

sary; and mustard poultices, or sometimes blisters, were applied, but the former remedy was generally preferable. Bleeding, or depletion in any form, according to all but universal consent, was considered improper, and, if ever employed, proved injurious: even tartarized antimony, so frequently useful in apparently similar complaints, at other seasons, he (Dr. Webster) found not only inferior to ipecacuanha, in the recent epidemic, but often inadmissible, from the depressing effects it produced upon the system.

Dr. LANKESTER observed, that the temperature and moisture alone which prevailed in the early part of December were not sufficient in themselves to account for the late epidemic, as in these respects the season differed little from that of the three previous years. He associated in the chain of causation, with the two facts mentioned above, the small quantity of rain which had fallen during the year. Thus, extreme dryness, followed by heat and moisture, not only gave prevalence to influenza, but to all other zymotic diseases, as shown by the Registrar-General's Reports. The excessive dryness of the summer had led to the accumulation of large quantities of vegetable matter, ready to decay when the moisture came on. In towns so situated as readily to get rid of a superabundance of water, the epidemic was less prevalent.

Dr. WEBSTER rejoined, that in regard to the heat and dryness of last summer, as influencing the recent mortality, although he (Dr. Webster) did not allude to the circumstance, it had not escaped his notice; and he believed the subsequent rainy season thereby proved more injurious to the human frame; indeed a somewhat similar effect was observed, during the early part of 1827, in Groningen, Friesland, North Holland, Belgium, and Lower Germany. After a very hot and dry summer in 1826, followed by mild and moist weather, whilst the districts just named were still damp, in consequence of great inundations which had occurred in the previous year, a very fatal epidemic fever broke out, whereby so many persons were carried off, that the Dutch government found it necessary to adopt very strong measures to relieve the sickness affecting nearly the whole population. He (Dr. Webster) might also mention, that last summer, when there was so much hot and dry weather, he had mentioned his apprehensions to some members of the Society, that if the subsequent winter should prove mild and damp, in all probability a severe fever or fatal epidemic would prevail. How far this surmise was correct, recent events had shown. Dr. Webster hoped the Society would excuse such personal references, since they were only now brought forward in illustration of Dr. Lankester's observations.

## Medical Trials and Inquests.

### DEATH FROM CHLOROFORM DURING A SURGICAL OPERATION.

ON Saturday, the 29th of January, an inquiry was opened at the village of Winlaton, about five miles distant from Newcastle-upon-Tyne, by J. M. Favell, Esq., the coroner of Chester ward, in the county of Durham, to ascertain how and by what means Hannah Greener, aged 15, had come to her death.

The deceased was, about three months since, an inmate in the Newcastle Infirmary, where (on the 26th of October) she underwent an operation under the influence of ether; and it was on the 29th of January, while undergoing a second operation under the influence of chloroform that she lost her life. The event, as will readily be conceived, produced considerable excitement in the minds of a village-population; and the coroner resolved very wisely to make a full and searching inquiry, for the satisfaction of the public, and in justice to the medical practitioner by whom the operation was performed.

A jury having been sworn, and having viewed the body of the deceased,

John Rayne deposed that he was a blacksmith, and lived at Winlaton. His sister married John Greener, the father of the deceased. The deceased came home from her grandfather's about a year ago. Dr. Meggison, of Whickham, surgeon, had visited her several times. She was in the infirmary about four months since, to have a toe-nail taken off. Dr. Meggison was employed by her father to have another nail taken off—from the great toe of her right foot. Dr. Meggison's assistant performed the operation yesterday (Friday, the 28th ult.) about one o'clock. The persons present were Dr. Meggison, his assistant, and witness. Deceased was seated in a chair by the fire, and Dr. Meggison held a pocket-handkerchief to her mouth and nose; he kept moving it at times, and looked at his watch, and felt the deceased's pulse. The assistant had the instrument all ready to commence. Deceased appeared to be fainty like. Dr. Meggison then told his assistant to take off the nail. Witness held her leg to steady the foot. The assistant took the nail off very quickly. When he was removing it the deceased shook her foot. She did not speak, but moaned after the nail was off. They dashed some water in her face, and her eyes moved. Dr. Meggison put some brandy into her mouth, and there was a rattling in her throat. She did not come to her senses; she appeared in a fainting fit. Dr. Meggison bled her in the right arm; she bled a little,—may be a

table-spoonful or so. He bled her also in the neck, and about the same quantity came away. She died without ever recovering. She had the nail taken off the large toe of her other foot about four months ago, in the infirmary. Witness had heard that some stuff was given to her at that time to make her insensible.

