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	PAGE		PAGE
Analysis of Madame Lafarge's Trial, with Remarks on the Medical Evidence, by Dr. Lynch.....	17	Liverpool Medical Institution	28
On Hypertrophy of the Brain in Children, by Dr. Green	19	St. Marylebone Infirmary	ib.
Observations on Dysmenorrhoea, and its Treatment, by Dr. Bushnan	22	Foreign Medical Literature.....	29
Comparative Mortality in Towns and Counties	23	M. Andral on the Blood.....	ib.
The Cheshire Coronership	25	Effects of Mechanical Suppression of Perspiration	30
North of England Medical Association	26	Dr. Forbes	31
Case of Strangulated Femoral Hernia, &c. by Mr. Banner, of Liverpool	27	NOTICES TO CORRESPONDENTS	ib.
		ADVERTISEMENTS.....	ib.

[FOR THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.]

ANALYSIS OF MADAME LAFARGE'S TRIAL, WITH REMARKS ON THE MEDICAL EVIDENCE,

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[THE proceedings at the trial of Madame Lafarge, for the murder of her husband, have excited an intense degree of interest, in consequence of the rank and sex of the accused, as well as the enormity of the crime laid to her charge, and the medical evidence has been contradictory in the extreme. We, therefore, feel pleasure in being able to lay before our readers the following valuable analysis of the evidence, but especially the medical testimony, accompanied by a few remarks from the pen of a gentleman who is peculiarly qualified for this delicate and difficult task. We believe, indeed, that this analysis and these observations will prove acceptable to our professional brethren, for many useful hints may be derived from a careful examination of the reports of this cause,—reports contained in several successive numbers of newspapers which many medical men have it not in their power conveniently to consult.—Eds.]

In order to attain quickly a clear notion of this perplexing case, it is requisite to bear in mind that three different groups of analysts gave in as many distinct reports. 1st, The medical men of Brives, Bourdon, Tournadour, and Lafosse, with Lespinatz, of Lubersac, and Massenat, of Paris; 2d, Messrs. Dupuytren and Dubois, of Limoges; 3d, Messrs. Orfila, Bussey, and Ollivier d'Angers. It should also be remembered that Mad. Lafarge, the mother, usually resided with her daughter, Mad. Buffieres.

We shall first relate the chemical evidence, and, reversing the order in which the reports were made, begin by succinctly describing the experiments and inferences communicated by M. Orfila; for these afford the strongest proof of a crime having been committed.

FIRST EXPERIMENT.

One quarter of the stomach, one half of the liquids contained in the stomach, and some liquid which had been vomited, having been returned by Messrs. Dupuytren and Dubois (who had not used them in their experiments), were mixed together and carbonized by means of nitric acid, in the manner suggested for the first time by

M. Orfila; * the carbonized mass was boiled with distilled water, the water was filtered, and the filtered fluid being introduced into Marsh's apparatus, yielded an inconsiderable portion of metallic arsenic.

The mass designated in the indictment (*procès verbaux*) as "the organs of the thorax and abdomen, the liver, part of the heart, and brain," which we, for brevity sake, shall call the visceral mass,—was now boiled for some hours in distilled water, and the decoction filtered so as to separate the undissolved portion from that which had been dissolved and had passed through the filter. The filtered fluid and the undissolved substance were then operated upon separately.

SECOND EXPERIMENT.

The fluid was reduced by evaporation nearly to dry matter; this matter was carbonized by means of nitric acid, and boiled with distilled water, which, being exposed to Marsh's apparatus, yielded arsenical crusts.

THIRD EXPERIMENT.

The undissolved portion was burnt for seven hours with nitrate of potass,—the macerated mass was treated by boiling in distilled water, and the water, being filtered, was submitted to Marsh's apparatus, when a remarkable quantity of arsenic was obtained, amounting to twelve times that procured by the preceding experiments.

Orfila and his associates did not discover arsenic in two pounds of muscular flesh taken from the thigh, in the winding-sheet, or in the earth surrounding the coffin, and concluded that the arsenic detected by them was not the portion naturally existing† in the human body, because this portion is to be found only in the bones. They, moreover, showed clearly that the metallic crusts were really arsenic.

This report, taken in connexion with the symptoms observed during the illness of M. Lafarge, will, we think, convince the most cautious medical jurist that the unfortunate man must have been poisoned by arsenic; nor can we suppose it will be of any avail to call in the aid of M. Raspail or others, to ascertain whether the arsenic could have been that naturally existing in the human frame, for even in the bones (and it can scarcely be doubted that it is

* Mémoire sur un nouveau procédé pour constater facilement dans nos organes la présence d'une préparation arsénicale, qui avait été absorbée. Ann. d'Hygiène, &c. vol. xxii. p. 431.

