

contained air. On being cut into, a frothy, dirty-brown, semi-mucous fluid exuded, tinged with blood. There was no odor of prussic acid from it. In the cavity of the right pleura were about eight ounces of thin serum; the surface of the pleura was not marked by any evidence of inflammation. The left lung was of a pale colour, exsanguine, contained but little air, and poured out only a whitish frothy mucus on being cut into; it was firmly adherent in its whole extent to the costal pleura of the same side, and, posteriorly, the adhesions were so strong as to defy my strength to separate them. The pericardium was natural; it contained, perhaps, a little more fluid than usual in its cavity. The heart was small, and firmly contracted, and the vessels on its surface distended with fluid blood. On cutting into it, about three ounces of dark-coloured fluid blood trickled out, without the least appearance of coagulation having been attempted. It exhaled no smell of prussic acid. The parietes of the ventricles were a little thicker than usual. The liver was large and healthy. The spleen soft and easily broken down, resembling mulberry jam. The kidneys were firm, rather large, and slightly coagulated. The stomach contained about fifteen ounces of half-digested food, that gave out the peculiar smell of food undergoing digestion, with which also could be satisfactorily recognized the well-known odour of bitter almonds. The mucous coat of the stomach was healthy, and smelt strongly of prussic acid after the stomach had been emptied of its contents. The intestines were healthy. The brain and its coverings were healthy, but its vessels and its sinuses were filled with dark-coloured fluid blood. It was quite free from any smell of prussic acid.

In this case, first, he had power to cork the bottle after having taken the poison; indicating its paralyzing effects on the sensorium not to have been instantaneous. Second, the placid state of his features, unmarked by any act of expiring. Third, there was no scream, but he died tranquilly and silently. Fourth, the congested state of the right lung might more reasonably be referred to the effects of chronic pneumonia than to the poison. Fifth, the blood was everywhere dark coloured and fluid. Sixth, the odor of bitter almonds was satisfactorily recognized in the stomach, and nowhere else. Seventh, he lived nearly ten minutes after having taken the poison.—Mr. POOLEY, in *London Medical Gazette*.

#### CASE OF POISONING BY ARSENIC.

In the examination of the corpses of two men, supposed to have been successively poisoned by the wife. Wholer distinctly detected arsenic, even after an interval of seven years and six months. He incinerated all the soft parts of both corpses with nitre. In the case of the man who died last, it was found that during the last moments of his life, he had taken phosphuretted oil, and had therein consumed altogether about 16 grammes (about 250 grains) of phosphorus. On examination of the stock of phosphorus in the apothecaries shop, whence it had been obtained, it was found to contain about half per cent. of arsenic. The phosphorus used in the preparation of phosphuretted oil ought therefore in future to be tested for arsenic.—*Ann. der Chem. und Pharm.* 53, p. 141.

#### DR. TAYLOR'S REPORT ON THE PROGRESS OF TOXICOLOGY.

(Continued from page 81.)

**Conversion of calomel into corrosive sublimate by an alkaline chloride.** A case lately occurred in France, in which a medical practitioner was charged with the death of a child by the administration of a common dose of calomel with muriate of ammonia. It was stated by M. Mialhe, who gave evidence on this occasion, that, by contact with any chloride, such as common salt, calomel was converted to corrosive sublimate; and such a mixture was therefore highly dangerous. Experiments subsequently performed, showed that if this change did take place at all at common temperatures, or at the temperature of the stomach (98°), it was only to a trifling extent, and not likely to endanger life by the usual mode of exhibiting the medicine. The question is of some importance to medical practitioners; for, although it is not customary to give calomel in mixtures with alkaline chlorides, yet common salt is largely employed as an article of food, and the chlorides of sodium and potassium exist in the animal secretions.

It is therefore proper to state here the results of some recent experiments on the subject by M. Larveque, especially since these tend to show that the statements of M. Mialhe are not strictly borne out by observation. An account of these experiments will be found in the *London and Edinburgh Phil. Mag.* Sept., 1843. The principal facts merely are here selected. In one experiment a mixture was made of 45 grains of calomel, 90 grains of chloride of sodium, and 1875 grains of distilled water. The mixture was frequently shaken, but it was only after the lapse of a week that the supernatant clear liquid was at all discoloured by sulphuretted hydrogen gas. This was not, however, owing to the presence of any corrosive sublimate, for none could be separated by sulphuric ether. The effect of the gas was doubtless due to the presence of a minute portion of calomel held dissolved by the alkaline chloride. When nearly double the quantity of common salt was used with half the quantity of water, still no evidence of the production of any corrosive sublimate could be obtained. The chlorides of potassium, barium, calcium, and magnesium gave precisely similar results. When the mixtures were heated to 212°, then a portion of corrosive sublimate, easily separable by ether, was uniformly produced. Muriate of ammonia was found, even at common temperatures, to convert a portion of calomel to corrosive sublimate. This, however, is only likely to occur where the quantities of calomel and muriate are infinitely larger than it is probable they would ever be prescribed for medicinal purposes. Practically speaking, this conversion by common salt can never give rise to any dangerous consequences; because it is not found to take place at common temperatures, nor at the temperature of the body. The change produced by muriate of ammonia at common temperatures is so slight as to be of no importance.

**Lead.**—In November, 1843, an interesting trial took place at the assizes of the Puy de Dôme, in France, involving the rare question whether or not the death of a person had been caused by the criminal administration of a salt of lead. The whole of the proceedings are reported with much unnecessary prolixity (extending to 158 pages) in the *Annales d'Hygiène* for January, 1844. The deceased died under suspicious circumstances; on examination of the body, there was nothing found indicative of the action of poison, while the stomach was ulcerated and in an otherwise diseased state. No salt of lead was found in the contents, but traces of the metal were discovered on incinerating the viscera. A question then arose, whether this metal was a natural constituent of the body, or the result of a portion which had been swallowed and had acted as a poison. The medical opinions were much divided. Orfila thought that it was very probable, if not certain, that the deceased had died from the effects of lead. There was so much doubt about the case, that, in an English court of law, it would probably have been speedily dismissed for want of clear medical proof of the cause of death. The details are not of sufficient general interest to justify quotation, but the medico-legal reader will find, in the controversy between MM. Dupasquier, Danger and Flandin on the one side, and M. Orfila on the other, that the art of conducting a medical prosecution and a medical defence is well understood in France.

**Carbonate of lead. Shot in bottles.** A case is related in the *Annales d'Hygiène*, April, 1844, which shows that serious accidents may sometimes happen from the shot used in cleaning bottles being left, and afterwards becoming chemically acted on by the wine or liquid introduced. The practice of thus cleaning bottles is very common in England and also in France, and the small pellets often become fixed in the narrow part of the base of the bottle, and thus escape notice.

A person after having swallowed a few glasses of liquor, suffered from the most violent colicky pains, and all the symptoms of irritant poisoning. Dr. Hanle, who was immediately called, having observed that the liquor remaining in the bottle was very turbid, poured it off for analysis, when he found, firmly wedged in at the bottom of the bottle, ten leaden pellets, which had become so completely transformed to carbonate of lead, that there was only a small nucleus of the metal left. So long as the liquor was clear, no accident had arisen from its use; but the symptoms of poisoning appeared immediately when the turbid portion, at the bottom of the bottle, containing the salt of lead either suspended or dissolved, was swallowed.

It is singular that the lead should have been found in this case in a state of insoluble carbonate; for, in general, the vegetable