postulated) operating on each individual cell in the growing portions of both the primary and secondary tumours? (Here we have the crux of the whole problem. My own view is that a parasite is the cause, which by its toxin provides the continuous irritant. But this is opposed to the findings in the report.) What hints even are given with regard to prevention, mitigation, or cure?

With respect to Dr. Charles Walker's criticism of my remark as to the conversion (not evolution) of a carcinoma into a sarcoma, is he justified in his analogy between the epithelium of the *Triton* and that of *Homo*? Granting that in the lower vertebrates the individual somatic cells can retain the power of producing all the tissues of the body, has this ever been proved in the case of mammals? I know of no verified recorded instance of the human crystalline lens, when removed, being recreated by a growth of mesoblastic cells. Certain curious intraocular epithelial growths have been observed, but these, when submitted to expert examination, have been ascribed to foci of implanted epithelium (traumatic in origin). Moreover, there is surely a distinction to be drawn between the highly specialized epithelium of *Homo* and that of those *Saurian* ancestors from whom, both in morphological differentiation of structure and physiological division of labour, he is separated by a few millions of years!

In conclusion, allow me to reiterate my original thesis: 30,000 people in England and Wales annually die from cancer, and I plead for the systematic clinical investigation of these cases on the lines laid down in my first letter.¹

Inasmuch as the incidence of cancer is *crescendo*, it behoves the whole profession to awake to its importance, and to petition the Government for an annual subsidy wherewith to carry out such investigation. This need not in any way conflict with the work being done in the cancer research laboratories; in fact, it would be merely complementary to it.—I am, etc.,

London, W., Jan. 15th.

KENNETH CAMPBELL.

THE CAUSE OF APPENDICITIS.

SIR,—Numerous reasons have lately been given to account for the undoubted increase in cases of appendicitis. Some suggestions have been feasible, some far-fetched, and some comic. I cannot remember reading any suggestion that the cause might be in the appendix itself; I have for some time considered it to be so.

Macalister in his *Treatise of Human Anatomy* calls the appendix "the degenerated long ancestral caecum." In herbivorous animals that require a large intestinal surface for absorption the appendix is represented by an enormous caecum, while in some Carnivora I believe the caecum is absent. This "long ancestral caecum," not being of any use, has, in process of time degenerated into the appendix as we now know it. The appendix of to-day is of no use, except to the surgeon (and, according to some, the colon is not much better); that being so, why should this degeneration have ceased? I do not believe that it has. This slow process has at last commenced to result in such an alteration in the mucous membrane and its secretion, muscular coat, or canal, that the appendix has become much more liable to attacks from the myriads of organisms in the intestines.

Every operating surgeon knows that in the vast majority of cases of acute appendicitis which result in localized abscesses, gangrene, or general peritonitis, one or more concretions are found in the appendix. These are, no doubt, the starting point of the acute disease and not the result. I have found a concretion in the apparently healthy appendix of a fine, well-nourished, breast-fed infant of 6 months, who died from acute pneumonia. I am sure that the infant's fearful past, mode of life, or method of defaecation cannot have been the cause of the concretion. These concretions are caused, I believe, by some degeneration of the mucous membrane and its secretion, though, of course, there is some faecal matter in the concretion as well. I do not consider that any change in the mode of living, etc., can have any effect on the number of cases of appendicitis unless it can reduce the number of organisms in the intestines.—I am, etc.,

Wolverhampton, Jan. 3rd.

W. F. CHOLMELEY, F.R.C.S.

SIR,—My suggestion, that the diminished use of alcohol is responsible for the increase of appendicitis, was made, in common with my other suggestions, as an application of the great principle of causation—*post hoc, ergo propter hoc*—discovered by those keen observers of nature, the schoolmen of the Middle Age, and adopted with such striking results by medical practitioners in assigning the causes of disease, especially of appendicitis. The bactericidal powers of alcohol were thrown in merely as a make-weight, and I must admit that in resting the case partly on them I was departing from the grand simplicity of the scholastic canon. Still, testotaters have taught us to appreciate the lethal powers of alcohol, and to recognize how those who use beer and wine, like those who use fuses,

All grow, by slow degrees,
Brainless as chimpanzees,
Meagre as lizards;
Go mad, and beat their wives;
Plunge, after shocking lives,
Razors and carving knives
Into their gizzards.

And, if alcohol has such disastrous effects on such a powerful organism as man, what may it not be expected to do to such a feeble creature as a bacterium? Surely, it must cause the hand of every bacillus to be lifted against its neighbour and so engage them in a fratricidal war that must end like that of the Kilkenny cats.

Since writing my previous letter, another cause of appendicitis that seems irrefragable has suggested itself. For 150 years—from the days of Charles II to the end of the eighteenth century—the wearing of wigs was general, and during the whole of this time not a single case of appendicitis was placed on record. It is only since the use of wigs has been discontinued that appendicitis has increased so much. I know of no case of appendicitis occurring in a judge, and barristers also seem to be immune—at least I have not heard of a practising barrister being attacked. Bishops wore wigs well into the reign of Queen Victoria; and who ever heard of a wigged bishop suffering from appendicitis? I give these illustrations, as well as that of alcohol, merely as examples of the force and conclusiveness of the mode of argument that is in common use to discover the causation of disease.

The University of London has struck out the subject of logic from the examinations for its higher medical degrees, and rightly so; for no doubt the Senate recognized, on the evidence of such discussions as this on the cause of appendicitis, that, in logic, medical practitioners have nothing to learn.—I am, etc.,

London, W., Jan. 9th.

CHAS. MERCIER.

SIR,—The comparative absence of appendicitis among people who use the natural position in defaecation is certainly remarkable.

Dr. Rainsbury, in his letter in the *BRITISH MEDICAL JOURNAL* of January 7th, foresees the possibilities of appendicitis, hitherto rare among colliers, as a consequence of the installation of closet seats.

To my mind, the scarcity of appendicitis among people who use the squatting position may be due to the frequent absence of constipation, and hence of autointoxication and lowered resistance to organisms.

In Egypt, where the majority of people use the natural position, appendicitis is rare; but there, again, constipation is rare; hence autointoxication is rare.

The absence of constipation among the Egyptian people may be due partly to the natural position in defaecation, but is also certainly due to their diet, of which butter forms a big constituent.—I am, etc.,

Guy's Hospital, Jan. 9th.

H. I. SHAHEEN, M.R.C.S.

SIR,—A few years ago there was a discussion in the *JOURNAL* on the alleged epidemicity of appendicitis. Probably by this time almost every one regards the increased prevalence of the disease during the last twenty-five years or so as a fact. My contribution to the discussion was a suggestion that the cause of the increased prevalence was a change in the food habits, not of adults and adolescents but of infants, and to point out that an investigation as to the incidence of appendicitis amongst the more primitive races, who, I believe,

¹ *BRITISH MEDICAL JOURNAL*, December 17th, 1910.