† See Mémoire sur l'arsenic naturellement contenu dans le corps de l'homme, lu à l'Académie Royale de Médecine, le 24 Sept. 1839. In this little essay, M. Orfila establishes—1st, That arsenic exists in "infinitely small" quantity in the bones of man and several of the mammalia; 2d, That it cannot be detected in the bones of man by the ordinary mode of analysis; 3d, That it can readily be extracted by Orfila's plan of carbonizing. M. Orfila's inferences may be depended upon, as many of his experiments were performed on large quantities of matter (8, 10, or 15 pounds).

confined to the osseous structure) that portion of arsenic exists in infinitely small quantity, and is separated from them with difficulty by the ordinary chemical agents,—whilst experiment No. 3 revealed a considerable quantity of arsenic. The subject is, however, deserving of investigation, if the opinion of M. Couerbe,—that arsenic exists in the human body during putrefaction,—originated from his having observed an evolution of arseniuretted hydrogen gas, for this would tend to show that, during the putrefactive process, the arsenic of the bones may be acted upon in a manner we do not as yet understand, and conveyed into tissues which do not naturally contain it. In October, 1838, Couerbe suggested to Lesueur, Ollivier d'Angers, and Orfila, the suspicion which led to the discovery by the latter of arsenic in the bones of man, &c.

It is worthy of remark, that water, boiled for several hours with the visceral mass, dissolved a small portion only of the arsenic,—but that the part of the visceral mass, which was not taken up by the water (when treated after the method of Orfila) yielded twelve times the quantity extracted by the first two experiments. Was the portion of arsenic which the water did not dissolve, retained by the animal matter, or sesquioxide of iron, used as an antidote, or by both? This question suggests the performance of experiments to determine a point, which, we believe, has not as yet been investigated;* but whatever may be the result of an inquiry instituted with the view of showing why the arsenic was not dissolved by protracted boiling, it must be confessed that the experiments detailed in the report refute the objections urged by Divergie against Orfila's plans of incineration with nitrate of potash, and carbonization by means of nitric acid, and place it beyond question that, in some cases at all events, *boiling for one hour or less, as directed by Divergie, Christison, and others, is altogether insufficient to dissolve the arsenic, which may thus remain undiscovered even by skilful chemists.*

It should not pass unnoticed, that the searching analysis of M. Orfila detected in the stomach but an inconsiderable proportion of arsenic, whilst at least twelve times this quantity was procured from the visceral mass;—we believe this increased proportion proceeded principally from the intestines, and consider the fact of great value, *-serving, as it does, to warn us against the too common error of confining the analysis to the stomach and its contents.*

The commission, composed of Messrs. Dubois and Dupuytren, concluded that arsenic did not exist in the body of M. Lafarge, but found it in the *lait-de-poule*, gum-water, toast-water, and powdered gum. Dubois and Dupuytren experimented with a full knowledge of the principles laid down by the best authors, having employed Orfila's method, and having also proceeded by boiling the suspected animal matter in distilled water,—throwing down a precipitate by sulphuretted hydrogen gas,—and reducing this sulphuret. Their opinion regarding the existence of arsenic in the powdered gum and drinks may be relied upon, being founded on the extraction of metallic crusts from these substances, and their inability to find arsenic in the body can be satisfactorily explained by adopting the opinion of Orfila, that their want of success depended upon their having employed in their operations insufficient quantities of animal matter, and upon their inexperience in the use of Marsh's apparatus, *which in unpractised hands may fail to separate the metal from fluids containing it.*

No weight can be attached to the report of the Brives Commission, the members of which evinced the grossest ignorance of truths known to the merest tyro in legal medicine, whilst, regardless of the serious consequences which might ensue from their deficiency, they communicated the results of their imperfect or mismanaged experiments with more than the confidence of an Orfila, or a Christison! M. Orfila, indeed, in his letter to M. Paillet, justly rebukes them for their positive assertion, that arsenic

must have been present, because sulphuretted hydrogen had thrown down a yellow precipitate soluble in ammonia; and mentions that an analyst had, some years ago, declared a precipitate, exhibiting these characters, and obtained by the same steps, to be arsenic, although it was really formed by an animal matter contained in the bile.† We may add, that sulphuretted hydrogen throws down a yellow precipitate from the bichloride of tin, and this precipitate is soluble in ammonia; the solution may certainly be distinguished by retaining a yellow shade; but inexperienced men, operating on a weak solution, would probably overlook this circumstance.

