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LETTERS

ON THE

MEDICAL DEPARTMENT

OF

LIFE ASSURANCE.

BY

HORACE DOBELL, Esq.

[Reprinted from the MEDICAL TIMES AND GAZETTE, with Additions.]

LONDON :
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1854.

LETTERS

MEDICAL DEPARTMENT

LIFE ASSURANCE

HORACE DOBELL, Esq.

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THE MEDICAL EXAMINATION
OF
LIVES FOR ASSURANCE.

LETTER I.

THE Directors of a London Life Assurance Company having desired me to revise the Examination Papers hitherto employed by them for the Reports of their Medical Referees, I have advised them to adopt the following form, and to employ the same in all cases, whether it is to be filled up by the Company's own Examiner in London, by a provincial medical referee, or by the ordinary medical attendant upon their Assurer; simply directing, that when the life intends to appear before the London Examiner, the questions printed in *italics* should be left for him to fill up. The advantages of this uniformity in the reports will, I think, be self-evident to those interested in Life-office practice. I have, also, particularly advised, and this appears to me to be of great importance, that the duty of estimating the value of the life should in all cases devolve upon the London Medical Examiner of the Company—that it should never be entrusted to any other person. This will account for the minute detail introduced into my proposed examination; for to carry out such a plan effectually, the reports obtained from the provincial referee or from the assurer's general attendant, should consist of a systematic collection of facts, connected with the family and personal history of the life, of those, also, which require examinations inconvenient at a public office; and where the assurer does not intend to appear before the London examiner, the results of a complete personal examination must be included; thus presenting the medical officer who has to value the life with the data necessary to a correct estimate.

PROPOSED EXAMINATION PAPER.

THE DIRECTORS ARE CONVINCED THAT THE VALUE OF A MEDICAL REPORT WHOLLY DEPENDS UPON ITS BEING ACCURATE AND COMPLETE; WHEN SUCH IS THE CASE, THEREFORE, THEY WILL HAVE MUCH PLEASURE IN REMITTING A FEE.

Name ?

1. If rejected by any other office? When ?
2. If assured in any other office? At what additional premium ?
3. Situation of dwelling ?
4. Occupation or profession ?
5. Age next birthday ?
 - a* The degree of greyness of the hair, and its natural colour ?
 - b* If an arcus round the cornea ? (*) If slight or well-marked ?
6. General appearance ?
 - a* Configuration ?
 - b* Height ? *c* Weight ? If increasing or decreasing ?
 - d* Which parent generally considered to be resembled in face ?
 - e* " " " " " " " " " figure ?
7. If fulness of habit ?
8. Habits? *a* Present ? If temperate ? If active ?
 - b* Past ? If temperate ? If active ?
9. Father ? *a* If alive, age ? Health ?
 - b* If dead, at what age ? Cause of death ? (†)
10. Mother ? *a* If alive, age ? Health ?
 - b* If dead, at what age ? Cause of death ?
11. Brothers ? *a* Living, ages ? Health ?
 - b* Dead, at what ages ? Causes of death ?

* The true arcus is separated from the sclerotica by a slight zone of more transparent cornea.

† It is desirable that the medical examiner should explain to his patient, that any indefinite statement as to the cause of death of near relatives is liable to be construed by the Directors into a tacit acknowledgment of death from some cause unfavourable to assurance: and that, when death is said to have occurred in childbirth, some further particulars of the remote and immediate causes of death must always be given.

