

intestines. Rubber tube was passed round broad ligaments, tight enough only to control hemorrhage. Uterus opened by vertical incision in median line, and membrane bulged into incision, which was enlarged upward and downward. Pail of hot and one of cold water had been provided for resuscitation of child. Membranes were then ruptured, and child's head presenting, was delivered in that way. Eyes sponged out, throat cleared with finger. Baby gasped a little, but as cord was pulsating feebly it was clamped and cut. Under treatment of Dr. Hitchcock child was soon crying vigorously. Rubber tube was then relaxed and contraction of the uterus followed. As patient was in good condition and no hemorrhage going on, the placenta was allowed to separate in the normal way, and after ten minutes was delivered through incision in uterus. There was no hemorrhage except a very slight oozing from the placental side which was directly over the os. Hemorrhage was so slight it did not wet one gauze sponge. Mucosa closed by a continuous suture of No. 1 half chromicized catgut (St. John Leavens). The uterine muscle was brought together by eight interrupted sutures, and a continuous suture of catgut closed the peritoneal wound. Gauze packing then removed. Peritoneum closed by continuous catgut suture, rectus muscle caught together by the same material, and fascia of rectus closed by continuous suture. Continuous silkworm-gut suture closed skin incision. Sterilized dressing applied, patient returned to bed. Whole operation consuming forty-five minutes. After treatment consisted of corrosive douches with pad until tenth day, when a slight odor of lochia caused a change to sulphonaphthol douches. Patient sat up in bed on twelfth day and left bed on twenty-first day.

On September 12th, house and outbuildings were completely destroyed by forest fires, and patient was driven to Plymouth after walking one and one-half miles through woods with baby in her arms. Patient suffered no ill effects from this, and she and baby are alive and well today.

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THE DUTIES OF THE MEDICAL EXAMINER IN MASSACHUSETTS.¹

BY JULIAN A. MEAD, M.D., WATERTOWN, MASS.

In these days when the subject of medicine is divided into so many specialties, the medical examiner may be considered very properly a specialist in the detection of the causes that result in unnatural deaths.

He should be familiar with the appearances that wounds on the live body present after death, and be able to decide the nature of the instrument that inflicted them; he should be able to recognize the post-

¹ Read before the Middlesex South District Medical Society, October 10, 1900.

mortem appearances that are caused by drowning, and to decide whether a body entered the water before death, or was thrown in after death; he should be conversant with the action of poisons, and able to differentiate between the symptom of food poisoning, generally called ptomaine poisoning, and metallic irritants. Continued experience in these and many other questions that are continually confronting the medical examiner should qualify him to assign to any suspicious circumstance its proper weight, and thereby enable him to disclose a hidden crime, or to prevent an unjust suspicion from clouding the life of an innocent person.

The medical examiner will find that it is just as true in his specialty as in all others that the value of his services depends mainly on the extent and thoroughness of the foundation that he has laid in his study of general medicine. The statute that abolished the coroner and created the medical examiner recognized this fact when it provided that the medical examiner "should be learned in the science of medicine." He is indebted for this qualification to the medical profession, which becomes, therefore, in this respect responsible for him. He can reasonably expect that he has been thoroughly grounded in his student days in the many causes that change physiological processes in the body into pathological ones, and that he has been taught to read aright in the lifeless organ the story of destruction that an insidious disease has written there.

If the teachers of medicine have done their duty, and have made the medical examiner, as the law prescribes, learned in the science of medicine, then the responsibility for success or failure in the many important duties that he is called upon to perform is shifted from the profession to the individual, and should he prove unequal to them, the profession should insist that they be entrusted to more competent hands.

The medical examiner, in addition to being learned in the science of medicine, must know something of the legal side of the question, and, if he is well versed in medical jurisprudence, he will be in a position to render valuable service to the Commonwealth, and to reflect credit on his corps. He should not encroach, however, on what pertains to the law, but confine himself to the solution of the question, What caused this death? leaving the question, Who did it? to be answered by the legal profession.

The medical examiner stands between the two professions, and at the same time unites them. He does this by reason of a knowledge of the legal side of a question that the medical profession in general has little means of acquiring, and by a knowledge of the medical aspect that is beyond the scope of a legal education.

Perhaps the best way to give you an idea of the duties of the medical examiner will be to show him at work in a particular case; with this view in mind, I will briefly relate a case that came under my care about a year ago.

