under consideration is outside the proper sphere of a general hospital. To this the rejoinder may fairly be made that the prevention of disease is higher service than the cure of it, and that the removal of consumptives from localities where they are foci of infection would establish a new claim on the grateful appreciation by the community of the beneficent work done by our infirmaries.

PAROCHIAL HOSPITALS.

The very poor are better off than the class whose wants and claims we have been considering. They are accommodated in the parish or union hospitals. The grounds for the segregation of consumptives, it need scarcely be stated, exist in them also. Probably the gathering of the males and females into wards apart from other patients would be found easier in many of them than in some infirmaries. It may be mentioned, as showing what is being done for this section of the public, that in a hospital for 1,500 chronic patients in course of erection by the Glasgow Parish Council, there are to be special wards for consumptive patients. It is expected to be ready for occupation in August of the present year. As example is better than precept, it is to be hoped that this enlightened action will prove a stimulus to other parish councils to do likewise.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, December 14th, 1901, p. 1728. ² See Annual Reports. ³ BRITISH MEDICAL JOURNAL, January 11th, 1902, p. 97.

THE ORIGIN OF THE MODERN TREATMENT OF PULMONARY CONSUMPTION.

By A. T. TUCKER WISE, M.D. (DIPLOME SUISSE FÉDÉRAL).
Montreux.

THE present system of treating pulmonary tubercle by nutritious diet (as much as the digestive organs can assimilate) with open-air exposure for the patient instead of shutting him up indoors, originated in England in 1835. Important hygienic reforms have generally originated in the English school. Dr. George Bodington (Warwickshire) carried the plan out in spite of great opposition and ridicule. He was, however, so derided for his innovations that he ultimately found it expedient to give up the practice and turn his sanatorium to other uses.

One of his consumptive patients, treated by him in 1835, whose case is mentioned in Bodington's book,¹ has within the last few weeks written me a letter. This is no "spirit writing," as some might suppose, but a clearly-written, intelligent communication which has reached me through the post. Before announcing what the patient tells me, I will quote Bodington's own description:

In 1835, a young lady, aged 16, who had suffered from occasional pain in the side, cough and debility, returned home from boarding school, where she had been placed under medical treatment for these complaints; she was still ill.... I met several medical men in consultation, and a treatment was pursued in the usual manner, the patient being confined to her room, and consumption gradually wearing her away. After two months of confinement indoors every symptom of the disease had become aggravated; she was now extremely emaciated, suffered from profuse night perspirations, violent cough, and difficulty of breathing. The expectoration was abundant, consisting of mucus mixed with opaque solid portions frequently tinged with blood, most of which sank in water: some floated. There was a dull sound on percussion of the upper portion of the lungs, mucous rattle with a gurgling noise, hoarseness, and weakness of voice. The physical signs in combination with the general symptoms were clearly indicative of the existence of cavities in the upper portion of the lungs.

In the month of January, 1836, the case was left entirely to my management, and having urged my views strongly to her friends, I gained consent to their being adopted.

A donkey was procured, on which the patient began to take exercise out of doors, notwithstanding the inclemency of the season, in the depth of winter. The first trial was unpromising; the cough appeared to be much increased in coming into the open air from the warm bedroom. This arose from the undue closeness and heat of the bedroom, and not the external air. There cannot be a more fatal error than that which arises from the supposition of there being something deleterious in the external atmosphere, because persons cough when first brought into it out of unwholesome heated apartments. The latter should be especially avoided and the apartments kept cool and airy, corresponding in temperature nearly to the external atmosphere, whilst the latter should be courted and indulged in to the utmost.... In the present instance it was soon found that by continuing a long time out of doors the cough abated materially; every day some improvement was observed to take place, very gradual but constant. A sedative draught was given every night, which, together with the exercise of the day, procured sleep and warded off the cough till morning. In the daytime an emulsion mixture

was taken at intervals, and very small doses of morphine, to subdue by degrees the irritation arising from the presence of tubercles in the lungs. The diet was nourishing, consisting of boiled egg, fresh meat, milk and bread, and two glasses of sherry in water daily. This treatment was continued very strictly through the winter and spring months of the year 1836. By June the patient had entirely lost her cough with all the other symptoms of the disease, regained her health and strength, and passed through the succeeding winter in very good health, accustoming herself to go out of doors walking and riding almost daily. At this time (July, 1836) she is in perfect health.

