cachexia, with spontaneous extravasations of blood in the form of purpuric spots over the surface of the body; and the sudden supervention of convulsions, without previous signs of brain-mischief, pointed clearly to the inference, that, just as blood had previously escaped into the meshes of the skin, so now it has been in greater or less quantity poured out on the surface of the brain.

In treating this child, the all-important indications from the first were, so to improve its general health and effect those salutary changes in the composition of its blood, that the tendency to purpuric extravasation should be removed. With this view it was warmly clad, well and carefully nourished, and full doses of sulphate of perchloride of iron were given; these preparations, besides being powerful tonics, having also the character of being styptic remedies. The addition of lemon-juice did not seem to have any marked effect on the blood-spots. When cerebral hæmorrhage was believed to have taken place, there was not much to be done beyond keeping the head cool, the bowels open, and the giving of such food and stimulant as could be swallowed.

When a child, otherwise healthy, and whose pulse is full and bounding, is stricken with symptoms which you believe to be due to cerebral hæmorrhage, you need have no hesitation about employing a few leeches to the scalp, and applying ice to the head. In children reduced by previous illness, or rendered cachectic, as in Gingall's case, great care must be exercised that more strength is not expended by bleeding, and that further depression is not produced by too great cold. Rather we must endeavour to keep the circulation quiet by less potent measures, and support the strength by food and stimulants in such a way that, while no fresh and strong impulse is given to the circulation in the direction of the points where blood has escaped, we may yet give the little patient a chance of rallying, if it escape the immediate effect of the shock which has in the meantime overwhelmed it.

CASE OF POISONING BY VERMIN-POWDER CONTAINING STRYCHNIA.

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I WAS hastily summoned on Monday afternoon, November 13th, to the University Hotel, where a man had been found dead in bed. He had been staying there about a week, living very irregularly; and had come in on the previous evening about half-past eleven, and immediately retired to bed. It was his custom not to get up until late; but, as he had not appeared by 2.30 P.M., the waiter went to call him, and discovered that he was dead.

When I saw the body, I noted the following appearances and conditions. It was that of a well-made muscular man, rather stout, and apparently about thirty-five years of age. He was lying on his back, with a perfectly calm expression of face, the lips being slightly apart, the chest partly exposed, and the hands clutching the bedclothes, which, however, were tucked in, and scarcely at all disturbed. The trunk was still warm, but the extremities and face were quite cold. There was universal and marked rigidity, the limbs being quite straight—the condition, in fact, being just that produced by a strong rigor mortis. Some evidences of congestion were observed in dependent parts; but the face and uppermost parts of the limbs and trunk exhibited no discoloration. The pillow presented a patch as if of dried perspiration, where the head lay, and for some distance around it. There were no signs of any vomiting. On searching the room, I found a tumbler on the washing-stand containing a little moist sediment, of a bluish-green colour; and a slight white crystalline-looking film could be seen lining its upper part. In the fire-grate were some envelopes, marked "vermin-killer" and "muricidane", but containing nothing. There were, however, with these some pieces of newspaper, in which was a light blue powder. Nothing else was discovered, except plenty of evidence that the man had been in distress. Of course I took the glass and papers away with me, and immediately sealed them up.

A *post mortem* examination was made on Wednesday, November 15th. The body was much decomposed, but rigor mortis still existed in the legs and hands. *Post mortem* congestion was very marked. The muscles were dark and well nourished. On opening the head, the veins and sinuses were seen to be overloaded with fluid blood; and the brain itself was congested, with some excess of sanguineous serum in the ventricles, evidently *post mortem*. The lungs were much congested posteriorly, but otherwise healthy. The heart was flaccid and flabby, its right cavities containing a very little fluid blood. The blood generally showed no tendency to coagulate. The stomach contained about

two ounces of a thick brown liquid, and two or three small fragments of meat and potato, with no particular odour. The contents were removed, and sealed up in a bottle. The stomach and intestinal mucous membrane appeared very pale, and gave no evidence of any irritation. The other organs were simply congested.