In the forenoon of October 12, 1899, I was summoned to the city of Newton to view the bodies of two persons who were said to have been murdered. I immediately went to the place indicated, and learned the following story from the policeman in charge. The family living in the house had moved to Boston for the winter, but had left their coachman and horses

in the stable. Two days before my view, the coachman had driven his mistress about Boston, and had returned to Newton in the evening. Nothing was heard or seen of him the next day. On the day that his body was discovered, his mistress expected him to drive to her house in Boston at nine o'clock in the forenoon. After waiting an hour or more, she decided to go to Newton, and learn why he had not driven to Boston. She found the stable door locked, and two days' supply of milk at the door. She then sought the assistance of a policeman, who entered the stable through the window and found the coachman dead in his room. At this point, I wish to call your attention to the correct method of procedure followed by the policeman. He locked the room, notified the medical examiner, disturbed nothing, and remained on guard until I arrived. As a consequence, I found everything to the slightest detail just as it was left by these two persons, the cause of whose death it was my duty to determine if possible. The members of the medical profession should thoroughly appreciate the great importance of leaving everything undisturbed, for they are often the first to see these cases; in many instances, by an entirely unnecessary examination of the body, they have either destroyed or befogged important evidence, and thereby increased the difficulty of unravelling the puzzling questions that such cases often present.

After hearing the history of the case I went upstairs, and entered a small, unplastered room, in which up against the board partition was a single bed, on which were lying two dead bodies. Before making an examination of the bodies, it was my duty to note and record every fact in connection with the contents of the room, so that I might be able to reproduce a picture of the room for the prosecuting attorney and the jury when the case should be tried. In such cases the medical examiner cannot exercise too much care in gleaming every trifling detail, which should be jotted down in a methodical manner for future use.

This is not the time or place to give such a detailed description of the room and surroundings as I have just indicated; a few of the important facts will suffice to give you a proper understanding of the case.

There was an earthen pitcher and a cup half filled with a fluid on a chair close to the bed; on the floor near the bed was a spittoon also partly filled with fluid. The contents of these receptacles were put into clean bottles, and given to a chemist, who reported that the cup and jug contained water, and the spittoon a mixture of water and urine, in the sediment of which was vaginal epithelium. On a narrow single bed standing against the wall were the bodies of a man and a woman, covered with three comforters. The woman was lying on her back on the outer side of the bed; her hands were clenched, her arms were crossed on her breast, her mouth was partly open, and her lips were slightly discolored with a dark stain. She was undressed and wore only a thin chemise and a light undervest. The man was lying partly on his side over against the wall. In addition to his accustomed everyday clothes, he had on a thick overcoat, and a carriage robe around his shoulders.

There was no indication of any struggle, and everything was suggestive of a peaceful sleep; neither were there any marks of violence on either body. Rigor mortis was present.

As it was impossible to decide the cause of the death

of this man and woman from the view alone, I proceeded to act under authority of Section 8 of the act concerning medical examiners, which reads as follows: "If on view thereof, and personal inquiry into the cause and manner of death, he deems a further examination necessary, he shall, upon being thereto authorized in writing by the district attorney, mayor, or selectmen of the district, city, or town where such body lies, in the presence of two or more discreet persons, make an autopsy." Having obtained permission to make the autopsy, I decided to employ a chemist, as empowered to do under Section 16, which provides that "the medical examiner may, if he deems it necessary, call a chemist to aid in the examination of the body or of substances supposed to have caused or contributed to the death."

Dr. Harrington, of the Harvard Medical School, the chemist, was present at the autopsies. He sealed up in separate jars and took away with him such portions of the different organs as he required for his examination.

It is always desirable to have the chemist present at the autopsy, and have him take charge of the specimens, so that the opposing attorney at the trial cannot say that the specimens have been tampered with in passing through several hands.

In making an autopsy, the law provides that the medical examiner shall then and there carefully reduce or cause to be reduced to writing every fact and circumstance tending to show the condition of the body, and the cause and manner of death, together with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy, he shall call the attention of said witnesses to the position and appearance of the body. The evidence in both these autopsies was negative, except that a large ante-mortem clot was found in the heart of the woman. After an autopsy the law requires the medical examiner to notify the district attorney and a justice of the district court, and to file a duly attested copy of the record of his autopsy in such court, and a like copy with such district attorney. The case then goes into the hands of the legal profession, and further action is left to the prosecuting attorney. Although the case that I have cited briefly is only of secondary importance, and designed to illustrate some of the duties of the medical examiner, still you may be interested to hear the report of the chemist, and the findings of the judge.

