ever that may have been. But I doubt whether, even then, suppuration from the eye was considered healthy, for the simple reason that the evil was apparent, was visible; for we know—

“What the eye does not see, the heart does not grieve.”

So much for negative results. But this contempt also leads to injurious treatment, which is a very positive evil. For example, forcible injections in cases of deafness from depressed membrana tympani—how much harm must result from indiscriminate syringing there? Then there is that common practice of dropping irritating fluids into the ear in cases of earache, which earache, of course, usually means inflammation of the parts.

Again, there is the dangerous proceeding of introducing instruments into the ear in search of foreign bodies, which frequently are not there at all. But the energetical surgeon does not easily give up the search, and renews his efforts, until the organ is severely injured, sometimes even resulting in the death of the patient.

Turning to the second cause—namely, a want of knowledge of what aural surgery can do for ear-disease—that must be met by impressing on our fellow-practitioners the advantages that have been derived from such treatment, constantly bringing to their notice cases which have been cured or improved. Especially should we bring forward the improvable cases, which are by far the larger class; because there is an idea floating about among the profession that ear-disease may be divided into two classes, *curable* and *incurable*, and that between these there is—nothing.

This is a great mistake. Of all the senses, hearing is, perhaps, the one that admits of most gradation of power; and, therefore, common sense would suggest that deafness, the result of disease of the organ, would admit of every degree of improvement.

Let us—I speak now to those who are teachers of this subject in our schools (and I am glad to say that we are a much larger body than we were a few years ago)—I say, let us teachers do all in our power to interest the rising generation of students in the study of this branch of medical knowledge.

In conclusion, I would ask, Can we not do something to induce our examining bodies to include aural surgery in their examinations? I do not mean that candidates should be expected to have gone deeply into the subject, but I do contend that they should be required to show that they understand the elements of it, and that they have attended a certain number of lectures and clinical demonstrations.

Gentlemen, these are the points to which I was desirous of calling your attention, and, although it is not usual to discuss an opening address, I should be extremely glad to hear the remarks of any present. If my opinion be shared by my audience, I should be very pleased if we could form a committee to consider the best means of inducing our examining bodies to include aural surgery in their list of subjects for examination.

ST. GILES.—In a recent report to the St. Giles Board of Works, Mr. Lovett gives some particulars as to the movement of the population in the district since the census of 1871, which, in view of the immense changes that have taken place there under the operation of the Artisans' Dwellings Acts, are very interesting and instructive. Since 1871, the population of the registration sub-district of St. George, Bloomsbury, has declined from 17,843 to 16,662, of St. Giles South, from 19,089 to 14,862, or a decrease of 4,227; and of St. Giles North from 16,497 to 13,733, or a decrease of 2,764, showing a total decrease of 8,172, in a population of 53,429. This decrease is chiefly owing to the carrying out of the Artisans' Dwellings Acts of 1868 and 1875. As far as the latter Act is concerned, the loss is only temporary, for the 1679 persons displaced by the demolition of houses in the Great Wild Street area will probably be re-housed there by the end of the present year. But it is different under Torrens' Act of 1868, for the properties pulled down under that Act, either have not been rebuilt, or they have been converted into warehouses, the owners making no provision for the accommodation of the people displaced. Mr. Lovett thinks that the application of Torrens' Act in the district, by sweeping away unwholesome houses, has certainly improved it, but it has also turned numbers of the poor adrift to seek for lodgings in other parts of the Metropolis. This is certainly one of the most difficult questions that have to be grappled with by the Legislature; and it is to be hoped that its importance will not be lost sight of.

EAST DEREHAM.—Only 19 deaths occurred in the district during the second quarter of the present year, but Mr. Vincent is unable to state that the health of the town is satisfactory. Small-pox has broken out, and 4 cases had already occurred at the date of the report, while it is believed that many more existed under the name of chicken-pox. A decided improvement is noted in the removal of refuse, etc., the scavenging arrangements being undertaken by the Sanitary Authority.

