

extremely emaciated, weighing less than 4 stones; pulse-rate usually about 160; temperature pyrexial; mental condition one of delirium at night and obtundation during the day; and all the usual symptoms of the most severe type of Graves's disease were present. Although under good conditions at her home she had been steadily getting worse and had been altogether confined to bed for several weeks. I had every reason to consider the prognosis as extremely grave indeed. I have not hitherto seen a case of Graves's disease in that stage end otherwise than fatally. I ordered her to have an ounce of rodagen daily. The improvement of her condition which soon took place was most striking. The acute symptoms all subsided, her mind became clear, her temperature dropped to normal, the heart's action considerably slowed down, the tremors ceased, and in a few weeks she gained a stone in weight. In spite of the fact that her recovery has been interrupted by one attack of influenza and another of quinsy she has done remarkably well.

If I had the choice of giving rodagen or the fresh milk of a thyroidectomised goat I should not hesitate to select the latter from which rodagen is derived. But I consider it is a great matter that it is possible to prepare from the milk a substance like rodagen which possesses similar beneficial properties to those of the milk itself. Rodagen is readily obtainable at a price, but the fresh milk of a thyroidectomised goat is not to be had by most of our patients for either love or money. The main drawback, indeed, to rodagen is the usual disproportion between its cost and the purse of our patient. It is one of those remedies which, as I have said before, few except hospital patients can afford to use. It is its high price which makes us inclined to dole it out even to our hospital patients when we should otherwise give it freely. Wholesale it at present costs between 3s. and 4s. an ounce. The only other drawbacks are its somewhat unpleasant cheesy smell and taste and an occasional tendency to purgative action. But some might raise the same objection to the use of goat's milk.

I may say I have not given more than an ounce a day in any case, but I believe smaller doses than this are not of much use in the presence of severe symptoms. I have previously stated that although I have made an extensive trial of Merck's antithyroid serum, which is prepared from thyroidless rams, I was not convinced that it exerted any beneficial influence. It is quite possible that if I had tried it in larger doses than I did I might have obtained some good results. All I can say about it is that in the doses ordinarily prescribed it seemed to me inert. I did not go beyond a dose of five cubic centimetres daily. This remedy is also expensive, ten cubic centimetres costing about 5s.

I should like to add to what I have said about rodagen that in cases of Graves's disease lately I have not been giving ordinary milk except in such small quantities as are usually taken with tea or coffee. If, as present observations indicate, there be a virtue in the milk of a thyroidless animal, and in the rodagen obtained from it, by means of which the toxin of Graves's disease is neutralised, this is likely to be counteracted if at the same time we gave in any considerable quantity the milk of an animal whose thyroid was in full functional activity. Recently I have been allowing not only little milk but also little meat to my patients with active Graves's disease and I believe this has been of benefit to them. In conclusion I should like to suggest that it might be possible to put up in tins condensed milk made from the milk of thyroidectomised goats, but I am afraid the remedy, however prepared, will continue to be expensive.—I am, Sir, yours faithfully,

HECTOR MACKENZIE, M.D. Cantab.,  
Physician to St. Thomas's Hospital.

Jan. 27th, 1908.

## LIQUID AIR AND CANCER.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Jan. 25th Professor J. E. Salvin-Moore and Mr. O. E. Walker relate some observations they have made on the effect of exposing the cells of a carcinoma to the temperature of liquid air for 20 to 30 minutes. In the same issue the importance of these observations is emphasised by a second communication, in which they are confirmed by Professor Salvin-Moore and Dr. J. O. Wakelin Barratt for another carcinoma. The authors express surprise that the substance of tumours so treated gave rise to growths when implanted into healthy animals. The conclusion that the proliferation of the parenchyma cells implanted is responsible for the parenchyma of the daughter tumours would seem, in the

opinion of the authors, to be laid open to doubt as the result of their application of what, in the absence of any reference to the literature on the subject, has the semblance of an experimental method new in cancer research.

That cancer cells may retain their vitality after long exposure to low temperatures has long formed part of the common stock of knowledge of those engaged in experimental cancer research. Two years ago Ehrlich obtained continued growth after an exposure to  $-10^{\circ}\text{C}$ . lasting two years, and also after an exposure to the temperature of liquid air 144 times as long as that employed by the authors of the two communications referred to. Michaelis has obtained continued growth after the cells had been exposed to the temperature of liquid air for half an hour three years before the repetition of a similar experiment has yielded a result so surprising to Professor Salvin-Moore and his two colleagues.