12. Sisters? *a* Living, ages? Health?
b Dead, at what ages? Causes of death?
13. Have any and what relatives died of—
a Consumption?
b Insanity?
c Apoplexy?
d Disease of the brain?
e Disease of the heart, or vessels?
d Disease of the stomach, or liver?
e Cancer, or tumour? (Of what kind?)
f Rheumatic fever?
g Gout?
14. Are any and what relatives, living or dead, suffering now, or have they suffered, from—
a Consumption?
b Insanity?
c Apoplexy?
d Disease of the brain?
e Disease of the heart, or vessels?
d Severe disease of the stomach, or liver?
e Cancer, or tumour? (Of what kind?)
f Gout?
g Rheumatism? If severe?
15. If the subject of this report has had any illness of importance? When?
16. What? *a* If rheumatism or rheumatic fever?
b If gout?
c If a fit, of what character?
d If insanity?
e If any head affection, what?
f If bronchitis?
g If any chest affection, what?
h If spitting of blood? How much? How long?
17. If subject to *a* Fainting?
b Headache (at what part of the head?)
c Giddiness?
d Singing in the ears?
e Dyspepsia?
18. *Condition of the sight?*

19. *Condition of the hearing?*
 20. *If the intestinal functions are regular and healthy?*
 21. *If piles?*
 22. *If fistula or stricture?*
 23. *If hernia? (Is a truss constantly worn?)*
 24. *If any suspicion of diseased kidneys or bladder?*
 25. *If stricture?*
 26. *If the urine is coagulated by heat and nitric acid?*
 27. *If a careful palpation of the abdomen discovers any tumour?*
- What?
28. *Pulse?*
 - a Intermittent or regular?*
 - b Weak or forcible?*
 - c Frequent or not?*
 29. *Heart's action?*
 - a Intermittent or regular?*
 - b Weak or forcible?*
 - c Frequent or not?*
 30. *If anything unhealthy in the character of the heart's —*
 - a Sounds, examined by the stethoscope?*
 - b Impulse?*
 - c Position?*
 31. *If any signs of impeded circulation in the chest?*
 - a Cough or expectoration?*
 - b Shortness of breathing?*
 - c Spitting of blood?*
 - d Fulness of the veins of the neck and face?*
 32. *The general development of the chest?*
 - a Subclavian regions?*
 33. *If any inequality or insufficiency in the expansion of the two sides of the chest during inspiration?*
 34. *If anything unhealthy in the percussion and stethoscopic sounds of the chest?*
 - a If the regions of the upper lobes of the lungs are equally and sufficiently resonant on percussion?*
 - b If the expiratory sound is unnaturally prolonged in the upper lobe of either lung, or anything else unhealthy in the stethoscopic sounds?*
 - c If rhonchus or sibilus is audible about any and what portions of the chest?*

If a female, in addition to the above :—

35. If the careful palpation of the abdomen discovered any ovarian disease ?

36. Uterine functions at present ? In general ?

If married ?— How long ?

37. Number of children ? How many now living ?

38. Any miscarriages, or other peculiarities occurring during gestation ?

I, _____, declare that the foregoing report was made by me after a careful examination of the patient, during which the chest was ausculted and percussed, the abdomen examined by palpation, and the urine analysed.

Signature.

Date.

NOTE.—The questions printed in italics need only be filled up when the life is not about to appear personally before the London examiner

I am aware that there are cases in which such a report as the proposed examination would afford, might appear unnecessarily detailed and inquisitive, but that is an error in a safe direction. The same list of questions must be used for all classes of lives, and the medical report reaches its maximum of importance when it concerns a life most difficult to value. It is, therefore, to such a case that the examination paper should be specifically adapted, and it is precisely in such a case that the ordinary medical reports are singularly inefficient—they do not afford information either sufficiently exact or sufficiently ample to form the basis of a correct opinion. In proposing so minute an examination, I am actuated by the desire to assist not only the Assurance Company, but also the assurer; for, in the first place, a Company which should, in the present day, decline all but the best lives would find it difficult to maintain a firm footing among its numerous competitors, and in accepting inferior lives, its profits will depend upon the accuracy with which the medical examiner estimates their expectation term. And, in the second place, the best lives—those who enjoy the most uninterrupted health, are they who feel it least incumbent upon them to provide against death; whereas, the inferior lives—those who are painfully

reminded, by the death of relatives, and by their own imperfect health, of the slight tenure by which this life is held, are the most anxious to provide in time for them whom unexpected death might leave destitute. These constitute the class of persons, therefore, amongst whom the Directors of Assurance Companies can most successfully extend their business, and for whom the humane physician will be most anxious to provide.