AN ADDRESS

ON THE

LOCAL AND GENERAL TREATMENT OF MALIGNANT TUMOURS OF THE BREAST, AND OTHER EXTERNAL PARTS.

Delivered at the Surgical Section of the International Congress, held in London, August 5th, 1881.

By M. SEMMOLA, M.D., Professor in the University of Naples.

[M. SEMMOLA commenced his remarks by stating that he was not a surgeon, and therefore apologised for addressing surgeons on a surgical subject. The treatment of malignant tumours by electrolysis was no new idea; twelve years ago, two cases of cancer of the breast had been treated in this way by an American surgeon; since then, Althaus had declared himself against it as a curative method, and Ciniselli had maintained that, as only benign tumours were curable by electrolysis, it was simply useful as a means of diagnosing between malignant and benign growths. M. Semmola, considering these opinions were based on insufficient data, prosecuted the inquiry, with results which he stated in the following words.]

I have always thought that the electric current ought to be looked upon as a powerful producer of trophic changes, and hence useful in the treatment of malignant growths. In the radical treatment of malignant tumours, the most important point to arrive at is the production of a change of direction in the local nutritive processes that the fatal evolution of the neoplasm with all its consequences may be arrested; that is to say, to substitute an innocent morbid process in the place of the primitive morbid process, which is capable, sooner or later, of poisoning the whole organism. Tumours may be destroyed or removed by the actual cautery or the knife, but they are powerless to modify the chemical processes of the surrounding tissues; consequently, electrolysis is far superior to them, for it does not only destroy, but it directly modifies the chemical processes of local nutrition, and hence is capable of completely changing the direction of these nutritive processes.

Without discussing here to what degree carcinoma and sarcoma are purely local diseases, and to what extent constitutional causes influence their production, it is evident that methods of cure must be at the same time both local and general; that is to say, while on one side the neoplastic element must be destroyed, and the perverted direction of the local nutritive processes modified, on the other, the nutritive changes must be energetically stimulated and improved, particularly by exciting excretion of harmful substances from the body. Thus, along with electrolysis, I have always given large and increasing doses of iodide of potassium, from a gramme up to three grammes (15 to 45 grains) a day, continued for a very long time. I have a patient who has taken three grammes a day for six months.

I believe that the chief reason for the failures which have been met with up to the present time in treating malignant new growths in accessible situations, has been that the treatment has been exclusively limited to local destruction, without modifying the general state of the organism, or because the attempt has been made to obtain resolution merely by the general action of medicines. This is, perhaps, not impossible, but it is a futile attempt at present, with the drugs which we possess.

The six cases which I have collected in the ten months during which I have occupied myself with these experiments, in which I have been aided by my learned friend and colleague Dr. Vizioli, Professor of Electro-therapeutics in the University of Naples, consist of one case of epithelioma of the right breast of the size of a large orange, fibro-sarcoma of the right breast, two sarcomata in the right breast, sarcoma in the left breast, and cysto-sarcoma on the upper third of the arm. In all these cases excepting one, the diagnosis was confirmed by eminent surgeons who had advised the removal of the tumour as rapidly as possible; and, in one patient, the case was that of a sarcoma produced eighteen months after another sarcoma had been removed from the same side. I know well how many doubts and errors may occur in the diagnosis of tumours, and that the verdict of the practitioner should never be given without reserve. In these cases, the best guarantees exist that the diagnosis was accurate and certain. In the first place, all the clinical characters were recognised by skilful colleagues, and microscopic examination was made in each case, in which I was assisted by one of our best professors

of pathological anatomy, Dr. Petrone, to whom science is indebted for studies of great importance.

