

OBSERVATIONS ON CANCER OF THE UTERUS WITH SPECIAL REFERENCE TO THE WOMEN OF SOUTH INDIA

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When I came out to India 5½ years ago, I had no thought of cancer in my mind. I had seen scores and scores of cases at home—some in early stages, operable and hopeful, and I had watched those patients submit themselves to surgery and regain strength and vigour and become altogether different beings, both in appearance and in their outlook on life afterwards. I had also watched those who were thought to be on the border line—doubtful cases as regards the prognosis after operation. Some improved after surgical interference; in others, it appeared to me that the very act of disturbing the growth made it spread more rapidly and life was actually shortened rather than lengthened. Then came the third class—the inoperable cases—and it is of this class of patients that my observations are chiefly made.

Cancer usually attacks the cervix—rarely the body of the uterus—probably because irritation is a predisposing factor of the disease, and irritation from discharges and frequent childbirth is common. I really believe that I looked upon this disease as being one of western countries and a disease occurring from middle life onward, for it is extremely rare in Europe to find a diagnosis of cancer made under the age of 40 to 45 years. But what an awakening I have had! I find this disease of the uterus far commoner in India than in England and occurring at much earlier ages. I should estimate the average age here in Madras at 30 years, but one frequently sees inoperable cases at 22 to 25 years. This difference in age incidence I attribute to early marriage and its consequences more than to any other cause. There is also a lack of education on the subject of cancer, a natural shyness on the part of the women, particularly in Purdah areas, to allow themselves to be examined by a doctor, and in many instances, very insanitary conditions of home life. All these factors have to be considered in reviewing the disease of cancer.

The number of cases which come under our observation in the Hospital for Women and Children is large. For example, for the year ending December 31st, 1931, 277 patients received 3 applications of radium each, in addition to many others who, for different reasons, received one or two applications. I seldom walked through the cancer wards without wondering why no solution as to the causation

of the disease has yet been found, in spite of the large amount of money being spent on research work in this direction. Many questions arise in one's mind:

- (1) Is cancer due to the entry of a germ in the tissues or blood-stream?
- (2) Is it due to abnormal cell growth?
- (3) Is it hereditary?
- (4) Is it infectious or contagious?
- (5) Are the people of certain localities more liable to contract cancer than those of other areas? If so, why?

And to all these and other questions, one has yet to give the same answer—'It is not definitely known'. I am very well-acquainted with the village in England, which is a veritable hot-bed of cancer. It is a prosperous village, and a very beautiful one. The point about its inhabitants is that for generations they have inter-married and I am of the opinion that the hereditary tendency is, in consequence, being passed on from one generation to the next.

Not many years ago, these advanced cancerous patients had no hope: they lived until death released them—often in great suffering, great discomfort, and feeling a nuisance to themselves and to those around them. Now, however, we have the use of Radium—a Godsend to any hospital fortunate enough to possess some, and to all humanity.

The tragedy of cancer is that in its early stages, it is quite painless, and it is not until the condition—whether it be of the uterus, breast, tongue or any other part of the body—has become inoperable that pain is felt. The common signs and symptoms of cancer are probably well known to all of you.

- (1) The hard and painless lump.
- (2) Emaciation and yellowish tinge of the skin.
- (3) Increasing weakness.
- (4) Pain in increasing severity.
- (5) Blood-stained and watery discharge, becoming later purulent and extremely foul-smelling.

Radium opens up a new field of research, for whilst much is known of its curative powers, much more requires to be known not only of its curative but of its harmful powers also; because it is harmful if used by any who have not studied its capabilities, and it should only be used by expert hands. Radium is a metallic salt and Belgium has, I believe, the monopoly of its sale. Little is known about its

action, but we do definitely know that the majority of patients show marked improvement in both local and general conditions after applications of radium have been given, particularly in cases of cancer of the cervix. In some instances, all traces of the disease have disappeared after three applications.