I have taken pains to arrange the questions in an order and apposition which I have found most convenient in conducting the examination of the patient, and which, assisted by marginal notations of the important points, will enable the medical officer to make a rapid comparison of the facts recorded when forming his opinion upon the case; and I have endeavoured so to express the questions that they will call forth concise and unmistakeable answers. I may direct attention to the following numbers as indicating the principal questions which are either new or modified:—The answers to *a* and *b* of figure 5 may in course of time afford data from which conclusions can be drawn, calculated to make an important diminution in the mortality of the assured, from apoplexy, softening of the brain, aneurism, and other diseases connected with morbid changes in the coats of arteries; and when carefully compared with other portions of the report, they will, even now, assist in estimating the expectation of life. Those who are acquainted with the papers of Mr. Barlow in the *Medical Times and Gazette*, will not question the importance of these interrogatories; and those who are not, can scarcely be qualified to judge. In that most important portion of medical testimony for the purposes of Life Assurance which concerns the family predispositions to disease, the questions *d* and *e* of figure 6 will lead to information indispensable to a systematic prosecution of the inquiry. These questions have, singularly enough, been heretofore omitted from all examination papers; yet the series of facts which they reveal are the elements of the most interesting truths. This I hope to find time to demonstrate satisfactorily on some future occasion. Those who are practised in the examination of lives for assurance will feel the importance of the note affixed to figures 9, 10, 11, 12; I may refer also to the particular items of figure

13. The whole of the questions under figure 14, have, I believe, been overlooked up to this time, thus affording an opportunity for serious deceptions on the part of the assurer, and certainly omitting facts which may be of the most imminent importance to the efficiency of the report. For no relative may yet have died of any hereditary disease, although several may be rapidly hastening to their graves. There are some modifications under figures 16 and 17. Figures 18 and 19 are, I believe, quite new, although in a case of difficulty these questions may draw forth the missing links in a chain of evidence. Under the very important headings of the pulse and heart, will be found increased details, and, I think, a convenient apposition.

Question 26 I have been unable to find in any other examination paper, yet we cannot doubt that important information may be involved in the answer, and the statistics of death amongst the assured, show a considerable loss under the head of diseased kidney. Both this and figure 27 may readily be answered by the medical attendant of the assurer, and by the examination proposed it is most probable that the serious losses under the denomination of organic diseases within the abdomen may be diminished. I have but recently had an opportunity of observing a case in point, which impressed the importance of this question upon my mind. A patient consulted me, complaining of ordinary dyspeptic symptoms of no great severity, and easily to be accounted for by his sedentary occupation, that of historical engraving. On learning that he had been already treated by several respectable practitioners without relief, I was lead to make a careful examination of his abdomen, and discovered a tumour about the pylorus, which soon afterwards assuming an active state, ended his life the other day. Examination after death disclosed an extensive deposit of cancer in the pylorus, stomach, and omenta, which had evidently been making progress for a considerable time, but had produced no marked symptoms of organic disease until within a few days of his death.

The apposition of the questions under figure 31, is, I think, important, even at the risk of a little repetition; and the explicit questions concerning the examination of the lungs, are intended to enforce a more careful attention to this point, on the part of

provincial referees, and to elicit a more intelligible set of answers than can be expected from a general form of interrogation.

Having thus briefly directed attention to the principal items of the examination paper, I will not further trespass on your space this week, but hope that you will shortly favour me with room for another letter, in which I propose to bring forward some further points connected with the Medical Department of Life Assurance.

I am, Sir,

Your obedient Servant,

HORACE DOBELL.

LETTER II.