A propos of this microscopical examination, I desire to submit to your indulgent attention a point which is not without interest, because it constitutes a simple method for making microscopical examination by the juice of a tumour. When a Ciniselli's needle is pushed into the centre of the tumour and withdrawn, a drop may be collected on the slide, which is microscopical indeed, but more than sufficient for observation. In one case of very remarkable cure, I have been able to make preparations directly from portions of the tumour which were eliminated by a process of dissecting suppuration, and I have these preparations with me for those who care to examine them. The case was one of a spindle-celled sarcoma. The apparatus employed was that of Stöhrer with small elements, and that of Onimus modified by Professor Vizioli. The oscillation of the galvanometer varied between a minimum of 60° and a maximum of 75° for the apparatus of Onimus and Vizioli; and a maximum of 90° for the apparatus of Stöhrer. In all cases, I employed the water-gradulater, to regulate the degree of the current. The needles were those of Ciniselli, that is to say, well polished steel needles. The needle was thrust deeply, to the extent of from two to three centimètres, or even more, in proportion to the volume of the tumour; and its direction in all cases was towards the centre of the tumour. The punctures were made symmetrical, that is to say, forming circular lines around the nipple, in the two cases in which the tumour occupied nearly the whole breast; and in the other cases, in which the tumours were of a more limited extent, the punctures were placed almost in a network. The introduction of the needle is usually not painful; and it must be done slowly, in consequence of the resistance of the tissue of the tumour, which sometimes calls for considerable force and careful management in introducing the needle. After several punctures have been made, it may happen that almost insurmountable resistance is met with. This no doubt arises from points of sclerosis which have followed the small inflammatory foci produced by the preceding punctures. In these circumstances, if the needle have already entered to a depth of from one to two centimètres, it is unnecessary to persist; but if the obstacle be very superficial, it is better to withdraw the needle and commence the application at a distant point. The same course must be adopted when inflammation has followed the introduction of the needle, so as to render its reintroduction very painful. Usually, that is to say, in five of my cases, it appears to be sufficient to introduce one needle into the tumour, and this is always the negative pole. The positive pole should be applied to the skin, at a greater or less distance from the puncture, with a charcoal button covered with linen, to prevent the formation of superficial scars; the distance depends upon the size of the tumour. In general, the arrangement should be such that the current may traverse the whole of the neoplasm. Only once did I plunge the two needles into the tumour with their points converging at a distance. This variation is determined by the object to be attained, as I shall mention later, that is to say, by the mode of action to which preference must be given, according to the special conditions of the tumour. The patient complains of a sensation of acute pain corresponding to the point of the needle, where it is often said that a tongue of fire seems to traverse the tumour, and sometimes the sensation invades the whole morbid tissue. Another sensation, which indeed corresponds to reality, is that which the patients describe by saying to the operator, "Oh! the bubbles! the bubbles!" and they indicate with the point of the finger spots at which air-bubbles appear to be forming deeply in the neighbourhood of the punctures, and specially above them. I said that this was reality; it corresponds, in fact, to the gases which are developed around the point of the needle by its chemical action; and this is so true, that, when the tumour is small, and the point of the needle, in consequence, is sufficiently near to the cutaneous surface, one may feel by the touch in the neighbourhood of the needles an emphysematous crepitation, which is doubtless due to the gases that have penetrated into the subcutaneous areolar tissue.

The duration of the application is from ten to fifteen minutes, according to the tolerance of the patient and the object which it is desired to attain. One thing well worthy of remark is that, during the whole time of the application, the needle of the galvanometer undergoes oscillations, sometimes very considerable, amounting to from ten to fifteen degrees; and that, during these oscillations, the patient, who may have grown quiet under the dull slow action of the current, utters cries indicating fresh suffering. This fact seems to indicate change of resistance presented to the passage of the current by the different layers of the tissue; and, secondly, resistance to the chemical action, which recommences more or less strongly. The duration of the treatment is sometimes very long. The electric current is not a knife, and it is in this relation especially that its slow modifying action

