsthetic. Although in the daily use of this agent, I fear that we can scarcely yet place it in comparison with chloroform, allowing that its mode of action were similar, which is very doubtful. The limited sphere of its application in medicine and surgery, the condition of patients under its influence, and some of its possible bad effects not being immediate, but more likely to show themselves at an after date, preclude its being used as anything like a fair standard by which to judge of chloroform. It is an excellent, an invaluable agent in its own place; but neither in medicine nor surgery is it ever likely to supersede such anæsthetics as ether or chloroform. In fact, if such were attempted, it seems very doubtful whether its present small rate of mortality would not increase in rather a startling manner; while its efficiency as a substitute would be found at fault in many ways.

CASE OF ACUTE POISONING WITH CHLORAL-HYDRATE.

By DAVID YOUNG, M.D., Florence.

A FEW days ago, I was called to see a gentleman who had just recovered from an attack of delirium tremens. He was feeble looking and nervous, and wished me to prescribe for persistent sleeplessness. For many months previously, he had taken chloral-hydrate in doses of twenty-five grains, with excellent results; but, since his last attack, the medicine had failed to act as before. I suggested a slight increase of the dose, and ordered the following mixture.

R Chloral hydrat. $\mathfrak{z}\text{ij}$; glycerini $\mathfrak{z}\text{ij}$; syrupi $\mathfrak{z}\text{ss}$; aquæ q. s., ad $\mathfrak{z}\text{iv}$. Misce.

A sixth part to be taken at bedtime, and half a dose more in two hours, if necessary. I was hastily summoned in the night; and, when I reached the hotel, found the patient in a deep stupor, the breathing slow and difficult, and the surface of the body, especially the extremities, very cold. In reply to my question if he had taken the medicine as ordered, his wife told me that he had come home about three hours before, and had apparently been drinking. He said, just before he went to bed, "I will now take the doctor's draught", and poured out, as she thought, one dose. Shortly after taking it, he became very restless, complained of being breathless, and of severe cramps in the legs. On attempting to get up for a drink of seltzer water, he staggered and fell on the floor. His wife became alarmed; and, after lifting him up, discovered that the bottle which had contained the chloral was empty; he had taken the whole—180 grains.

I was immediately sent for; and, on arriving, found him as above

stated. Acting on the suggestions given by my friend Dr. Lauder Brunton for the treatment of this accident, I ordered blankets and hot bottles to be procured at once. In the brief interval which elapsed before they were got ready, I noticed the following points in the condition of the patient. His breathing was slow and difficult; respirations 11 in the minute. Pulse 76, feeble and irregular. The temperature in the axilla was 35.6 deg. C. (96.08 Fahr.). The first sound of the heart was indistinct, and its action feeble. The eyelids were opened with difficulty. The conjunctiva was deeply injected, and the pupil firmly contracted. The surface of the body was very cold.

The lower limbs were wrapped in warm flannel, and hot bottles applied to different parts of the body; and a gutta-percha water-bag was filled with hot water, and laid over the cardiac region, and the patient carefully covered with blankets. The effects of the warmth were decided, and soon apparent. The temperature slowly rose, the breathing improved, and the heart regained its power. Half a teaspoonful of Darby's extract of meat, with a teaspoonful of brandy in a small cupful of hot water, was now ordered to be given every two hours.

Six hours after the application of the warmth, and nine after the taking of the chloral, the patient's condition was noted as under. Breathing was tranquil; respirations 16 per minute. The heart-sounds were distinct; its action was somewhat tumultuous. Pulse 92, full and soft. The pupil was contracted. The conjunctiva was injected, and he complained of muscular pains in the arms and legs. The patient continued in a state of great drowsiness for fifteen hours. He was easily roused, but immediately went off again to sleep.

In two days, he was quite well. I have no doubt that the effect of the application of the warmth, in this case, was to prevent another being added to the list of those whose death has been caused by chloral injudiciously taken.

A NOTE ON ANGINA LUDOVICI.