SIR,—I propose, in this communication, to direct attention to some further precautions which, I think, may be adopted with advantage both to the Assurer and to the Assurance Company. The profits of Assurance Societies necessarily depend upon the proportion in which their assured lives reach or exceed their expectation term; the interests of the assurers lead them to desire that the tables of premiums shall be calculated at the lowest possible rate, while the liability to unexpected deaths, at very early periods after assurance, renders it necessary that the rates of premium required from the sound lives, shall be high enough to pay for the casualties among those that are unsound.

These, then, are the great disiderata to both parties concerned: To enable the directors, First, To charge a proposed life at a rate of premium, calculated, not for the age which it has actually reached in years, but for that to which it has attained in comparison with the healthy expectation term. Secondly, To reject those lives of which the liabilities to death will not admit of calculation; and, Thirdly, To avoid those premature deaths from acute or other diseases, which no admission examination can possibly foretell.

The first two of these are provided for in the preliminary examination of the life, already proposed. It is intended by

that report to collect such an assemblage of facts, connected with the family history and personal condition of the assurer, as shall enable a skilful and experienced medical officer to form an accurate estimate of the value of the life; and here let me observe, that it is comparatively an easy and simple matter to reject all but the most obviously good lives. The skill and intelligence of the medical officer will be displayed when he discriminates between the life which is *apparently* unsound, but which may safely be accepted at the ordinary rate, and that which is apparently sound, but *intrinsically* hazardous; and in the judgment with which he weighs the evidence, and determines the expectation term of an unsound life. The medical examiner who adopts the former course will certainly reduce to the lowest rate the mortality tables of his assurance office; but that will only be done at the sacrifice of a very large amount of business, which it might have safely and profitably transacted, while he will have refused the benefits of Life Assurance to the class of persons, referred to in my last letter, who are most anxious, at any expense, to assure their families against the contingency of poverty.

With respect to the third desideratum, "to avoid those premature deaths from acute or other diseases, which no admission examination can possibly foretell." This is the class of deaths from which the funds of an Assurance Company, when its directors have selected a skilful medical examiner, have most to suffer. These deaths may occur at any period of life, and are many of them most frequent at an early or middle age. Hence their serious importance to a company; for it is clear that any cause of death which carries off twenty lives at the age of sixty; will, *cæteris paribus*, be less serious to an office than that which deprives them of ten at the age of thirty; yet there is, at present, no attempt made to diminish this important item in the mortality of the assured. According to the interesting investigation of the deaths in the Standard Assurance Company, lately published by Dr. Christison,* and the Statistics of the

* An Investigation of the Deaths in the Standard Assurance Company. By Robert Christison, M.D., V.P.R.S.E., &c.—*Monthly Journal of Medical Science*, August, 1853.

Scottish Widows' Fund, also recently published by Dr. Begbie,* this class of deaths assumes a very prominent position. Among 293 deaths which occurred to the Standard during five years, no less than 38 were from gastric and typhus fever; and among 690 deaths, from all causes occurring to the Scottish Widows' in 7 years, 65 deaths were due to fever. "It is not alone the absolute mortality from fever among the assured," observes Dr. Christison, "which renders this disease a serious source of loss to Assurance Companies. For, in the first place, it carries off principally the young and middle aged. Of the thirty-eight cases three died between their 20th and 30th years, eight between their 30th and 40th, nine between their 40th and 50th, eleven between their 50th and 60th, and only four between their 60th and 70th, and three after 70 years. But, secondly, the amount of loss will appear still more distinctly on comparing with their expectation of life the number of years they actually survived entry. Not one of the thirty-eight exceeded his expectation term. Only one attained it. Conjointly they survived 160 years, while the conjunct expectation of life was 990 years; that is, each survived, on an average, only 4·2 years instead of 26, or scarcely a sixth part. And, thirdly, it appears that fever has no respect even for the most eligible lives, but rather assails them in preference to others." A similar experience is recorded by Dr. Begbie. "In regard to fever," he says, "the most fatal of all causes, we know that no care or foresight can effectually guard against loss from this source." And among the deaths from fever in the Scottish Widows' Report, the large majority took place anterior to the 60th year, and of these 33 were before the 50th.