Methods adopted in its application.—In Madras, our method with cancer patients is that a full and comprehensive history of the patient and her family is taken. The Wassermann test is carried out; a blood smear examined for other organisms; blood count and haemoglobin content ascertained; the urine examined and the motions examined for ova or parasites. The patient's weight is recorded. Any abnormal conditions found in connection with the above tests are treated prior to the insertion of radium. The patient is kept in bed and all symptoms noted. Douches are given, usually saline, sometimes 4 hourly, depending on the amount of discharge. The patient is taken to the theatre and examined on the table; the condition of the cervix and surrounding parts noted, and a decision made as to the advisability of treatment by radium.

*The dosage,*¹ needs to be very carefully worked out by the doctor, and the method of application and position of the radium is all-important. It is usual to give 3 applications, with intervals of not less than 10 days between each. These intervals may be lengthened, depending on the constitutional reaction of the patient. In some, it may be slight, but occasionally one finds a very severe reaction. We have in this hospital about 120 milligrammes of radium in needles which are very like a gramophone needle, with an eye for the purpose of threading. Some needles contain 10 mgs., others 5 mgs., of radium sulphate encased in platinum. Before use, the needles are put into a metal container having a long wire handle. This container is made of an alloy of copper and zinc, which has the effect of cutting off some of the harmful rays of the radium. We also, for further security, often put the container in rubber tubing prior to insertion. The whole needle, container and tubing are sterilized by boiling, and are then ready for use.

Method.—The patient is prepared as for an operation, *vis.*, bath, soap and water enemas, light food and catheterisation immediately before going to the theatre. With the patient in the lithotomy position, the cervix and vagina are lighted by means of a torch, and the containers—one at least—is put into the cervical canal.

¹ The dosage of radium is reckoned in milligram-hours—that is:—The number of milligrams of radium inserted multiplied by the number of hours of insertion.
50 mgs. × 24 hrs. = 1,200 mg.-hours.

If more than one container is being used, the others will be placed in suitable positions near the growth. The vagina is then very carefully packed tightly with gauze to prevent the movement of the Radium containers (It has always to be remembered that harm will be done if they come into contact with healthy tissue). A pad and bandage is applied and the patient is taken carefully to the ward. The length of time for insertion varies from 12 to 48 hours, during which time the patient has to lie flat on her back. Many patients complain of the position and stillness required, more than of anything else. Catheterisation is usually necessary during such period, as the padding interferes with natural micturition.

Reaction.—The constitutional reaction may be slight or severe. It usually consists of a rise of temperature to about 100° , a slightly raised pulse rate, headache with a moderate amount of pain, for which we give injections of omnopon or morphia. The discharge is usually increased in a few days and then lessens. Occasionally, there is a very severe reaction; there may be rigors, hyperpyrexia and sometimes fairly severe haemorrhage may occur, dealt with by calcium lactate or chloride, morphia and haemoplastin injections. It is occasionally necessary to remove the radium when the reaction is unusually severe. Occasionally the rectum becomes irritated giving rise to diarrhoea with the passage of mucus. There are occasional cases, however, in which radium appears to have an ulterior effect and death results quickly afterwards—often the result of haemorrhage. Fortunately, however, these cases are few, but it is just as well to mention them.

For some time now, we have been taking specimens of the discharge from cancerous patients, incubating the germs and examining them in conjunction with the Guindy Institute, to find out whether there were any special organisms to be found in connection with cancer. The results have been of little use—it usually being the ordinary streptococcus or staphylococcus which is found. We have had vaccines prepared which are useful in those cases toxic from outside infection, and one or two injections of this anti-vaccine have cleared up the condition by septic absorption, but have not been of any value in any other way.

TULERAMIA

By A. C. MAC. MUNRO.

'In Feb. 1930, McNabb reported the first diagnosed case of Tuleramia in Canada.' (Public Health Reports, United States Treasury, Wash, D.C., Jan. 9th. 1931.) 'It occurred in a miner,