Mary Greener deposed that she was the wife of John Greener, of Winlaton, banksmen. The deceased was 15 years old; she was not witness's daughter. Dr. Meggison had been attending her for her toes. She was in the infirmary for her toes for nine weeks. Witness brought her out on the Monday before Christmas-day. She had a toe-nail taken off in November. She told witness she was made insensible before it was done, and felt no pain. Her father said on Thursday (the 27th ult.) she had better not have that stuff to make her insensible again. Deceased said she would not have the nail taken off without it. All the family were then agreeable, not only that she should have her nail removed, but that she should take the stuff. She was in good health before she went into the infirmary. She fretted in the infirmary, but never complained of ill treatment. She grew thinner while in the infirmary, and also after she came out. She took her victuals better this last month. She had complained of a pain in her chest, and doubled herself up, both in and out of bed; she was never subject to anything of the kind before she went into the infirmary. She suffered much pain in her toes,—in the one from which the nail was removed and in the others. Witness thought the pain was so great as to prevent her thriving. The toe-nails were growing into the flesh, which was much swelled. Witness had poulticed her toes, and rotten flesh came off the one from which the nail was removed.

Dr. T. N. Meggison, surgeon, being asked by the coroner if there was any statement which he wished to make, said that Hannah Greener died under his hands on the previous day while under the influence of chloroform vapour, administered for the sake of producing insensibility during the removal of a toe-nail. She was suffering under onychia. She had never complained of pain in the chest to witness. The pain in her toes might cause her to become thinner. Witness seated her in a chair, and put *about a tea-spoonful of chloroform* upon a cloth, and held it to her nose. After she had drawn her breath twice, she pulled witness's hand down. He told her to draw her breath naturally, which she did; and in about half a minute he observed the muscles of the arm become rigid, and her breathing a little quickened, but not stertorous. Witness had one hand on her pulse, which was natural until the muscle became rigid; it then be-

came somewhat weaker, not altered in frequency. Told his assistant, Mr. Lloyd, to begin the operation, which he did, and removed the nail. When the semicircular incision was made, she gave a struggle or jerk, which witness thought was from the chloroform not having taken sufficient effect. Witness did not apply any more. The eyes were closed at first; witness opened them, and they remained so. Her mouth was open, and the lips and face were blanched. When witness opened the eyes *they were congested*. He called for water when he observed her face to be blanched, and gave her a mouthful; he also dashed some in her face. It had no effect. He then gave her some brandy, a little of which she swallowed with difficulty. He laid her on the floor, and attempted to bleed her in the arm and jugular, but only obtained about a spoonful of blood. She was dead, he believed, at the time he attempted to bleed her. The last time he felt her pulse was immediately before the face became blanched, and when he observed the jerk. The time that elapsed from the first inhalation of the chloroform to her death *could not be more than three minutes*. Witness procured the chloroform from Daglish and Ismay, of Newcastle. He had used chloroform from the same place before with good effect and no ill consequences. He did not apply more than *a drachm* to the deceased—probably less. One of his patients required upwards of half an ounce, at four times, before she became insensible, and she completely recovered afterwards. He had used it to a woman who was very drunk, and would not lie still without it. She had dislocated and fractured her ankle. Two tea-spoonfuls were given, and it had the proper effect. His assistant, Mr. Lloyd, was a duly qualified practitioner, and had been in the habit of using chloroform.

Mr. William Lloyd, surgeon, expressed his concurrence in what Dr. Meggison had stated.

The inquiry was now adjourned, that a post-mortem examination might be made by Sir John Fife and Dr. Glover, of Newcastle.

On Tuesday, at half-past one o'clock, the inquest was resumed. Before the arrival of the medical witnesses, the Coroner stated that he would read a passage from the *MEDICAL GAZETTE* of December 3, 1847, from which the jury would learn that chloroform was a substance in general use among medical men, and that Dr. Glover was a peculiarly appropriate witness to be called before them in an inquiry like the present. Mr. Favell proceeded to read part of an editorial article alluding to the prevalent use of chloroform vapour in surgery and midwifery, and its apparent possession of "all those

advantages over ether-vapour which had been announced by Dr. Simpson."