The next disease for consideration under this heading is rheumatic fever. In respect to this, I may observe, in passing, that since the hereditary transmission of the rheumatic diathesis appears to be well established, the admission examination, when

* Medical Statistics of Life Assurance—Observations on the Causes of Death among the Assured of the Scottish Widows' Fund and Life Assurance Society, from 1846 to 1852. By James Begbie, M.D., F.R.S.E.—*Monthly Journal of Medical Science*, August, 1853.

conducted in the manner already directed, and its results stringently acted upon, will limit the liability from rheumatism amongst the assured. But it is very certain that no family history or personal examination can foretell a large proportion of the attacks of rheumatic fever, to which the inhabitants of this country are subject, and which occur as one of the many effects of sudden transitions of temperature. Rheumatism and rheumatic fever would be comparatively unimportant diseases, if the heart could be saved from the damages it so frequently sustains during their attack. In the seven years' mortality of the Scottish Widows' Society, only one death is recorded from uncomplicated rheumatism, and during the five years' account of the Standard not one death occurred from this cause. But when we turn to the headings, "Disease of the heart and adjacent great vessels," "Apoplexy," "Dropsy," and consider the intimate relation which exists between these diseases and previous attacks of rheumatic fever, we cannot regard with too serious attention the evils resulting from this cause. In the Report of the Standard Assurance Company, there are sixteen deaths referred to diseased heart, and five to diseased blood-vessels; "And if it be considered," says Dr. Christison "that several of the deaths ascribed to dropsy were really occasioned, in all probability, by disease of the heart, we may safely increase the number to twenty-six, or 9 per cent. of the whole." * * *

"The whole conjunctly outlived acceptance 193 years, instead of 467 years, their conjunct expectation of life." In the Scottish Widows' Report, the deaths under this class include 66, or $9\frac{1}{2}$ per cent. of the whole; and of these Dr. Begbie remarks, "The morbid alterations of the heart chiefly noticed are hypertrophy, or enlargement, principally of the left ventricle; dilatation, chiefly of the right chambers; valvular imperfections of the mitral and aortic orifices; ossification of the coronary vessels; and fatty degeneration of the muscular fibre of the heart." * * *

"Many of the subjects of these diseases had previously laboured under rheumatic fever, and several were known to have been affected with gout."

Apoplexy accounts for no fewer than twenty-six deaths, and palsy for fifteen in the Standard; while in the Scottish

Widows' Fund the mortality from these causes reaches its highest rate ; 150 deaths, or $21\frac{3}{4}$ per cent. of the total mortality, having been due to diseases of the brain and nerves, exciting this remark from Dr. Begbie : "The influence of gout and acute rheumatism on the heart and blood-vessels, and the injurious effects of intemperance as aiding in engendering a pre-disposition to cerebral disease, is still a subject too little considered in conducting the business of Life Assurance ;" of many of these deaths "it was *ascertained* that they had been preceded by attacks of rheumatic fever." Indeed, the fatal series of changes, commencing with rheumatism, and terminating in death, by diseased heart, dropsy, or by apoplexy, are too sadly familiar to medical men in the present day, to require, in this place, a word more on the subject.

From pleurisy, hydrothorax, and pneumonia, Dr. Begbie records 29 deaths ; and from the same causes 20 deaths occurred to the Standard. Among these 20, those who died from pneumonia survived acceptance, one with another, 113 years, instead of 310, their conjunct expectation of life ; those from pleurisy and hydrothorax, lived 45 years after acceptance, instead of 135, or exactly one-third of their expectation term ; and of those in Dr. Begbie's list, 18 occurred before reaching the age of 60.

Without occupying further space by the multiplication of details, I think that those already entered into must have sufficiently illustrated the importance, both in number and description, of the deaths among the assured from "causes which no admission examination can possibly foretell."