Dr. Harrington reported as follows:

HARVARD MEDICAL SCHOOL,
Laboratory of Hygiene.
BOSTON, December 5, 1899.

DR. JULIAN A. MEAD, *Medical Examiner*,
Watertown, Mass.

DEAR SIR:—I have the honor to report on the examination of the organs of William McCauley and Alma Y. Peterson. The condition of the bodies when found, the absence of evidence of diarrhea and vomiting, the non-occurrence of convulsions evidenced by the undisturbed condition of the bedclothes, and the negative evidence of the autopsies were of themselves sufficient to rule out of the list of possible causes of death most of the poisons with which we are acquainted; but, notwithstanding, I made a careful examination for the presence of irritants, cyanides, chloral and alkaloidal poisons. In both cases the result has been wholly negative excepting that with Fröhde's reagent I obtained a faint, somewhat doubtful reaction for the only poison which is compatible with all

the circumstances, namely, morphine. I have characterized the reaction obtained as "somewhat doubtful," that is to say, it was so slight that I should feel a decided reluctance to report it positively if thereby one's life or liberty were placed in jeopardy.

Yours very truly,
(Signed) CHARLES HARRINGTON.

(Copy.)

At the inquest, the judge asked me who I thought caused the death. I replied that, in my opinion, one or both had committed suicide. He told me some weeks later that he came to the conclusion that the woman poisoned the man and then took the poison herself. The police learned later that the man had a wife and several children in Canada, that a woman in Boston claimed him as the father of her child, and that he was engaged to the woman who was found in bed with him. It is possible that the deceased woman may have anticipated the police in acquiring the above information.

The method of procedure, as prescribed by law, is much the same in every case, but the line of inquiry followed by the medical examiner varies very materially with the nature of the violence he is called upon to investigate.

It is apparent that the prosecuting attorney will not care to know anything about poisons in a case of homicide by shooting; but he will want to know how the pistol was held, how far the muzzle was from the person when the pistol was discharged, if the deceased could have inflicted the wound by his own act, and if the bullet entered at right angles or obliquely to the surface of the body. The experienced medical examiner will be prepared as far as possible to answer these questions, and to give his reasons for his opinions in such language as the average man in the jury can comprehend; if there is a common name in use for a particular bone, muscle or any part of the body he will use that word instead of the technical term, and he will bear in mind that he can only instruct the members of the jury by using language that they can understand.

The medical examiner law went into effect twenty odd years ago, a time sufficiently long to determine the wisdom of its creators; it was a new and conspicuous departure in that vast system of protection which it has been found necessary to establish for the community; other States have expressed their opinion of it by that sincerest mark of approval, imitation. The medical examiners during this period of twenty years have done good work for the State, and have reflected credit on the medical profession, but perhaps it would be better on this point to call as a witness one who represents the legal profession, and therefore I will close this paper by quoting from an address by Attorney-General Knowlton, delivered some two years ago at a meeting of the Medico-Legal Society.

"My experience," he says, "is that success grows and results much more from men than from machinery in any department of human activity, whether in business or in the working of laws. It is the men who are entrusted with the work, rather than the machinery that is devised, that make or mar results. I am glad to say this, gentlemen; it is the first opportunity that I have had of putting in formal shape my testimony to the very commendable exertions of the members of this body, and of the medical examiners throughout the State, to enforce the provisions of this

law in the interest of justice in the Commonwealth. It may be that my experience has been larger than that of living men. I have had to do directly and indirectly with the trial of thirteen indictments for murder, and the investigations of many more cases, and I have uniformly found the medical examiners with whom I have been brought in contact to have that understanding, that intelligent understanding, of the duties imposed upon them by the Medical Examiner Act that was necessary for its success. As you know, the medical examiner system succeeded a system that had fallen into disrepute, and which had become worse than obsolete. This act was an immense advance in the business of detecting and punishing crime, and yet this act would not have been a success, had it not been for the character of the men who enforced it."

A CASE OF ALEXIA, MIND BLINDNESS, ETC., WITH AUTOPSY.¹

BY EDWIN E. JACK, M.D., BOSTON.