"While, however," said the MEDICAL GAZETTE, "these facts appear to promise safety in the use of chloroform vapour, the experiments of Dr. Glover on animals tend to shew that this agent is not to be regarded as innocuous. He found that it had a tendency to cause congestion of the lungs. His experiments were not performed with the vapour; and the mode of introduction into the system by the lungs may considerably modify the effects."

In the same number of the GAZETTE (Mr. Favell continued to say), there was a letter from Dr. Glover, dated "Newcastle, Nov. 21." That gentleman observed that Professor Simpson, to whom belonged "the sole merit of having proposed chloroform as a substitute for ether in surgical operations,"\* spoke "as if no one had an idea of the physiological properties of this substance before his time;" but in October, 1842, there was published, in the *Edinburgh Medical Journal*, a paper of his (Dr. Glover's), on bromine and its compounds, and the analogies existing between the physiological properties of these bodies and those of the corresponding compounds of chlorine and iodine; one chapter of which paper was headed "Physiological Properties of the Bromide and Chloride of Olefiant Gas, of Bromoform, Chloroform, and Iodoform." This chapter began thus:—

"The only experiment on an animal with any of this class of bodies, is one related by Dr. Cogswell with iodoform, which he terms sesquiodide of carbon, but which we now know to be a compound of three atoms of iodine with one of formyl. The curious results of this experiment led me to investigate this class of bodies, which, from the results of my experiments, appear to form a new class of poisons, and to be possessed of properties not unlikely to be useful in the treatment of disease."

The chapter detailed an extensive series of experiments with these bodies, and especially with chloroform, performed upon animals, and, among other general conclusions, stated the following:—

"The action on the spinal cord is very different from that of strychnia, to which my friend Dr. Cogswell compared it in the case of iodoform. Strychnia destroys the influence of the will over the muscles, but appears to excite the spinal cord, which loses its sensibility under the action of this class of poisons."

Having thus referred to his paper of 1842, Dr. Glover closed his letter to the MEDICAL GAZETTE in these words:—

\* Note by the editor of the MED. GAZETTE.—It was first used by Mr. Bell. See *Pharmaceutical Journal*, Feb. 1847, p. 357.

"When the application of ether and of chloric ether to anæsthetic purposes became known, I remarked to several of my friends that without doubt all the class of bodies on which I had formerly experimented would possess similar properties, but was deterred, from the fear of their formidable power of congesting the lungs, from giving them in practice.

"Either the action of chloroform, when inhaled, must be very different from its action when admitted in other ways, or animals must be more susceptible of it than man. Perhaps habituation to alcohol may protect us somewhat. The use of chloroform, in some habits and cases, must, however, be attended with danger, from its immense power of congesting the lungs." The Coroner, when he had laid aside the *Medical Gazette*, caused the father of the deceased to be called, some one having stated that he had evidence to give.

John Greener was accordingly sworn. He deposed that he was a banksman at Mr. Ramsay's colliery. The deceased, Hannah Greener, was his daughter. There did not seem any thing much to ail her, except in her toes. She said, when she came out of the infirmary, that the doctors gave her ether before they took her nail off, and that they tried three different strengths\* before she turned insensible. She said they pricked her with needles or pins before they performed the operation, to try if she felt any pain. She said she felt no pain when the nail was removed. She was bad of both toes at the time, and had suffered from both since. Witness employed Dr. Meggison to attend her; and he and his wife were agreeable to the operation. Deceased wished to have the chloroform. She had complained that the ether made her head bad for two or three days. The night before the second nail was taken off witness said that she had better suffer a bit of pain for a moment than have her head made bad again for some days with the stuff. She said she would not have the operation performed if they would not let her have it; so they agreed that it should be given to her.

