

THE CAUSES OF CANCER.

SIR,—I have worked for some years at the question of the etiology of cancer, and, with this object in view, far and wide in the broad field of literature I have searched and examined. I published a paper on cancer in the JOURNAL in April 1883. In August of the same year, I suggested, in a letter to the JOURNAL, that cancer should form one of the subjects of inquiry by the Collective Investigation Committee; and I am glad to see that, in the able hands of Mr. Butlin (see JOURNAL, July 11th, p. 5), there is now some likelihood of the matter being thoroughly inquired into.

In criticising my conclusion that the fecundity of women and the prevalence of high nervous tension should be classed as strong predisposing causes of cancer, Mr. Butlin states that there is absolutely no proof at present that very fruitful women and highly nervous people are "peculiarly" liable to cancer. Now, statistics which I have quoted, collected by Moore, showed that cancer of the uterus was most common in women who had borne fine children, and Scanzoni determined the same fact; and, with regard to the question of nervous persons, it is generally admitted by surgeons that a close connection exists between mental shock and the appearance of mammary cancer. This fact is frequently referred to in the pages of surgical text-books. It does not, therefore, seem extravagant to hold that nervous persons, in one respect at least, are more liable to cancer than others whose nervous systems possess more stability. Mr. Butlin may, of course, have some reasons for refusing to accept the applicability of these statistics to the case in point, but in my opinion they seem to be conclusive enough; and there is, moreover, the concurrent testimony of Birkett, West, and Velpeau, of the special liability of the breast and uterus to undergo malignant degeneration in married women who have borne children. Mr. Butlin, however, qualifies his criticism by the insertion of the phrase "at present," and here I am quite in accord with him, inasmuch as the statistics above referred to cannot be described as having the freshness of youth; indeed, according to my reading, there have been no published observations dealing with this matter for many years; and, bearing this fact in mind, I would suggest that the Collective Investigation Committee might, with advantage, institute an inquiry based upon the relative frequency of cancer in the case of married and unmarried females.

Turning, now, to the discussion of the hereditary theory of cancer, I think there is no statement which cannot be disposed of showing that cancer is in any respect more hereditary than, for instance, small-pox, scarlet fever, or measles. In both cases, nothing more is transmitted than a predisposition to suffer from the diseases in question. A man is predisposed to scarlet fever by virtue of his humanity; but this predisposition—which, of course, may vary in degree—may or may not become manifest. He may never be exposed to the infection, or, if exposed, may pass scatheless through the risk. A man is not the subject of scarlet fever, in spite of the predisposition to the disease which he may inherit, until the appearance of the usual symptoms by which it is characterised; neither is he the subject of cancer, in any sense whatever, in spite of cancerous progenitors, until some organ or part becomes the seat of a malignant growth. Therefore, it is impossible to speak of cancer as being hereditary in the usual acceptance of this term. Each man and woman inherits a predisposition to become cancerous after a certain age is reached, and this is largely under the influence of certain causes which, perhaps, it is true to describe as exciting. Similarly, then, as scarlet fever does not arise *de novo*, and without the presence of the germ of this disease, so the predisposition to cancer, of degrees of which it is quite possible to conceive, will presumably be found not to exhibit any activity except under the influence of one or more causes with which it invariably seems to be so closely allied. Thus it seems rational to conclude that, even in persons whose cancerous disease is said to be hereditary, some amount of care in the avoidance of deleterious habits might have had the effect of maintaining the predisposition to the disease in a condition of really masterly inactivity. For instance, Dr. Stallard states that in San Francisco carcinoma of the stomach is very predominant amongst the male population; and he attributes this result to a very likely cause, the prevalence of the practice of drinking "cocktails" in the morning, together with bitterns in the middle of the day, and punches at night. Now, in view of this, a man in San Francisco might not suffer from cancer of the stomach if he had strength of mind enough to deny himself what are called "cocktails." It is evident, however, that any inquiry into the whole question of cancer is likely to yield good results which deals with the combination of circumstances under which the disease seems most prone to occur. It is probable that we are a very long way off determining in what cancer as a disease consists; but there is no disputing the fact that we have certain knowledge of many of its causes, or at least of the conditions under which it commonly arises. We are sure, for instance, of the connection between smoking and cancer of the lip, and soot and epithelioma of the scrotum; and in these cases it is evident that some perversion of nutrition is excited by the stem of the pipe on the one hand, and the soot on the other. But, if physical agents can act as exciting causes of cancer, there is no apparent reason why morbid conditions should not lead to the same result. And, from this point of view, it is not improbable that eczema of the nipple and leucoma of the tongue owe their precancerous connection to the fact, that the chronic inflammatory changes with which they are associated act as exciting causes of cancer in organs for which the disease exhibits a marked predilection.

