male patients go down to Epsom on parole, and week-end leaves are arranged for the convalescents. A visit is paid to the pantomime at Wimbledon at Christmas, and visits to the seaside are planned. The hospital possesses a large chapel; the same building is used by Anglicans, Nonconformists, and Roman Catholics—the latter having their little altar in a side chapel. The staff form the choir.

Like all thoroughly up-to-date hospitals of its kind, Long Grove has its social worker, whose services are invaluable; for she can follow up cases absent on licence, in addition to making enquiry about home conditions and history of new patients, with a view to their proper treatment.

Most of the patients have a little money to spend, as the various insurance societies usually make them some small weekly grant, and brisk business is done at the canteen. The library, too, is well patronised.

It can be said, without exaggeration, that here is a model institution, run on model lines, with a first-rate staff, and with every possible amenity for the patients. Everything is devised to rouse a mentally sick man from apathy, to assist him in concentration, to give him useful work, good food, healthy exercise and recreation. The patients are friendly, on good terms with their nurses and with the medical staff. The result is that the percentage of recoveries during a year is more than 30 per cent., calculated on the total admissions during the year, and of those chronic cases who remain and make a large proportion of the regular population of the hospital, as many as 60 per cent. are able to do some work for the hospital community. Anyone who is familiar with mental hospitals knows that this is a creditable achievement, for it is the terrible lethargy and uselessness of the insane that seems so dreadful. Here, tact, enlightened methods and real kindliness have done much to dissipate this gloom and to make life at Long Grove hold both hope and consolation for those who must live within its walls.

P. W. in the *Nursing Mirror and Midwives' Journal.*

ORAL CANCER OR CARCINOMA OF MOUTH

By MR. GEORGE, 3rd year Student, South Travancore Medical Mission, S. M. S., Neyyoor, Travancore, S. India.

I am going to tell you a few observations that I have noticed in our hospital regarding oral cancer and its treatment.

Before entering our subject, I want to tell you something about the institution in which I work, the South Travancore Medical Mission, Neyyoor.

From the very name you all can understand that it is situated in the southernmost part of India. It is only twenty miles from Cape Comorin. Though it is in Travancore, a good number of its in-patients come from outside the country. The institution started exactly one hundred years ago (in the year 1838) at Nagercoil, about ten miles north of Cape Comorin with a medicine chest containing a few bottles only. It was shifted to Neyyoor in the year 1852, and it gradually prospered by the ceaseless efforts of various medical missionaries and we can boastfully say that it is one of the best medical missions in India at present with appropriate accommodation and up-to-date appliances. One of our wards is always crowded with patients of flowered cheeks, swollen faces, bandaged heads and of tongues with troublesome growths. Such cases are very common here as this has

been the only place in south India where cancer patients could get adequate Radium treatment.

Cancer is a type of malignant growth occuring usually in the epithelial cells, e.g. mucous lining of the mouth, stomach, intestines, etc. The actual cause of the disease is unknown, though several have tried, and are still trying, to find out the reason. According to the opinions of certain doctors it is more common on the Malabar coast and in Ceylon than in any other part of the world. It is more prevalent among the poor than the well provided classes, and usually occurs in both sexes between the ages of 50 and 60, though we have noticed exceptions to this rule.

Ian M. Orr, M.D., F.R.C.S., one of our medical missionaries, worked hard for two years to find out the actual cause of the disease. Though he did not succeed in finding out the actual cause, he observed that the oral cancer is closely related to betel chewing. Now you all may perhaps be induced to question me, why a particular part of the country is attacked by that dreadful disease when chewing is a common habit existing throughout India. I shall tell you the reason. As we all know, the betel leaf is pasted with lime and chewed with pieces of arecanut, and lastly with tobacco, the coloured saliva being spat out now and then. Within ten or fifteen minutes the whole quid is spat out usually. On enquiry of our patients about this habit, they all admit that they keep it in the mouth for hours together, and some even sleep with the quid inside. Secondly, the Malabar people are using shell lime, while in other parts of the country, stone lime is used. Thirdly, the tobacco which we get from Jaffna is very irritating, and the Vadackan tobacco which we get from Coimbatore district is of a stronger quality, at the same time cheaper. The present theory is that some alkaloid is formed by the action of tobacco and lime, after prolonged chewing, and these alkaloids do the harm. Though the hill coolies are having the same kind of chewing it is not common there, because they are better paid, and they never keep the quid more than ten minutes. Again they are using more nourishing food than the better class coastal people. The poor folk of the coast are always using a poor diet devoid of Vitamin A. It has been shown by several research workers that a man or animal fed on a diet without Vitamin A develops certain changes in the epithelial cells. Hence, we can conclude that poor diet, habit of chewing and unhygienic surrounding may help the development of cancer.

