TREATMENT OF CANCER OF THE CERVIX UTERI BY IRRADIATION.*

BY

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Action of Irradiation on the General Condition.

In their recent works Professor Slosse and Dr. Reding of Brussels have demonstrated the action of the α and gamma rays on the organism.

For that purpose the patient drinks a solution of dextrose (50 grams of pure anhydrous dextrose in 200 c.cm. of distilled water). The authors detect the quantity of sugar in the blood by Hagedorn and Jensen's method. They found that the glycohaemia is more intense and has a longer duration in patients with malignant tumours than in the others.

These authors have shown also that cancer patients have a pH above the normal. When these patients are cured by a surgical operation this state may persist for years. On the other hand, if they are treated and "cured" by irradiation these symptoms disappear.

Having no personal experience of the utilization of α rays I shall not speak of them, but will only indicate the improvements which seem to result from our practice in the treatment of patients by radium. To explain these improvements it seems useful to indicate precisely the technique which we have utilized since 1919.

Technique of Curie Therapy.

In 1919 we utilized the utero-vaginal method of Professor Regaud, which consists in placing a certain number of tubes, suitably filtered, in all the length of the uterine cavity, and more tubes, also suitably filtered, in the vaginal culs-de-sac. Very early (1920) we gave up using needles with a weak filtration (1/2 mm. of platinum), as their action was too caustic, and consequently too local (1 cm. in distance). We have given the preference to tubes filtered by 1½ mm. of platinum, plus aluminium 1/10 mm., plus rubber, plus gauze or cork. The distant action is greater and extends to a zone of 3 cm. around each tube.

Unfortunately the cervical canal is not always reparable, and we have had cases in which recurrence has taken place, the intrauterine cavity being the point of origin.

In the cases in which tubes could not be placed within the uterus we have, a month or two afterwards, made a vaginal application of radium. We have since 1922 performed subtotal hysterectomies by the abdominal route—the cervix is generally difficult to remove—followed by implantation of needles in the cervical stump, our motive being to destroy the malignant cells, which are too distant from the vaginal tubes; here the local action only is aimed at.

Having found that some of our patients presented recurrences in the neighbourhood of the parametrium, in 1922 we adopted the radium drainage method of Professor Daels. By this method tubes of radium may be placed outside the peritoneum in the neighbourhood of the external portion of the broad ligament. We have practised this without any operative accident, and have had a certain number of successes. We employed these methods combined up to 1926. Since then, Professor Regaud having drawn attention to the good results which followed the use of radium placed at a long distance, we have had constructed an apparatus containing 4 grams of radium element or 7½ grams of the bromide. We only use the very hard gamma rays. Our apparatus allows us to irradiate two patients at a time in large fields, as is done by the α rays. The whole of the small pelvis is irradiated with an equal intensity, and, in spite of the enormous doses, the patient is neither rendered anaemic nor shocked. It is premature to speak of the results which this method will give, and to say whether it is useful to combine it with the local applications or with surgery; we have not used it sufficiently long to be able to discuss our results. Therefore we have only given a personal statistic ending in 1924; but we shall appeal to a large

number of authors of different countries to demonstrate that radium effects a cure in more than one-half of the operable cases; that in the cases on the limit of operability at least one-third are cured; and in inoperable cases 10 to 20 per cent. of the cases are cured.

Conclusions.

1. Irradiation seems to effect cures of a better quality than surgery.
2. Of all cases treated by radiation 30 per cent. are definitely cured.
3. An improvement of this percentage should be obtained by the new methods, using large amounts of radium placed at a distance.

An Address

ON

THE CLINICAL STUDY OF PAIN:

WITH SPECIAL REFERENCE TO THE PAINS OF VISCERAL
DISEASE.*

BY

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"Every pain has its distinct and pregnant signification, if we will but carefully search for it."—John Hilton.

Of all the symptoms for which we are consulted pain, in one form or another, is the most frequent and frequently the most urgent. Properly assessed it stands pre-eminent among the sensory phenomena of disease as a guide to diagnosis. And yet it must be confessed that our understanding of its nature and mechanisms, and consequently of its full significance in practice, remains peculiarly limited. We are naturally dissatisfied with invisible and imponderable evidence, and it is therefore no matter for surprise that recent years have witnessed the introduction into medicine of a host of objective methods of studying disease, and that the study of subjective symptoms has suffered some contemporary neglect. The opaque meal and enema; pyelography; cholecystography; the electro-cardiograph; methods of blood analysis; the various chemical tests for gastric, hepatic, pancreatic, and renal efficiency; bronchoscopy; lumbar puncture and its developments; and the exploratory operation—all these, following in the trail of the stethoscope and the ophthalmoscope and older routine methods of physical examination, bear witness to our zest for objective information. It is, however, chastening to remind ourselves that, notwithstanding all the help derived from a judicial employment of them, these methods too have their limitations, and none of them is infallible. They are chiefly useful in proving or disproving the existence of established organic disease; in increasing the accuracy of a clinical opinion; and in serving to differentiate one form of organic disease from another. They have greatly helped in decisions for or against operative intervention. They have undoubtedly exerted an instructive and a corrective influence. In some degree—although, to my mind, by no means so much as they might have done—they have even enhanced our appreciation of subjective symptoms. But their contributions to the early diagnosis of organic disease and to the study of functional disorders are necessarily restricted, and it is clear that without the initial indication of certain symptoms they could never be rationally employed. Moreover, their aid can rarely be invoked in urgent problems or in the homes of the people. There is a very real danger that by over-reliance on them, by too great an anxiety to give our patients the benefit of modern investigations, and by a waning confidence in our own clinical ability, we may come to lose the astuteness and wisdom of our forebears.

In medical education the introduction of these methods has not been an unqualified blessing, and the training of ear and eye and hand and the development of the power of inductive reasoning have suffered much. Every year I see a number of mistakes made through inappropriate,

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