By F. MURCHISON, M.A., M.B. Edin.,

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Two years ago, during my residence as medical officer in Harris, in the Hebrides, some cases of what I now believe to have been the *Angina Ludovici*, occurred among the natives of the island. The disease was different in its symptoms and peculiarities from any throat-affection that either my experience or reading had brought under my notice. I vainly tried to diagnose the malady, and as vainly read whatever medical literature of the past and present I had access to; but I could find nothing, having a name, similar to it. It attacked children and young persons of various ages. The youngest patient under my care might have been three years of age; the oldest was not certainly over thirty. The symptoms were uniformly of the same type, save that they were modified according to the diathesis and idiosyncrasy of the individual invaded. As a rule, the older the patients, the more intense were the sufferings, and the better developed were the throat-tumours that occasioned them. It is worthy of mention that the anæmic, pale, and pasty fair-haired, suffered in the proportion of six to one of the plethoric and healthy-looking; and that the disease among the latter did not occasion the prostration which it did among the former. Indeed, the cases among the absolutely robust were so few and far between, that I was induced—in the absence of a more plausible one—to adopt the theory that the sickness was one of the numerous manifestations of a scrofulous habit of body, incited into activity by the prevalence of very cold weather, insufficient clothing, want of cleanliness, and inappropriate food. All the cases were purely idiopathic, and independent of any local lesion. They all occurred in winter, and in close succession; but they were not confined to one isolated locality. One island seemed to favour the growth and development of the affection more than any other situation; but the six cases that occurred in it seemed to have arisen independently of infection for their origin, and rather to have commenced in an unhealthy locality, destitute of proper sanitary arrangements. No two cases occurred in the same family, although isolation of the sick from the healthy was not enforced; so that I am induced to believe that the disease was occasioned by climatic and insanitary influences rather than by contagion.

The disease began with a chill, a stiffness of the muscles that move the tongue and throat, a feeling of general *malaise*, discomfort and prostration, loss of appetite, and, in a word, with the feelings that are frequently the precursors of the specific fevers—symptoms which preceded the development of the disease in every instance. This incipient stage was followed by another of much distress and discomfort to the patient. The vicinity of the submaxillary gland, the gland itself, and

the entire floor of the mouth, became the seat of a hard swelling that seriously interfered with the functions of mastication, deglutition, and respiration. From this centre, the disease gradually extended, till, in its course, it involved the parotid and thyroid glands in the morbid action. The mouth was left half open; the voice became much modified, either existing only as a whisper, or being altogether inaudible. The patient was a spectacle of real suffering, and, in some instances, feverish and delirious. His countenance bore the expression of intense anxiety. The saliva dribbled from the mouth, which performed its functions imperfectly or not at all, according to the severity of the case. It was impossible for the sufferer to move his lower jaw without great pain. The entire constitution became involved. The bowels were constipated, the urine scanty and high-coloured, the tongue furred and enlarged from sharing in the contiguous inflammatory action. The local tumour became gradually harder, and imparted the sensation of a board. It pressed the tongue upwards, so that there was scarcely any passage left open to feed the patient, who now lived entirely on slops and stimulants. This state of matters continued for a varying period, which never exceeded twelve days, and terribly exhausted the patient, who passed day and night sleepless, and in despair of relief from pain so insupportable. The tumour was now much larger, but its colour was not characteristic, and differed little from that of the parts in their healthy state. In a short time, redness and, in the worst cases, lividity marked the seat of the inflammation, and the whole throat bulged out as if an immense goitre had attacked the neck. Some of the cases ended in resolution; others in the formation and discharge of pus; but none in gangrene nor in death. Such as were subjected to early treatment got on best, and ended most frequently in resolution; but, in each case, a marked hardness, which proved intractable to every remedy, save time and iodine, remained.

The treatment I adopted was very simple. The bowels were relieved by a saline draught; while the strength of the patient, who was not allowed to leave his bed, was kept up by stimulants administered at stated intervals in a diluted form, as well as by slops and chicken-broth. The local treatment consisted of fomentations and poultices made with a drachm or two of tincture of opium superadded. When fluctuation pointed out the necessity of making an incision, I resorted to the knife to get rid of the pus. This treatment was adopted with few variations, in every case with the best results; and, when convalescence fairly set in, the patient went on uninterruptedly from good to better, till every trace of the disease disappeared.

OBSTETRIC MEMORANDA.

ON THE VALUE OF NITRIC ACID IN THE TREATMENT OF DISEASES OF THE NECK OF THE WOMB.

I FULLY endorse Dr. Braithwaite's recommendation of the use of nitric acid in affections of the cervix uteri. He seems, however, to have overlooked the fact that this agent had been previously recommended by others in such cases. Had he referred to my *Lectures on Diseases peculiar to Women*, he would have found (page 84, 3rd edition) that I say "brushing the part lightly over with nitric acid may (if the unhealthy condition of the mucous membrane does not extend very high) be sufficient"; and again, pp. 154-5: "My usual treatment has been to apply the strong nitric acid freely to the whole interior of the cervical canal." Dr. Braithwaite is, therefore, mistaken in supposing that the value of nitric acid in affections of the cervix uteri has been overlooked.

LOMBE ATTHILL, M.D., Master of the Rotunda Hospital, Dublin.