Our early patients complain of severe toothache, and occasional headache and we can notice a small growth with a nasty smell. In advanced cases, where the bones are affected, there will be decayed teeth, inability to open the mouth, unbearable headache, toothache, and even earache, with a very offensive smell, and gradual emaciation.

In cases of cancer of tongue, there will be a growth which will gradually eat away the tongue and in the course of time, the tongue may become gangrenous and wear away. In certain cases the tongue may become adherent to the floor of the mouth, and may retract at times. Advanced cases can neither talk nor devour anything.

Many people still believe that cancer is an incurable disease, but this of course, is not true. Very many persons are cured of cancer in our hospital, though the percentage of persons cured is, however, small and recurrence usually occurs.

The usual treatment in our hospital is radium application. Those unsuitable for radium treatment either from extensive secondary deposits or from involvment of bones especially upper or lower jaws, are treated by operation, generally removal of the affected part. We have 45·1 mg.

needles and 5·2 mg. needles. Radium treatment started here from 1930. There are several methods of application and the amount applied depends upon the nature of the growth and its malignancy.

A. For slowly growing cancers, especially on lips and cheek, needles are inserted at 1 c.m. distance.

B. For rapidly growing cancers radium needles are inserted further apart as in cancer of tongue.

C. For glands, external application.

D. If a growth is advanced but operable, together with removal of the part we implant a few needles too.

The needles are left for 10 days, and are inserted under general anæsthesia and removed without any anæsthetic. The extensive resection of jaws with removal of glands leaves large holes in the cheek at times. For this in our hospital, Gillie's Tube Flap is done, i.e. a flap of skin from the chest wall is taken, rolled up, and stitched as a tube (Tube Flap, 1st stage) which will have its blood supply from both ends. When the flap is quite healthy and clean (usually after ten to twelve days) the lower end is cut out and the gap is closed with it (Tube Flap, 2nd stage). It will still have its blood supply from the lower end and the face. When it has completely stuck to the gap, the flap is removed and the gap is closed. (Tube Flap, 3rd stage).

The anæsthetics generally used for surgical treatments are :—

General anæsthetics—Chloroform and ether.

Rectal anæsthetics—(Oil aractis 30% ; Ether 70% ; Dose 1 oz. to every 20 lbs. body weight.)

Local anæsthetics—(Novocain 2% with adrenalin).

When general anæsthetics are employed, we usually begin the operation after a tracheotomy which keeps the airway clean, and the tube is left for twenty to twenty-four hours more.

If rectal anæsthesia is used, a thorough washout of the colon should be done immediately after the patient is brought to the ward.

Complications that may occur are :—

1. Hæmorrhage, due to sloughing and wearing away of vessels or post-operative bleeding.

2. Lung complications, such as bronchitis, pneumonia, lung abscess etc.

3. Toxæmia, due to sepsis.

Nursing. The principle of nursing of these cases is thorough cleaning of the mouth, for which purpose we douche the mouth, 4 hourly, with Lysol (1 drachm to a pint of warm water) and especially after each feed. In resection of jaw, feed the patient through an œsophageal tube with nourishing liquid diet. The diet we usually give is Glaxo, Lactogen, Ovaltine, Horlicks, Oatmeal, Congee water, milk with coffee or tea, egg jellies, etc., starting with ten ounce feeds every two hours and gradually increase the quantity up to 40 ounces four hourly.

Dressings should be changed daily. If septic, dress twice daily. The patient can move about freely after four or five days provided there is no complication.

The whole treatment requires from fifteen days to months together if complicated.