

## Editorial

### THE TREATMENT OF CANCER

There is nothing the medical world would welcome more than the news of a cure for cancer. The discoverer, if he chose, could make an immense fortune. Instead he will probably give it freely to the world. There is, however, no evidence that there is any prospect of so happy an event in the immediate future, and the more our information grows, especially from the experimental side, the less certain such a prospect seems.

It is perfectly proper that everything that offers the slightest possibility of benefiting the cancer patient should be tried, for it is impossible to say from which direction the discovery of a cure may come. But it is probable that mere random experimentation by those not highly trained will lead to no important discoveries. The fact that cancer cells are a real independent life inside the body, just as much as the fetus is, and perfectly adapted to the soil in which they grow, does not seem to be recognized, even by research workers. This ignorance leads to the random injection of all sorts of substances in the hope that some remedy may be blundered upon by the mere exercise of industry.

There is another group which feels that the problem should be attacked from the bottom, and that the more we know about the life of the cell, the more likely we are to learn something about what makes it grow and what prevents it growing. In other words, instead of striking about blindly in the dark, we had better center our investigation of cancer upon the study of normal and diseased cells of all types, as being much more likely to offer a clue.

The highly emotional reaction of the laity to any suggested cure for cancer—and scarcely a week passes that one is not announced—places an obligation on the profession to guard their statements, and not to use this emotional instability as a means of obtaining money or material for extensive human experimentation. It is for this reason that the recent announcement by Coffey and Humber before a scientific society, in California, of their development of an extract of the adrenal cortex for the treatment of cancer, and the escape of this information into the daily press, has been regretted by the leaders of the medical profession.

Though Coffey and Humber have repeatedly said that they are

offering no cure for cancer, only a treatment, the assumption is natural, on the part of the laity, that a cure is offered, and thousands of people have trekked to San Francisco and Los Angeles to obtain something which they assumed was beneficial.<sup>1</sup> After all, what is a treatment? Why travel a thousand miles for nothing but relief from pain, which is the thing which has been chiefly stressed? Every drug store has an ample equipment of substances which will relieve the pain of the hopelessly inoperable cancer patient, who needs dread no habit, as all habits will shortly cease. The attempt made to treat 3,000 patients has resulted, so far as we can ascertain, in no practical end, merely a jumble of incomplete records, hearsay evidence, and disappointment.

How much better it would have been, had the preparation first been tested on animal tumors, for it is an accepted policy that before any remedy is recommended for use on human beings it should carry with it records of animal tests to prove its innocuous nature and pharmaceutical value. The extract of the adrenal cortex has lately been so tested, and found to be without any efficacy in the destruction of tumors, either primary or transplanted. This means just one thing: that Coffey and Humber are right, they have no cancer cure.

That temporary ameliorations are possible following the injection of a host of substances has long been known. If one turns to Wolff's monumental work on cancer, he will find that there is scarcely a substance which has not at some time been injected into unfortunate human beings, with alleged benefit. But who remembers these things now? One of the favorite indoor sports of second-rate experimenters is to re-discover some long ago exploited and abandoned substance—an organic extract, some protein or colloid, an aniline dye, a serum made with the saprophytic organisms present in many cancers—and to try this on human beings. The patient, whose emotions dominate his condition, will often announce that he is miraculously improved. Osler long since called attention to the efficacy of a laparotomy in the hopeless cancer case.

Almost any cancer patient with an ulcerating growth may improve somewhat after the injection of foreign protein. The treatment raises the general immunity of the body slightly, and if the wound is dressed with surgical care, a certain amount of healing will take place. This is due partly to removal of the organisms and their toxic products by the dressing, partly to the

<sup>1</sup> Coffey, W. B., and Humber, J. D.: *California & West. Med.* 33: 640, 1930.

increased general immunity induced by the injections, aided by the psychic improvement entirely due to the feeling that one is being treated. As a reflex to this enthusiasm the appetite improves and the patient eats more. Every pound gained increases the emotional uplift. If the tumor is carefully measured, however, it will be found to have grown continuously during the treatment.

There can be no criticism of such injections if the patient's family be warned that no permanent benefit may be expected. These effects are comparable to the temporary rise in morale and physical condition ensuing upon blood transfusion as a means of amelioration of cancer cachexia. The hopeless cancer patient and his physician are in an awkward situation. The patient begs for something; the physician knows there is nothing which will check the steady progress of the disease. An advertisement reaches the physician's desk extolling, for example, the virtue of a \$5.00 bottle of colloidal gold which contains perhaps five cents worth of this element, the *aurum potabile* of the alchemists. He gives this to the patient. The latter immediately becomes more cheerful and feels better—the doctor is doing something. But this is no proof that colloidal gold will in any way check the growth of cancer. There is ample proof that it does not.

Nor is the mere fact that a product has long been used a proof of its value. Certain quacks in this country and in Europe have long sold alleged sera against the bacterium which they say causes cancer, and the writer recently heard a well known pathologist say that there must therefore be something in these products. This, of course, is an absolute *non sequitur*. The patient has received some psychic benefit and nothing more.

The proper way of handling the situation under discussion would have been, after animal tests had been completed, to select a few patients who could be hospitalized and carefully studied by a group of impartial judges, and then to publish the results. Evidence for the original hypothesis that the adrenal cortex controls cellular growth is completely lacking. There is no experimental or clinical proof that the cortex contains a substance destructive to carcinoma or sarcoma cells which will act without damage to normal cells, as the patent specification for this extract alleges. Until further evidence is offered making clear the alleged mode of action, composition, and results, it would seem that no greater kindness could be offered the unfortunate cancer patient than to stop further human experimentation.