The exposure of Messrs. Bardon, Tournadour, Lafosse, &c. will, it is to be hoped, for the future deter medical men from undertaking medico-legal investigations which they are incapable of properly conducting. It too often happens in our own country, as well as in France, that medical witnesses unskilled in analysis, are induced by an unwillingness to acknowledge ignorance, or are tempted, by the very inadequate fee allowed by law, to enter upon chemical inquiries demanding the utmost accuracy; for upon them depend the due administration of justice, the public safety, or perhaps the life of an individual wrongfully accused. The trial of Mad. Lafarge proves that such a course is as much opposed to the interests of the parties who pursue it, as it is to the laws of honour and to morality.

Having now discussed at some length the evidence of the scientific men, we shall proceed to review and canvass the testimony of the other witnesses.

The following is a summary of the principal non-medical testimony brought forward against Mad. Lafarge:—it was deposed, that she had repented of her marriage, and declared her hatred of her husband; that she had several times during his illness, and previously, despatched servants to the neighbouring villages for arsenic; that she had not seemed to regret his illness or death; that arsenic had been found in his stomach and drinks; that poison had been detected in the powdered gum which Mad. Lafarge kept in a little box; that Mad. Le Brun had seen the prisoner put a white powder into the *lait-de-poule*; that arsenic had been found in a chest of drawers belonging to Mad. Lafarge; that her waiting-maid, Clementine, had assisted in the burial of the arsenic, real or supposed; that Alfred, the valet and friend of Clementine, had betrayed confusion, and threatened to drown himself when questioned by Faugeras regarding arsenic; that the prisoner had asked questions as to the period of mourning; that she had seemed anxious to receive her letters after having sent the box to Paris; that her husband had been affected with pain of the stomach, or vomiting, after eating a portion of these cakes; that he had alluded in his letter to *one* “delicious cake” which the prisoner had requested him to eat, and two little cakes which his mother had sent him; that the waiter in the hotel at Paris (who opened the box) had seen but one cake; that the prisoner had requested her mother-in-law to withdraw from attendance upon her son; and that Marie Mathieu, the cook, had given Clementine sugar and an egg to make a *lait-de-poule*.

On the other hand, the succeeding facts and arguments may be urged in favour of the accused,—that it is not surprising she should have been angry and discontented on finding she had been persuaded to marry by false representations of the luxury and comforts prepared for her; that it had been proved that Mons. Lafarge had practised the most premeditated and heartless deception upon his former wife and her relatives; that the prisoner had been reconciled to her husband for some time; that it is not strange a lady of refined manners and elegant accomplishments should have been desirous of destroying the rats which rendered a residence in the house almost intolerable; that M. Lafarge himself had sent for arsenic in the height

* The experiments published by Dr. Christison many years ago, together with the recent experiments of Dr. MacLagan, go far to prove that the arsenic was retained by the oxide.

† Chevallier has twice seen the precipitate; and in his memoir on arsenic naturally existing in the human body, M. Orfila relates an experiment, in the course of which he obtained this substance, by boiling the liver of a person who had not taken arsenic, and passing S.H. through the filtered solution.

of his illness, when no trifling annoyance would have withdrawn his attention from his own sufferings; that arsenic had been so often procured to destroy vermin, that packets of it must have been on various occasions within the reach of other inmates of the house; that the prisoner had shed tears when she perceived that her husband's mind had been filled with suspicions of her, a circumstance proved by M. F. Fleigniat, who acknowledged he was hostile to the prisoner at the time he had observed it; that it is improbable a guilty woman would have *openly* made inquiry as to the period of mourning, and thus direct attention to her crime; that a guilty person would not, like the prisoner, have, without the slightest hesitation, given up for the purposes of justice the poisoned gum-powder, when it would have been so easy to scatter to the winds this evidence of guilt; that Mad. Lafarge had expressed the greatest indignation when the suspicions of her guilt were communicated to her, and had swallowed some of the poisoned gum-powder, which she would hardly have done had she known it to have been poisoned; that she constantly mixed gum-powder with her own drinks, and seemed to have a high opinion of its virtues; that Mad. Lafarge evinced upon the trial the possession of good sense and great presence of mind, a circumstance tending to prove her innocence, for if guilty, so intelligent a woman would not have acted (as she did on several occasions) in a way calculated to insure her conviction; that the prosecutors had failed to show the impossibility of the arsenic having been introduced into the gum-powder without the prisoner's knowledge; that the evidence of Mlle. Le Brun was given throughout in an incoherent manner; that the little pot of arsenic was found in a drawer which lay constantly unlocked, a place which would not have been selected by the prisoner, (supposing her to be guilty,) for she might have put it into any of the other drawers of the same piece of furniture, which were always locked, and the keys of which were never out of her possession; that it is highly improbable a substitution of the cakes by the prisoner took place, because several persons were present during the packing of the box, and some of these persons were inquisitive, and, according to their own acknowledgment, observant of the mode of packing; that the prisoner had desired her sister (to whom she was warmly attached) should partake of the cake or cakes; that Clementine gave her evidence in a clear and unembarrassed manner, and deposed that her mistress knew nothing of the burial of the supposed arsenic; that the prisoner had never betrayed a malevolent or cruel disposition; that she had not requested her mother-in-law to withdraw until she had been several days in attendance upon her son; that the box was fastened with hooks and cords when it left Glandier, but was nailed when it reached Paris, a circumstance tending to prove the occurrence of substitution, but not by the prisoner; that the letter of the deceased was not sufficiently definite and clear to warrant a conclusion that his wife had requested him to eat, not the cakes made by his mother, but one substituted by herself; that Barbier's suspicions had been expressed at so early a period, and upon such slight grounds, as rather to inculpate himself or others than the prisoner; that Faugeras had been a servant of the Buffieres family; that Mad. Lafarge had permitted her husband to raise money upon the security of property which she had a right to reserve for her own use solely; that she had not hesitated for a moment to guarantee to M. Roque, banker, of Brives, a debt due by him to her husband, and that this occurrence took place on the day of Lafarge's death; that the *repas sympathique* should not excite suspicion against the prisoner, first, because such manifestations of sentiment are usual in France; and secondly, because had she wished to poison her husband, she would not have adopted a course so calculated to indicate her guilt, but would have awaited the return of M. Lafarge, when she might secretly have mixed arsenic with his food or drinks, and have succeeded, perhaps, in fixing the charge upon some other person; and lastly, that all the most important testimony against the accused had proceeded from witnesses whose evidence