of local nutritive acts may represent a therapeutical action preferable to that of the knife. In the cases which I have observed, the minimum duration has implied twenty-four electric applications made three times a week. But alongside of this minimum must be noticed another case, in which the treatment lasted eight months. This was the large epithelioma mentioned; and it may even be affirmed that the treatment is not yet finished, for at the present moment the patient continues the application once a week. In the cases in which it is urgent to act as I did in the case in which I plunged both needles into the tumour, one or two sittings at most suffice to determine sharp inflammation, quickly followed by suppuration. These cases are, I believe, extremely rare. In all the cases which I have observed, the state of the lymphatic glands surrounding the tumour was quite healthy. But, even if there had been some glandular engorgement, I think electrolysis should be employed all the same. Only in these cases precisely, instead of slow action, it would be necessary to act on the latter method; that is to say, to plunge both needles into the tumour, and to use a very strong current, in order to provoke an inflammatory action, which might be followed by dissecting suppuration—a means of cure which nature exceptionally offers to us.

Acting in this way, I arrive at the following conclusions, which I have the honour to submit to you.

1. The electrolytic treatment, applied to malignant tumours, such as epithelioma, fibro-sarcoma, sarcoma, is capable of curing them by three modes of action; that is to say—(a). By producing small foci of inflammation, with consecutive sclerosis. The tumour is reduced to a minimum volume in relation to its primitive size, and there remains in its place a definitive innocent induration like a *caput mortuum* (cicatrical tissue). (b). By producing colloid and fatty transformation in the mass of the tumour, especially when it is in course of softening. (c). By exciting inflammation with dissecting suppuration, breaking up of the tumour, and its elimination in pieces.

2. With the electrolytic treatment, I have employed iodide of potassium in large doses, administered with great perseverance, so as to modify profoundly the direction of the nutritive changes.

As I have already had the honour to say, I do not present this as a definite and completed method. It is rather a problem for which I have had the good fortune to be able to sketch out an encouraging preliminary formula, the distinct solution of which can only be given by you. I hope that you will be willing to follow in the path which I have indicated, remembering that it is necessary to walk very gently, to proceed with great patience, and not to be too quickly discouraged if the desired solution of a great therapeutic problem be not immediately apparent.

In the treatment of such diseases, the question comes at at once to the lips, Will the tumour reproduce itself after a short time, and thus supply an example only of a new disappointment? I must reply that I do not know, but that it does not appear to me unjustifiable, looking to our biological observation of the action of modifying agents, to hope that it will not. The solution may, perhaps, be presented to the next Congress. Meantime, it may not be out of place to recall an old French proverb, "*Qui sait attendre sait jouir*".

BIRMINGHAM.—Dr. Alfred Hill, in his report on the health of the borough of Birmingham for the quarter ending July 2nd, states that, with a population estimated to the middle of the year at 402,296, the total number of births was 3,754 (1,893 males and 1,861 females). The birth-rate during the quarter was 35.8, against rates of 40.2 and 41.6 in the second quarters of 1879 and 1880 respectively. The deaths registered during the same period amount to 1,836, giving an annual death-rate of 18.25 per thousand: in the corresponding quarters of 1880 and 1879, the death-rate was 21.29 and 22.36 respectively. Dr. Hill attributes this considerable and satisfactory fall in the death-rate to the smaller fatality from most of the local (as distinguished from general and zymotic) diseases, but more especially from a fall in the number of deaths from affections of the respiratory organs. The average age at death during the quarter was twenty-seven years and eight months, against twenty-five years and five months last year. Small-pox has shown no material increase during the quarter. The guardians of the poor have instituted a house-to-house visitation, with the object of finding unvaccinated children; and a bill has been distributed to every house in the borough, setting forth the importance of vaccination and revaccination, and giving information as to times and places where the operation can be performed free of charge. The deaths in the quarter from the seven chief zymotic diseases number 218, compared with 178 in the same period of 1880. The zymotic deaths were: whooping-cough, 93; scarlet fever, 43; diarrhoea, 40; measles, 21; "fever," 11; diphtheria, 9; and variola, 1.