This patient (Mrs. E. M.) writes me from Cheltenham as follows:

Dear Sir.—My cousin, Dr. Bodington, tells me that you wish to hear from me any details I am able to give you respecting his father's treatment of my case when, many long years ago, I was supposed to be hopelessly ill in an advanced stage of pulmonary consumption. As this illness commenced in the year 1835, when I was in my 12th year, you will not be surprised that after the lapse of sixty-six years my memory is rather shadowy about the progress and different stages of my illness, as well as of my uncle's special treatment; but I will only state to you those things of which I have a clear recollection.

In the autumn of 1834 I had a severe attack of measles, which I suppose may have left me in a weakened condition of health. In the following summer of 1835, when at the sea-coast, I took a chill, which ended in a sharp attack of inflammation of the right lung, and was treated by the local doctor in the then usual way with leeches and blisters and other lowering remedies, and for many weeks I was too seriously ill to undertake the long coach journey between Liverpool and Birmingham—for this was before railway days. After my return home late in the autumn my uncle, Dr. George Bodington, then of Erdington, afterwards of Sutton Coldfield, took me under his charge, but was not able during the winter months to pursue his own plan of treatment except with regard to liberal diet, owing to the strong opposition of my dear parents and other relatives, whose prejudices against the new system of treatment were too strong to be overcome.

I grew worse rapidly, my cough was incessant, with every symptom of advanced disease of the lungs, until at length my friends gave way to my doctor's repeated assurance that the only hope of my recovery lay in my being allowed to breathe the fresh cool air and to be out of doors as much as possible.

I think it was in February, or very early in March, 1836, that I was first lifted on to a donkey, for I was too weak to walk, and led round the garden, and in spite of my dear parents' fears the result proved more than they had ventured to hope for. From that time I began to recover strength. The cough and other unfavourable symptoms gradually decreased, and, though the process of recovery was slow, it has been sure, for now, in my 81st year, I am in the possession of fairly good health, and able thankfully to enjoy the many mercies which surround me in my daily life.

I have had some serious illnesses in the course of my long life, and have always needed to be careful in avoiding cold, having had several attacks of pleurisy and occasional bronchitis, but on the whole I have enjoyed remarkably good health, and until the last few years have been able to lead an active life. There is no doubt that the mischief in my lung was entirely healed under the skilful treatment of my uncle, Dr. George Bodington.

If there is any other point on which you desire information, it will give me sincere pleasure to answer any question you may ask, if I am able to do so.

I hope the length of this letter will not alarm you.

Believe me, dear Sir,

Sincerely yours,

To Dr. Tucker Wise.

After the relation of some cases Bodington concludes his book of 60 pages by advocating the establishment of sanatoria (he calls them hospitals) in the vicinity of large towns, where gardening and farming occupations could be undertaken by the convalescent. He mentions, too, "that if the medical profession are to succeed in the treatment of their consumptive patients, they should have country houses in proper situations, well ventilated, and provided with 'all appliances and means to boot,' where their patients should be under their own eyes, and strictly watched and regulated in all respects as regards exercise, air, diet, medicine, etc."

If one peruses his writings carefully it will be seen that nothing of importance in the routine treatment of pulmonary tubercle has been added since his book appeared, except cod-liver oil as a remedy, and rest during feverishness. The main principles, which at the time of introduction were a complete reversal of the ordinary treatment followed in those days, remain unchanged; but we are duly indebted to later workers in the same field, especially Brehmer, for their elaboration and completeness carried out in his sanatorium established in 1859 at Goerbersdorf in Silesia. His additions to the régime of a free use of alcohol and the cold douche have, however, been abandoned.