should be received with the utmost caution,—for instance, it appeared from Barbier's own evidence, that he had been an accomplice of the deceased in preparing and passing forged bills of exchange.—2d. A member of the Buffieres family had acknowledged that this family had a pecuniary interest in the conviction of the prisoner.—3d. The evidence of M. Chauveron, and the confidential intercourse proved to have subsisted during his present and former marriage, between M. Lafarge and his mother, suggest a suspicion that the latter was not ignorant of her son's transactions in bills.—4th. Even if she be considered ignorant of her son's discreditable conduct, it should be remembered that she resided permanently with her daughter, Mad. Buffieres, and, probably, her feelings and interests were identified with those of the Buffieres family.

That M. Lafarge perished from the effects of arsenic cannot be questioned, but, after having deliberately weighed the arguments for and against conviction, we do not hesitate to say, that the evidence advanced against the prisoner is not, by any means, sufficiently strong to warrant a verdict of guilty. We beg it, however, to be understood that, in giving this opinion, we do not mean to assert positively that the crime has not been committed by Mad. Lafarge.

We cannot dismiss this deeply-interesting cause, without denouncing the system,—permitted by the French laws,—of subjecting a prisoner during his trial to repeated cross-examinations. What can be more likely to deprive an innocent person of his self-possession, and lead him into mistakes and contradictions which may induce a belief of his guilt? The accused should be deemed innocent until a verdict of guilty has been returned by the jury, and it is barbarous and unjust to make reiterated attempts to confuse them, and extract answers favourable to conviction at a time when shame, anxiety, and perplexing interrogatories have temporarily almost deprived them of reason. The French would do well to alter a code which allows of so much unfairness and cruelty, and substitute the equitable, considerate, and generous principles of our criminal jurisprudence, which forbid such systematic persecution. Mad. Lafarge has been compelled to submit daily, during a trial of a fortnight's duration, to the repeated brow-beating of the advocate-general, the jurors, and, (*proh pudor!*) the judge! Really, a French trial may not inaptly be compared to a French fox-hunt, or a Spanish bull-bait, in which the animals pursued (or rather worried) are allowed no chance of escape! Mad. Lafarge has displayed great firmness of mind throughout this long inquiry, but her strength has given way, and she has been brought to the verge of the grave; nor is this astonishing, for the strongest man could hardly bear up against such continued torture. M. Paillet, her advocate, had indeed good reason to exclaim, "you will have two corpses instead of one!"

[Since the above remarks were written, Mad. Lafarge has been found guilty, and sentenced to the galleys for twenty years; but, during the last two days, nothing transpired which would seem to justify a change in the opinions expressed by Dr. Lymce.—Ed.]

CONTRIBUTIONS TO THE PATHOLOGY OF CHILDREN.

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HYPERTROPHY OF THE BRAIN.

HYPERTROPHY of the brain is a disease which is common to children and adults, but it deserves some consideration from those who are occupied by the study of infantile diseases, because, when accompanied by enlargement of the head, it has often been mistaken for chronic hydrocephalus.