There are many other references to the effects of thermal agencies in the literature of experimental cancer research, to which I need not refer in detail, since the two authors cited dealt specifically with the temperature of liquid air, and support the views advanced by Jensen, Murray, and myself on the processes at the site of the implantation of cancerous tissue. It will suffice to point out that exposure to thermal agencies is a routine laboratory method used to diminish the vitality of the cells of malignant new growths, and that with the extinction of the life of the cancer cells inoculation ceases to be successful. Although exposure to thermal agencies is a valuable method for studying the *vita propria* of the cancer cell, it is, for the reason just stated, unsuited to settle whether or not there be a virus in the tumour substance. The results of the cytological study of the site of inoculation in conjunction with this method have been found to be in entire agreement with the view that the artificial propagation of cancer is an actual transplantation of living cells which are merely nourished by a succession of new hosts.

I am, Sir, yours faithfully,

Jan. 27th, 1908.

E. F. BASHFORD.

## SUFFOCATION BY COMPRESSION OF THE CHEST: THE BARNSELY DISASTER.

To the Editor of THE LANCET.

SIR,—The sad accident at Barnsley whereby some 16 children lost their lives presents some features in common with the one at Sunderland in 1883 when nearly 200 lost their lives. In the present instance a large number of children were endeavouring to force their way into the gallery of the public hall to witness a cinematographic entertainment. On the gallery being completely filled the children on the stairs were turned back by the attendant and told to make their way to other parts of the house. A stampede then occurred on the staircase, several of the little ones fell at a turn in the stairs and others fell upon them, the whole being kept from regaining their footing by the pressure of the children behind. Before they could be extricated 14 children of an average age of six years lost their lives and two more died very shortly afterwards in hospital. Those who recovered seemed to have sustained surprisingly little injury. Out of the 16 killed and 17 slightly injured, attended to at the Beckett Hospital, only one sustained a fracture—viz., a fractured humerus. This, of course, may be accounted for by the greater flexibility of children's bones, especially the ribs. The children seen immediately after death presented practically the same features as described by Dr. Lambert in 1883 in his report on the disaster at Sunderland.<sup>1</sup> In varying degree their faces were congested and puffy, the vessels of the neck much swollen, the eyelids closed, the eyeballs protruding, the pupils widely dilated, and froth surrounding the mouth and nostrils. In nearly all the cases urine had been voided and in a few cases faeces expelled.

By order of the coroner a careful and individual examination of the whole of the bodies was made 24 hours after death and in the case of two bodies post-mortem examinations were made by Dr. Hall and Mr. V. K. Blackburn. The external examination presented the following features. Rigor mortis (probably influenced by the cold) and post-mortem staining were well marked in all cases. With one or two exceptions the countenance was placid as if in sleep, the eyeballs were not protruding nor the pupils widely dilated. In three cases the face was markedly congested, the remainder varying from slight frontal suffusion to slight general congestion. The ears in all cases were much darker

<sup>1</sup> Brit. Med. Jour., vol. i., 1883.

and the necks more swollen than is usually seen after death. Bruising was general but not extensive in area, being more marked on the face and lower limbs, slight abrasions being seen in a few cases. There was a total absence of fractures and wounds as disclosed by external examination. In one case in which a post-mortem examination was made there was a trace of blood in the left ear but no fracture of the skull was found. In nine cases the tongue was not protruded, in six but slightly, and in one case well protruded. In 12 of the cases there was well-marked oedema over the front of the chest and in two of these it extended over the abdomen and thighs. The two post-mortem examinations presented practically the same features. Two of the more markedly congested cases were selected with a view to getting more definite results. The following are the brief particulars:—

*Head.*—Coverings, meninges, surface and substance of brain congested but healthy.

*Chest.*—No fractured ribs. Lungs congested and air passages clear. Heart, right side contained a small quantity of dark fluid blood.

*Abdomen.*—Liver and kidneys, slight congestion. Intestines, pale. Spleen, not congested but pale.

It is to be noted that there were no hæmorrhages in either case on the lungs or heart as is often found in cases of death by suffocation.—We are, Sir, yours faithfully,

J. HALL, M.D.,

Jan. 25th, 1908.

H. F. HORNE, M.B., B.C.

## THE NEED OF FEMALE MEDICAL MISSIONARIES.

*To the Editor of THE LANCET.*

SIR,—You have from time to time been good enough to make special missionary needs known through your columns. Will you now give publicity to the urgent need for more women doctors in the foreign field? Pioneer work waits to be begun in at least two districts of India; an overworked doctor in China needs a colleague; and now the grievous news of the death in January of Dr. Marie Hayes at Delhi makes the reinforcement of the staff of that mission a matter of urgent necessity. In a letter dated four weeks ago she said herself, "We desperately need another doctor." In two years from now there will, as we hope, be doctors qualified who are now going through the medical schools with this end in view. But these needs are immediate. We appeal earnestly for two medical women already qualified and able to undertake responsible work who would offer at once for this work, especially for Delhi. For particulars apply to the C.W.W. Candidates secretary, S.P.G. House, 19, Delahay-street, Westminster, S.W.