Sir John Fife was now sworn. He stated that he had made a *post-mortem* examination of the body of Hannah Greener, with Dr. Glover; and they had thought it important to reduce the result to writing. It was as follows:—

The examination was made about 3 o'clock P.M., on Saturday, the 29th of January. The body was that of a well-grown female of about 15 years of age. The development seemed on the whole in tolerable relation to the age. The legs were rather thin;

\* This is an error. Three different instruments were used, but only one specimen of ether. See Mr. Potter's letter, page 255.

calves not sufficiently fleshy. Breasts tolerably well developed; and although on the whole thin, she was not altogether devoid of fat, as appeared on proceeding to open the body. The body was perfectly free from spots or stains of any kind, except from the marks of the phlebotomy to which she had been subjected, and some slight livid stains about the neck. The toes showed the nature of the operations which had been performed. There was simply the ordinary degree of rigidity. Mouth a little open; eyes presented no appearance of congestion. On opening the chest the lungs were not collapsed. One or two very slight adhesions were encountered on separating them from the walls of the chest. The external appearance of both lungs, over the whole surface, but especially in the inferior portions, was that of organs in a very high state of congestion. They were mottled with patches of a deep purple, blueish, or scarlet hue. They were everywhere crepitant. Along the outer and interior border of both lungs, particularly of the upper lobe of the left lung, were several emphysematous bubbles of small size. On cutting into the pulmonary tissue it was found free from tubercles; unless some hard bodies about the roots of the bronchi (enlarged and partially-indurated glands) could be called so. The pulmonary tissue was filled with bloody froth, which was also found in the interior of the bronchi, mixed with mucus. There was no appearance of hepatization. On examining the larynx and trachea, the epiglottis was found reddened at the summit, of a vermilion hue. The mucous membrane of the larynx was redder than natural—mottled with vascular patches. The sinuses of the larynx contained a good deal of dark mucus. The œsophagus was healthy. The stomach was distended with food. Some of the veins were more distinct than usual. Digestion had been going on at the time of death. The liver, kidneys, and spleen, were more congested than usual. The heart contained dark fluid blood in both its cavities: very little in the left. Its structure, and that of the great vessels near it, quite healthy. The brain, externally and internally, was more congested than usual; and the ventricles contained rather more than the usual quantity of serum.

These (observed Sir John) were the facts revealed by the examination: he now came to matter of opinion—and he gave it as the united opinion of himself and his friend Dr. Glover.

The coroner requested that Sir John would give it as his own opinion: he would take Dr. Glover's separately.

Sir John Fife resumed:—In his opinion, the cause of death was the *congestion of the lungs*; and this congestion he was compelled to ascribe to the inhalation of chloroform.

Of the power of chloroform to occasion congestion, no doubt could be entertained, after the experiments of Dr. Glover and Mr. T. Wakley, jun. on animals. There did not seem anything observable in the *previous condition* of the young woman to have prevented the surgeon from having recourse to chloroform, as a means of allaying pain in one of the most painful operations of surgery. Having now concluded what was written, he had only to say, further, that such was his conviction of the value of chloroform in lessening human suffering, and of the comparatively small amount of danger attending its use, taking into account the number of cases in which it was applicable, that if he was himself under the necessity of submitting to an operation such as the one now under consideration, or to any other operation involving much pain, he would insist upon taking chloroform. He had given it repeatedly, and in much larger quantity than was administered by Dr. Meggison. Ever since the occurrence of this event he had used it; and he should continue to do so, with the fatal result in the present instance staring him in the face. Ever since Dr. Simpson had first applied it in surgery, and made known its virtues in relieving pain, he had been in the habit of using it, and had constantly seen it prevent suffering without leaving any bad consequences behind it: he had never once seen any bad effects from it. There was one remarkable case which he might mention, in which a woman submitted to the removal, by dissection, of a tumor weighing three pounds, and exposing a dissected surface of a foot square. Dr. Glover administered the vapour of chloroform, and his (Sir John's) son dissected away the tumor. The operation occupied some minutes, during which chloroform was applied in eight times greater quantity than was used by Dr. Meggison. Yet the woman was no worse after the operation than might reasonably be expected, and recovered favourably. He had used chloroform in cases of amputation, in lithotomy, and in other severe operations, and seen, he repeated, no evil effects from it. He attributed the fatal result in this young woman's case to *some peculiarity in her constitution*—not to be detected beforehand—either in the lungs or in the nervous system. He had no hesitation in saying that the same result might have occurred in the hands of the most prudent and skilful surgeon that ever lived. It was necessary that the coroner and jury should be reminded of this fact. Persons would die sometimes from the shock of an operation, and no appearances might present themselves to account for such a result; and the same susceptibility which led to a catastrophe of this kind, would be likely to produce the same issue from the use of chloroform. He

should certainly not use chloroform in all cases; he had refused to use it that day in a trifling case. He should think it undesirable to use it in trifling cases, where the pain was neither severe nor protracted. In other cases, however, he would not only resort to it, but if the quantity used by Dr. Meggison failed to produce insensibility, he would double it without hesitation. Within the last two months he had performed almost the whole of the more formidable operations of surgery in connection with chloroform, and without any bad consequences.