It is obvious that no means can be adopted by which this class of deaths can be entirely avoided, but it is not so clear that their numbers cannot be diminished ; and, if we consider the loss which an Assurance Company sustains when a policy of considerable amount becomes a claim shortly after it is effected, or, even a few years before the completion of the expectation term of the assurer, it is evident that even the smallest decrease in this class of deaths is of the very highest importance to a company.

In the earlier days of Assurance Policies they were made use of almost exclusively by the wealthy, and by those moving in

the higher ranks of life ; by persons who were likely, in case of serious illness, to procure the best medical advice that could be obtained. The case is altered now ; from various causes Life Assurance has now become general among all classes, and especially among the middle classes, who constitute the large majority of the assurers of the present day. They are also those (next to the lower classes, who do not so often assure) who are most exposed to the causes of those diseases of which I have been speaking.

The very serious question to which I wish to call particular attention in this letter may be thus briefly stated. Is the mortality among the assured from rheumatic fever, pneumonia, pleurisy, hydrothorax, dysentery, diarrhœa, bronchitis, affections of the heart, of the nervous system, and from fever, reduced to the lowest rate that is practicable in the present state of medical science ? In other words, do the policy-holders who become the subjects of diseases, which, in the experience of two Assurance Companies, have accounted for the worst half of 983 deaths, receive the most enlightened and judicious medical assistance that can be obtained in the neighbourhood in which they reside ? From those who are qualified to judge, the negative answer to this question, will, I fear, predominate. The degrees of inefficient medical treatment are, of course, various, but no Directors of an Assurance Company can say, when they accept the risk of some thousands of pounds sterling upon the persistence of a single life, that their policy-holder may not, within the same year, become the subject of rheumatic fever or pneumonia, with a homœopathic practitioner to stand by his bedside, the impotent witness of organic changes which may shortly terminate life. Instances less striking, but perhaps equally serious to society, in which health is permanently damaged, or life prematurely lost by quackery, indefinite diagnosis, and ill-directed medical treatment, are but too familiar to us all. I am acquainted with a gentleman who has recently suffered from severe rheumatic fever ; but, although attended by a surgeon of excellent local reputation, in a large provincial town, he informs me that during the entire illness his heart was neither examined nor inquired after. It is but a few days since I myself saw a young lady, who was being treated for simple debility, and ordered to drink freely of wine,

in whom the lower lobe of the right lung had advanced to hepatisation, and that of the left was rapidly assuming a similiar condition; while she respired at the rate of sixty inspirations per minute. Some months since, I saw a gentleman, aged 39, who was supposed to have been suffering for a week from influenza, and whose friends had been informed shortly before my seeing him that he had no serious disease. Within six hours he became a claim upon a London Assurance Office for a considerable amount, having died of gangrene of the lung, following pneumonia. It would be invidious to multiply illustrations of a fact familiar, as it is lamentable, and worthy the serious consideration of all those interested in the assurance of life.

In concluding, may I venture to ask for any sufficient objection to the following proposition? viz., that an Assurance Company should appoint the most skilful physician in every city and town where it has done business to be its OWN CONSULTING MEDICAL MAN; and that it should form part of the agreement entered into with the assurer, that in case of his suffering severely from fever, acute rheumatism, serious chest, head, or bowel affections, he shall be obliged to have at least one consultation between his own medical attendant and the consulting medical officer of the Assurance Society, at the expense of the Company. If this plan were adopted, there is reason to believe that the admission to a life office, might, in many cases, become a veritable assurance of life, as well as a provision, in case of death.

I am, Sir,

Your obedient Servant,

HORACE DOBELL.

LONDON, Dec. 9, 1853.

NOTE.—Since the appearance of the proposed examination in the columns of the *Medical Times and Gazette*, several professional friends have suggested that ladies might object to the examinations required by Questions 26, 27. As the same objection may occur to other readers, I beg to add that if the proposer appears before the London Examiner, he may, by less direct interrogations, distinguish the cases in which such examinations are required; in these, and in those, also, where the Assurer does not appear at the London Office, the private medical attendant will be able to supply the necessary information without difficulty.