An inquest was held, and adjourned, in order that a chemical analysis might be made, as it was impossible to give any opinion as to the cause of death from what had been observed. Professor Barff, of the Royal Academy and University College, performed the analysis, and subjoined are the notes, furnished by himself, of the processes he made use of, and their results.

"The *residue in the tumbler* was treated with hydrochloric acid, filtered, and the filtrate submitted to the action of sulphuric acid and bichromate of potash. The colour-reaction for strychnine was immediately produced. When tasted, the filtrate was intensely bitter; and a portion of it produced tetanic convulsions in a frog after two minutes, and caused death in less than five minutes. Emprosthotonos was well marked, the back being arched upwards, and the frog resting on his toes and mouth. Relaxation took place before death. Half the *contents of the stomach* were submitted, after acidulation with hydrochloric acid, to dialysis. The liquid outside the dialyser was evaporated, and gave indications of the presence of strychnine with the colour-test. The other half was divided into two parts, one being treated by Stas's method; the other by my own, which consists in warming over a water-bath for about an hour with dilute hydrochloric acid; then filtering, and shaking up the filtrate with alcohol, and saturating with normal carbonate of potash. The alcohol containing the alkaloid floats to the top, and is drawn off with a pipette. After evaporation, the colour-tests were applied, and the results were obtained much more distinctly than by Stas's process. From experience I can state that the use of tartaric acid to dissolve the alkaloid out of the organic mass is very objectionable, as, at the temperature of 100 deg. C., that acid is, in the presence of the substances contained in the stomach, decomposed, and forms caramel, easily detected by its smell. I should mention that, in performing the reaction with alcohol and potassic carbonate, the mixture should be warmed for a time in a water-bath; and time should be allowed—say three or four hours—for the solid matters to settle out of the alcoholic solution. There were three papers, containing a light blue powder; and in one of these ample evidence of the presence of strychnine was obtained. The other two, however, did not contain any."

REMARKS.—It has appeared to me desirable to publish this case, more on account of its medico-legal interest than anything else. There is not the least doubt that death resulted from poisoning by strychnia, as this was discovered in the tumbler in abundant quantity, also in the stomach-contents, and in one of the powders; while the *post mortem* examination revealed nothing in any of the organs that could account for sudden death. Nor was there any reason to suspect otherwise than that the man had taken it himself. Had there been any suspicion of foul play, there were some points about the case which might have given rise to a difficulty. First, it might have been a question whether it were possible for a man to endure the severe pains which attend the tetanic spasms of strychnia-poisoning without making some disturbance and seeking for help; secondly, whether these could have occurred without producing more displacement of the bedclothes, etc. That such may be the case, is proved by this instance; and the probable explanation is, that he took a large dose, which, owing to the empty state of the stomach, was rapidly absorbed, and led to a correspondingly rapid death, so that his sufferings were of short duration. It is to be noted, also, that the expression of the face was quite calm; and that there was no distortion of the body, which, however, was extremely rigid. This, of course, was due to the relaxation of the muscles, which occurs soon after death in cases of strychnia-poisoning, and the subsequent speedy setting in of rigor mortis. A congested appearance is stated to be present in various parts—in these cases, the result of the spasms; but I only observed it in dependent parts, and it appeared to me to be merely *post mortem*, which had come on rather rapidly, owing to the fluid condition of the blood. The patch of dried perspiration on the pillow was of some importance, as there is free sweating in connexion with the spasms caused by strychnia. The *post mortem* examination revealed nothing more than the absence of any organic lesions, or signs of irritant poisoning; with a somewhat congested state of the organs generally, and a fluid state of the blood; the heart, however, being nearly empty and flaccid.

I would call special attention to the observations of Professor Barff on the analysis of the contents of the stomach, as this gentleman has devoted himself particularly to this subject.