A juror.—What is the meaning of congested?

Sir John Fife.—Gorged with blood. The eye is congested when it is said to be “blood-shot.” Sometimes the congestion is so extreme as to burst the smaller veins.

Robert Mortimer Glover, M.D. (examined by Mr. Favell) deposed that he was a lecturer on *Materia Medica*, and formerly on Medical Jurisprudence, in the Newcastle School of Medicine and Surgery. He concurred in the report read by Sir John Fife. The after-treatment of Dr. Meggison for the recovery of the deceased was very proper; it was in accordance with the practice recommended by the highest authorities. He should think that chloroform might be used, perhaps, with greater safety in the larger operations, where there was much loss of blood, than in the smaller ones. He had examined the chloroform used by Dr. Meggison, and found it pure; the bottle bore the name of one of the most respectable manufacturers in London. He should not think chloroform safer than ether. He found, from a lecture lately delivered by Professor Brande, that that gentleman was of the same opinion as himself. He (Dr. Glover) had thought from the first that the use of chloroform was attended with danger. There was a case recorded in the *Medical Gazette* of Friday, (January 28,) in which the use of chloroform had been accompanied by formidable symptoms. In the case mentioned by Sir John Fife, of the removal of a tumor, the loss of blood might render the copious application of chloroform less dangerous. After the use of it made by Dr. Simpson, and so generally afterwards by medical practitioners, Dr. Meggison, or any other gentleman, was perfectly justifiable in adopting chloroform. On reading Dr. Simpson’s publication on the subject, he (Dr. Glover) had written to him to say that chloroform was not, in his opinion, so harmless an agent as the professor supposed. From the very fact that it was more powerful than ether, he should infer that it was more dangerous. It was in general use, however, all over the kingdom, and also in France; and Dr. Meggison, in using it in

the present case, had observed proper precautions—such as feeling the pulse, &c.

Sir John Fife said, in reference to what had fallen from Dr. Glover, that in one of the hospitals in London chloroform had been used in the case of an infant ten months old, where there was no loss of blood, and yet no ill consequences had followed. It was a case in which a needle was passed through a congenital tumor.

Dr. Meggison (who was present at the *post-mortem* examination) expressed his concurrence in the report made by Sir John Fife and Dr. Glover.

The coroner addressed the jury, observing that this was a case of so much importance to the public and the profession, that he had felt called upon to step out of the ordinary course of proceeding, and go beyond the bare requirements of the law. Having briefly stated the law and the facts, Mr. Favell remarked that the jury had enjoyed the advantage of hearing both Sir John Fife and Dr. Glover on the case before them, and would have little difficulty in coming to a right verdict.

The jury retired to another room, and were absent a short time. On their return, the Foreman (Mr. John M’Ewan) said, they were unanimously of opinion that *Hannah Greener died from congestion of the lungs, produced by chloroform*, and that *no blame could be attached to Dr. Meggison or his assistant*.

The coroner said, he might now mention, what he had not thought it right to name before, that Dr. Meggison, immediately after the fatal event, informed the police of it, and suggested that it would be necessary to hold an inquest.

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### Correspondence.

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#### THE FATAL CASE OF CHLOROFORM NEAR NEWCASTLE—LETTER FROM DR. MEGGISON.

SIR,—In the last number of the *GAZETTE* I observed an account of the injurious and dangerous effects chloroform had produced in one instance where it had been administered with all due caution. I regret it should now fall to my lot to communicate a case of death from its use. The harassing duties of a country practice prevent my drawing out a longer report, and must also be my excuse for the delay in sending this. I merely give you a plain statement of the facts of the case; doubtless a full report of the *post-mortem* appearances will be given in the local papers, which I will forward to you; and, should such not be the case, I will endeavour to transmit Sir J. Fife’s and Dr. Glover’s report.