The later history of the developments and popularity of what is now termed "open-air cure" is not uninteresting. In the year 1865 Dr. Friederich Unger and Hugo Richter, a bookseller, both of whom had not entirely recovered their health in Brehmer's establishment, went to Davos in Switzerland. They had heard of this remarkable climate in the

Alps through an article in the *Deutsche Klinik* by Dr. Meyer-Ahrens, who had been visiting Davos. The article had been freely copied in the German press, and was read by the two inmates of the Goerbersdorf Sanatorium, who were not progressing as rapidly as they had hoped. Unger had watched and was familiar with Brehmer's system, and now, under unique conditions of climate, introduced the plan of open windows at night, walking and sitting out all day long, with *sur-alimentation* by taking large quantities of milk in the twenty-four hours in addition to the ordinary meals, a greatly-increased appetite being a marked effect of Alpine climate on debilitated patients, especially in dry cold weather. The results were eminently satisfactory; both the newcomers regained their health completely. Dr. Unger started in practice, and Hugo Richter went into business as bookseller and librarian. I had the satisfaction of making their acquaintance when I visited Davos in 1880 and following years. We were mostly disposed in those days to attribute the striking improvement in the condition of patients to the effect of climate alone, but it did not escape the observation of those who practised in Davos that success depended a great deal on the "push given to nutrition."²

Although it is now eight or nine years since I practised in Davos, I regard the place as having contributed in no small measure to the popularity of "open-air treatment," which spread from thence to other countries through the thousands of invalids and their friends who carried home with them a practical acquaintance with the potency and value of fresh air. This was to a certain extent superfluous in respect to English people, as English physicians and medical officers of health had long before drawn attention to the subject, and the ventilation of dwellings was already in vogue in England.

The later reputation of Nordrach in the Black Forest has shown us what Bodington originally demonstrated—namely, that the treatment can be carried out advantageously in quite inferior climates, but Bodington has never received his meed of recognition, even from his own countrymen. He has incontestably the prior claim to originality in devising the modern method—give the proceeding what new name we may—"sanatorium treatment," "open-air cure," "hygienic treatment," or what not. Dr. Otto Walther has, however, with much attention to detail and constant supervision of the patient, attained considerable success at Nordrach during recent years.

It was about the middle period of the last century that hygienic and sanitary matters began to attract attention. The use of the morning "tub" began, ventilation was studied, and land drainage undertaken. Food eventually became more plentiful and cheaper. The window tax had long been abolished; reforms were made in the Poor Law and prison life. Public baths and wash-houses were introduced. The standard of sanitation with the army and navy rose each decade.

Finally, the English school took a prominence in hygiene which has never been lost, and the repute of the country as leading in sanitation is proverbial, and is acknowledged on the Continent. Is it mere coincidence that since these times there has been a surprising decline in the death-rate from pulmonary tuberculosis to less than half of what it was in 1840, and that there is less of the disease in England at the present moment than in most other European countries, where the fear of infection has taken deep root for many years past, but little importance is attached to fresh air except as a "cure"?

Deaths from Pulmonary Phthisis per 10,000 Inhabitants.

London ...	...	...	17.2 (1897).
Paris ...	...	...	38.0 (1896).
Berlin ...	...	...	21.8 (1897).
Berne ...	...	...	33.0 (1888-1892).

It was less of an innovation for Brehmer to prescribe a life in the open air for phthisical patients twenty-five years later, even in Germany, than for Bodington to conquer the widespread prejudice against an open window in the year 1835; but the latter has left clear proof in his writings and practice that he was the originator of the modern method.

REFERENCES.

- ¹ Essay on the Treatment and Cure of Consumption, Longmans, 1840. ² Davos Platz and the Effects of High Altitudes on Phthisis, Churchill, 1881.