THE patient was a rather spare man, aged sixty-three, whose general health, with the exception of chronic indigestion, had always been good. There had been some sickness, but it had no apparent bearing on his later condition. Up to a year ago he had been at work at his trade, wood-carving. It became necessary from lack of employment, etc., to turn to other things, and the change and the worry incident to it had a bad effect on him generally.

He consulted me first the 23d of last December, giving a history of failing vision for about one month, first noticed in reading the labels on boxes. V. O. D. = 5-20, V. O. S. = 5-27, the letters being slowly picked out. A correction of his hypermetropia did not seem to improve him. There was nothing in the test or in anything he or his wife said which led me to believe he could really see better. Fundi, both discs slightly red and hazy but not abnormal; small spot of chorioretinitis in the right eye a short distance upward and to nasal side of macula. Fields normal, pupils normal. Inability to name colors. This latter fact, though the apparent color scotoma was not confined to the central region, suggested retrobulbar trouble, and in the absence of any tobacco or alcohol history, the possibility of diabetes came to mind and an examination for sugar was made later with negative result. I did not at this first visit suspect the real trouble, no hint except that of a negative examination being got from either patient or his wife. At the second visit, three days later, correcting the hypermetropia, I found that by pointing out letters at the first of the examination he could name a letter or two of much smaller type, and that when after a moment or two he could not do this, he could roughly draw their shape. The power to do this also was quickly exhausted. These observations led to questions which showed the nature of his trouble.

He was unable to come to my office alone; he had no idea of the signs on the cars; former familiar streets were only partially or not at all recognized. There was evidently no difficulty in merely seeing letters, words or objects. Later investigation of the case brought out the following symptoms, which

varied from time to time. With these I will give other negative ones, the two together making a more complete picture of the defects in question.

The patient could hear sounds of all kinds and recognize them, with one odd exception. He certainly on one occasion failed to interpret musical sounds. I asked him once if he knew the tune "Annie Rooney"; he did not. I then whistled it; still he did not know it. Immediately afterward I played on a small parlor organ a hymn of which he was particularly fond, and on asking what it was he slowly shook his head and said interrogatingly, "Annie Rooney?" A day or so later the same tune was recognized and awakened the sad memory of former failure. He understood spoken words. He could see letters, numbers and words, printed and written, but he could not, except to a slight and variable extent, comprehend them. There was at all times an ability to recognize a few letters and figures and even words, and this not confined to any particular ones, but limited apparently by the exhaustion of his power. He could see objects, but there was an inability to a considerable extent to recognize them. Such objects as matches, a key, comb, napkin, photographs, etc., brought up no remembrance of similar previous ocular images. Other objects he evidently recognized, but could not find words to express the name, or the idea vanished before he could put it into words. This inability to interpret objects was not limited to those seen. When asked, he could not describe the schoolhouse across the way nor the arrangement of the streets, and this not due to lack of aural perception apparently. There was a variable inability to tell the use of objects, very often an absolute ignorance. For example, one day a key was held up; he could not tell what it was or its use, and when put into his hands he was helpless; an attempt to draw it on paper was also a failure. He once named a watch correctly and immediately afterward called a knife a watch; he could not tell its use, but could use it. A later examination showed less of this particular power even. In showing me the use of a small hand mirror he took out a pencil and began to write on it. I think he had just been using a pencil. The use of a chair, stove, trousers and money were unknown. His wife said that at times he did not recognize her and that he made odd mistakes, trying to drink out of the sugar bowl and salt cellar, dipping his toast into the jelly tumbler instead of his coffee and then eating without apparently noticing his mistake, and once mistaking his hat for his coat and trying to put it on over his arm. Hearing usually set him on the right track; touch sometimes failed. Salt was readily recognized when tasted, though wholly unknown by sight.

He could speak voluntarily, for the most part well, but often forgetting words or stopping short, having the whole mental picture of what he wished to say vanish. He had spells of wandering off in his talk to the scenes of his past life, applying them to the present. He could not speak words read, that is, he could not read aloud. Here again some modification of statement must be made, though a few letters or figures and a word or two were all he was at any time able to recognize. He could write voluntarily a little. The best example of this is shown on the paper dated January 23d, when he wrote his own name and recognized it afterward. The power of writing to dictation was limited in about the same way; the ex-

¹ Read before the American Ophthalmological Society at Washington, May 3, 1900.