I may add, in conclusion, that a few months ago the idea presented itself of examining the records of all the European States, with the view to "an inquiry into the comparative mortality from cancer in the European States." But some hours spent in the library of the Statistical Society exposed me to the disappointment of finding that, in consequence of the meagre details which are furnished to this country of the mortality-statistics of other countries in Europe, the collection of facts for the purpose would be a matter of considerable difficulty. In time, however, I hope to be able to do something in this direction.—I am, sir, yours faithfully,

H. PERCY DUNN.

THE FIRST APPENDIX TO THE "MEDICAL DIGEST."

SIR,—Considering that during the past four years much has been written on medical science, it has been suggested that it would be acceptable to many if the first appendix to the *Medical Digest* were to be issued at the end of 1885, instead of at the close of 1886, as originally proposed.

I wish upon this point to elicit through your JOURNAL the opinions of those interested in the subject. A post-card addressed to myself, or to the publishers, Messrs. Ledger, Smith, and Co., St. Mary Axe, E.C., expressive of such opinions, and noting, at the same time, any needed corrections in the edition of 1882, will oblige, yours truly,

RICHARD NEALE, M.D. LOND.

60, Boundary Road, South Hampstead, N.W.

PRACTICE IN NEW ZEALAND.

The Edinburgh Medical Missionary Society's quarterly paper publishes the following paragraph.

OPENINGS FOR CHRISTIAN PHYSICIANS IN NEW ZEALAND.—The following extract from a letter, written from Waipukurau, near Napier, New Zealand, will, we hope, be read by some young Christian medical men who are on the outlook for a useful, as well as inviting, sphere in which to practise their profession. We shall be glad to hear from any such. Our friend writes:—

"I wish some steady young doctors would come out to this part of the colony. It would be a great benefit if these doctors had some regard for religion. At present, we are here in need of a medical missionary, or a medical man who would occasionally conduct religious services. His station would be, at present, an outlying one, where there is no medical man within 45 miles, and where a minister preaches only about four times a year. The district is well able to give a suitable man £300 a year. There is another district in the Wairarapa, near Wellington, where the people are prepared to give £300 yearly, in addition to his practice, for a good Christian medical man; and between his practice and the amount promised, he would have at least £500 a year. If you know of a young medical man who has a character for piety, or even a regard for religion, you would greatly oblige me by bringing these openings under his notice. In this country, we need men of Christian principle."

The address of the Edinburgh Medical Missionary Society is 56, George Square, Edinburgh.

COMMUNICATIONS, LETTERS, etc., have been received from:

Mr. W. Philipson, Newcastle-on-Tyne; Mr. G. Cartland, Windsor; Mr. D. Bradley, Dudley; Mr. W. H. Omerara, Carlisle; Mr. W. J. Sansbury, London; Dr. W. R. S. Jeffries, Chatham; Mr. Furness Simmons, London; Mr. W. P. Y. Bainbridge, Droitwich; Dr. W. Bruce, Dingwall, N.B.; Dr. Styrap, Shrewsbury; Dr. J. W. Bullen, Bandon; Messrs. Sampson Low and Co., London; Messrs. Burroughs, Wellcome, and Co., London; The Secretary of the Royal College of Physicians, London; The Rev. W. G. Hazlerigg, Wiesbaden; Mrs. S. Aldridge, Dorchester; The Secretary of the Medical Faculty, University of Aberdeen; Mr. A. Gubb, London; Mr. J. F. Dixon, Sevenoaks; Dr. Petch, York; Dr. R. Bowes, Oldham; Mr. A. Stewart Norman, Havant; Dr. A. Tucker Wise, Maloya, Switzerland; Mr. Wm. Garner, London; Dr. Maxwell, Sandgate; Dr. A. Sheen, Cardiff; Mr. C. T. Mitchell, London; Dr. R. Pearson, London; Dr. Leech, Manchester; Dr. G. Owen Rees, London; The Secretary of the Cambridge Scientific Instrument Company; Dr. Robinson, Dublin; Our Glasgow Correspondent; Dr. G. E. P. Nixon, Shrivensham; Dr. Jeffreys, Chesterfield; Dr. Chalmers, London; Mr. C. R. Straton, Wilton, Salisbury; Dr. R. Wade Savage, London; The Rev. G. Howard Wright, London; Mr. J. Hussey Williams, Southampton; Dr. A. Hegg, London; Mr. F. P. Atkinson, Surbiton; Mr. Wm. Barlow, Bolton; Dr. Broadbent, London; Dr. E. E. Moore, Downpatrick; Mr. H. J. Masters, Leicester; Mr. H. T. Tomlinson, Nuneaton, Warwickshire; Mr. W. H. Withington, Manchester; Our Edinburgh Correspondent; Mr. J. P. Philpot, Parkstone; Dr. G. C. Kingsbury, Blackpool; Dr. A. Edis, London; Mr. E. Freeman Morris, Leeds; Dr. W. S. Robertson, Port Said; Mr. T. C. Blanchard, Linares, Andalusia; Dr. Monckton, Maidstone; Mr. T. W. Cook, Exeter; Mr. R. Rieley, Spennymoor; Dr. E. Markham Skerritt, Clifton; Mr. W. J. H. Wood, Boston; Messrs. Mawson and Swan, Newcastle-on-Tyne; Our Correspondent in Cairo; Mr. R. J. Gilbert, London; Our Aberdeen Correspondent; Dr. A. Ambrose, Bournemouth; Mr. R. S. Anderson, Spennymoor; Mr. Percy Pope, South Hayling; A Member; Mr. E. Sheaf, Newcastle-on-Tyne; Mrs. Timmins, Carmarthen; Mr. J. F. Maclaren, Suakin, Egypt; Dr. J. Sinclair Coghill, Ventnor; Dr. R. Barnes, London; Dr. Murrell, London; Dr. Poulain, London; Dr. McKendrick, Glasgow; Dr. T. Maxwell, Woolwich; Mr. H. D. Palmer, Colchester; Mr. C. E. Furslow, Birmingham; Surgeon-Major Baker, Salford; Dr. J. S. Langdon, Seville; Dr. D. C. Black, Glasgow; Mr. S. Osborn, London; Mr. James Dixon, Dorking; Dr. T. Harris, Manchester, etc.

BOOKS, ETC., RECEIVED.

A System of Practical Medicine by American Authors. Edited by W. Pepper, M.D., assisted by Louis Starr, M.D. Vol. II. General Diseases (continued) and Diseases of the Digestive System. London: Sampson Low, Marston, Searle, and Rivington. 1885.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE "BRITISH MEDICAL JOURNAL."

Seven lines and under	£0 3 6
Each additional line	0 0 4
A whole column	1 15 0
A page	5 0 0

An average line contains eight words.

When a series of insertions of the same advertisement is ordered, a discount is made on the above scale in the following proportions, beyond which no reduction can be allowed.

For 6 insertions, a deduction of	10 per cent.
" 12 or 13 "	20 "
" 26 "	25 "
" 52 "	30 "

For these terms, the series must, in each case, be completed within twelve months from the date of first insertion.

Advertisements should be delivered, addressed to the Manager, at the Office, not later than noon on the Wednesday preceding publication; and, if not paid for at the time, should be accompanied by a reference.

Post-Office Orders should be made payable to the British Medical Association at the West Central Post-Office, High Holborn. Small amounts may be paid in postage-stamps.