HYDROGEN PEROXIDE IN THE TREATMENT OF LUPUS VULGARIS AND TUBERCULOUS ABSCESS.

By CHARLES HERBERT GUNSON, M.B., CH.B.,
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Departments, Wisbech.

HYDROGEN PEROXIDE is a most effective germicide, yet practically unirritating and harmless to the delicate tissue cells, if not used in full strength. Its mechanical action is also of value, as by its effervescence when applied to disorganised tissue it aids in removing the debris resulting from the destructive action of bacteria or their toxins on the tissue cells. I have used it in a number of cases of lupus exedens, applying it by means of a fine spray daily to the ulcers, with most encouraging results. The granulations soon assume a healthy appearance, the area of congestion around the ulcer gradually disappears, and the stratum lucidum becomes very active, proliferating over the granulation tissue when it reaches its level. The resulting cicatrix is firm, and has no the usual tendency to break down from any slight irritation.

If the granulations are of a protuberant nature, then it is necessary to resort to a preliminary scraping, and subsequently apply the hydroxyl daily. In either case I then dress with an ointment consisting of one part of powdered iodoform and two parts of boric acid, mixed with lanolin.

In the healing of chronic or tuberculous abscesses, after evacuating their contents hydrogen peroxide gives excellent results. The cavities are soon filled by healthy granulation tissues, and the process of repair completed with greater rapidity than under the usual treatment.

I have also found it of much value when sprayed daily on ulcers and purulent wounds, especially the former, which I have known to respond actively to this treatment when other methods have failed to effect a cure.

The following are a few illustrative cases:

CASE I.—H.A. consulted me about a small crescentic ulcer with raised and infiltrated edges on her face, which she stated had appeared three weeks before, and was "spreading." Some years previously she had been treated for lupus involving the nose and upper lip, which, after having been scraped several times, healed, leaving obvious scars with much loss of substance. As the patient did not desire surgical procedure, I sprayed it each day with hydrogen peroxide, and dressed it with the iodoform and boric ointment mentioned. In a fortnight's time the ulcer had healed, and remained so when I saw her three months later.

CASE II.—W.E. presented herself suffering from ulcers on the lower part of her right cheek, extending to her neck. She stated that the disease had many years before attacked her skin just over the cicatrix, resulting from an operation on a tuberculous gland, and had extended upwards to her cheek. The ulcers had been frequently scraped, but never entirely healed. There were also present a few shot-like nodules surrounded by a zone of hyperaemia, and much infiltration. As the granulations were protuberant we resorted to a preliminary scraping, and treated thereafter with hydroxyl in manner already mentioned. In four weeks' time healing was complete.

CASE III.—E.M. complained of a painless swelling of long duration over the outer end of the right clavicle. Patient had suffered from tuberculous disease of the left hip-joint some years before. Upon making an incision into it, pus with small masses of curdy debris, and cholesterol crystals escaped. I sprayed the cavity well with hydrogen peroxide daily, and packed with iodoform gauze. In ten weeks healing was complete.

In conclusion, from my experience of the use of hydrogen peroxide and results in many other cases, I deem it a valuable agent which as a surgical dressing deserves to win its way to a high place in the list of surgical applications.

THE UNITED STATES NAVY RATION.—In a report appended to that of the Surgeon-General of the United States Navy, Dr. John C. Boyd, Medical Inspector of the Flagship *Kearsarge*, adds his testimony to that of many others with regard to the nutritive value and sufficiency in amount and variety of the several food elements which collectively constitute the ration now issued by the United States Navy Department. He particularly insists that well-trained cooks should be employed on board the vessels of the United States Navy, and argues that unless this be done, however good the ration may be, it will in many instances be spoiled, or its nutritive value impaired, by bad cooking. The remedy suggested for this too frequent occurrence is that some well-defined plan should be adopted for instructing a certain number of the enlisted force in the special knowledge pertaining to the duties of ship's cook.