I am, Sir, yours faithfully,

Jan. 20th, 1908.

H. H. MONTGOMERY (Bishop).

## SUNSHINE IN 1907.

*To the Editor of THE LANCET.*

SIR,—May I be allowed to state that the records of the Meteorological Office for 1907 show that the island of Guernsey enjoyed the maximum of sunshine of any place in the British Isles—viz., 1859·7 hours. This, however, is considerably below its average for the last 14 years, which is 1916·2 hours.—I am, Sir, yours faithfully,

HY. DRAPER BISHOP,

Medical Officer of Health, States of Guernsey.

Health Office, Guernsey, Jan. 25th, 1908.

## THE DESTINY OF CASE-BOOKS.

*To the Editor of THE LANCET.*

SIR,—Referring to your leader on the disposal of case-books I send you the following facts for which I can vouch. You are at liberty to make what use you like of them but please suppress names as one of the ladies is still living. A medical relative of mine died some 20 years ago, leaving as his nearest relatives a group of ladies and a nephew not a medical man. He had resided long in his house which was situated in a populous neighbourhood and was likely to be a good investment for a suitable successor. The ladies managed the transfer of the practice and of the lease of the house. Soon after a gentleman called on me and asked if I was the late physician's executor, and went on to state how annoyed he had been to see that gentleman's case-books giving full reports of cases, including those of the complainant's wife,

for sale on a bookseller's counter. So strongly do I feel on the subject that I have destroyed all my case-books except the one I am using.

I am, Sir, yours faithfully,

Jan. 21st, 1908.

M.R.C.S.

## THE ORGANISATION OF THE PROFESSION.

(FROM OUR SPECIAL COMMISSIONER.)

ATTITUDE OF THE HONORARY STAFFS OF THE LIVERPOOL HOSPITALS IN REGARD TO PAYING AND INSURED PATIENTS.

Liverpool, Dec. 8th, 1907.

IN so far as the organisation of the medical profession is concerned Liverpool cannot in any way be considered a model town. Perhaps for want of proper leadership certain it is that there has been very little cohesion among the members of the profession. The fear also of doing anything that might in the remotest degree be likened to trade unionism greatly exercises the minds of some of the older and more prominent members of the profession. Nevertheless, there is to-day a very strong feeling of unrest and this has led at least to some attempts at organisation. Of late it is the honorary staffs of the hospitals who have been bestirring themselves and are actually seeking to form a union. It is not quite easy at first sight to determine whether this movement will make for the union or disunion of the profession at large. Some of the observations made in answer to my inquiries were not altogether encouraging. For instance, one of the most active leaders in this new movement argued that there were two classes of medical men, members of the hospital staffs and the general practitioners. Now each class accuses the other of being mainly responsible for the prevalence of hospital abuse. The general practitioner says that the competition of the hospitals robs him of his chance of earning a decent livelihood. On the other hand, I was assured that at the Liverpool Children's Hospital, when an inquiry was made into the matter, it was found that the general practitioner was the principal culprit. Then at the Southern Hospital a special superintendent had been appointed to investigate whether there was abuse. It was found that medical practitioners were themselves often responsible for abuse. When they were tired of a patient they would send him to the hospital. A case was described to me of a drunken and very dirty woman who was sent to the hospital with pneumonia and died in two days. She was fully able to pay. Then another case was that of a man who had nothing really the matter but was probably a club patient and generally a nuisance. Though there is undoubtedly something to be said on both sides there can be nevertheless no doubt that the general practitioner in Liverpool, as in most other towns, has suffered considerable loss through the facility with which patients who could pay fees have obtained gratuitous treatment at hospitals. Obviously the true remedy rests in uniting the members of the hospital staffs with the general practitioners in one single society where all would meet on equal terms and discuss their grievances in a friendly manner.

The nearest approach to such an organisation is the Liverpool division of the British Medical Association and the local secretary thinks that there is more cohesion among the members of the profession at Liverpool since the adoption of the association's new constitution. Nevertheless, it does not seem to me that the position is very promising because, if I am correctly informed, though the division has 67 members only about twelve or so attend the meetings. This is but a small number for so large a town as Liverpool. But what seems more significant is the fact that when a considerable number of the honorary staffs of the hospitals felt that they had grievances and it was necessary to take action, they formed a new society instead of bringing the matter before the local division of the British Medical Association. Then, again, the lay committees managing the principal hospitals have also joined together and are attempting to constitute themselves into a joint body so as to take common action. It is said that their principal purpose is to check abuse and to employ a uniform method to prevent persons who can pay fees obtaining medical relief. In this respect they are evidently greatly impressed by the Manchester example. When at Manchester inquiries