I AM happy in being able to add my testimony to that of Drs. Braithwaite and Churchill, the result of considerable experience, as to the value of nitric acid as an uterine caustic, which I have found especially useful in cases of chronic endocervicitis, induration and intractable abrasions about the neck of the uterus; and its value appears to have been greatly enhanced, in many cases, by previous depletion of the part affected. Latterly, I have been in the habit of applying the anhydrous nitric acid, which, from its rapid effects upon the tissues, occasions little or no pain; and I find a piece of porous ordinary firewood, cut to the requisite size and shape, a convenient method of application.

R. GREENHALGH, M.D., Physician-Accoucheur to and Lecturer on the Diseases of Women, etc., at St. Bartholomew's Hospital, etc.

My desire for brevity in the paper kindly read for me at Edinburgh by Mr. Cullingworth, as I infer from Dr. Tilt's criticisms, has unfortunately led to some ambiguity. It was not my intention to recommend the use of nitric acid as a caustic in all cases of disease of the neck of the womb requiring such an application; the expression used was "generally, but not invariably, the most suitable". Nor did I aim at embracing the whole subject of treatment of the disease in question; but only at pointing out the superiority of nitric acid in cases of "ulceration or erosion of the os and cervix uteri" and "endocervicitis". But I expressly stated that, "if the canal be not open, the case is not one suitable for this treatment". This disposes of Dr. Tilt's objection to the use of nitric acid in comparatively recent cases of endocervicitis. I did not intend to recommend it; for in these cases, the canal is not open. Dr. Tilt again demurs to my "recommendation to leave the patient without examination for a month, unless the os uteri be patulous, and the calibre of the cervical canal such as to render its contraction rather an advantage than otherwise". But this sentence (the words are Dr. Tilt's) does not correctly state my views. For "unless", read "provided that", and it would be correct; but the meaning of the sentence is reversed.

I quite see the value of the classification of cervical diseases requiring a caustic given by Dr. Tilt; and our want of accord as to the treatment is more apparent than real. In his first class—recent cases of endocervicitis—I did not recommend its use. His third class is more strictly inflammatory hypertrophy of the cervix, with hard and fissured lips. These cases, Dr. Tilt regards as originally inflammation of the mucous membrane spreading to the surrounding tissues; and this view naturally leads him to classify them with endocervicitis. On the other hand, I do not so regard them; but believe them to arise from direct injury to the structure of the parts, generally from crushing or laceration during delivery, either by the head of the child or the finger of the accoucheur. Nothing conduces more to this than the practice of rupturing the membranes before the os has attained its full size, especially if it be thick and fleshy. Whatever the origin of these cases, I quite agree with Dr. Tilt as to the value of potassa cum calce in their treatment; but I have certainly, in some cases, been able to avoid the use of that remedy by a free application of nitric acid to the eroded surfaces of the everted lips. But, in a bad case, I should precede this by the use of potassa cum calce, and then after a time use the nitric acid, with the view of producing a healing surface. A sore resulting from the application of potass has little healing power; it is pale and watery in appearance. To sum up, I should use nitric acid in all cases of erosion or ulceration of the os uteri, and in all cases of inflammation or ulceration of the cervix in which the canal is open. I should not use nitric acid in any case in which the canal is closed; and in cases of great induration and hypertrophy of the lips, its use should be preceded by that of potassa cum calce. I cannot admit that it produces more pain than nitrate of silver, nor that it has "an ugly tendency to run"; for there should never be enough on the cotton-wool to do so. Nor can I admit that there is much analogy between the action of nitrate of silver in morbid conditions of the fauces and in the cases in question. A tannin gargle is often very efficacious in the former, but it would be quite useless as a lotion in the latter. The reason is that, from the capillary vessels of the womb running perpendicularly to the surface, there is a strong tendency for the whole thickness of the structures to become implicated; whereas, in the case of the fauces, the vessels run in the mucous membrane, and are amenable to the action of astringents, such as nitrate of silver and tannin. No doubt much of the inefficacy of nitrate of silver as a caustic is from the film of chloride preventing its deeper action. Next to nitric acid in value, I should place nitrate of mercury. Nitric acid, in the words of Dr. Churchill, "does just what we want, and no more". It is a clean and handy remedy in the possession of every medical man in country places, and all are familiar with its action in other diseases; but its great recommendation is that the frequent use of the speculum can, by its aid, be avoided; and nothing, to my mind, is so repulsive in the treatment of these diseases.

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PUERPERAL STATISTICS.

As a small contribution to puerperal statistics from private practice, I beg to send the following for publication. Out of 216 consecutive cases which I have attended and noted down, I find the following; forceps used once in 14, breech once in 36, footling, hand with head, hands and feet, arm, each once; *post partum* hæmorrhage 1 in 54; retained placenta once. I have lost no mother, although several have suffered from considerable fever with tenderness in the abdomen, etc.,