land it was only 21.30. This high death-rate the lecturer attributed chiefly to the strong winds which prevail, and also affirmed that the geographical distribution of the disease in the island supported this theory. In other words, the windier the district the greater the phthisis mortality. I will deal with the first part of this statement before dealing with the distribution of the disease.

The phthisis mortality-rate was roughly half as much again as in England and Wales, and Dr. Haviland considers this to be due to the island being in an exceptional degree exposed to strong winds. Mr. A. W. Moore, F.R.M.S., Speaker of the House of Keys, who has made a more exhaustive study of Manx climate than any other man, says:

With regard to our winds, my opinion is that they are frequent but not exceptionally strong, and that for the greater part of the year they are mild and damp. It is not likely, indeed, that our winds are either more or less frequent and strong than the winds of the adjacent coast, though, being more exposed, we feel them more. If it were so, our atmospheric pressure would show greater variations than on these coasts, and its mean would be different. Of this, however, there is no trace. The mean annual isobars of atmospheric pressure of the British Islands, according to Mr. Buchan, vary from 29.74 in the Shetlands to 29.98 in the Channel Islands. This calculation has been made by him for the years 187-80 from a very large number of stations, among which are for the Isle of Man, the Point of Ayre, Douglas Head, Calf of Man, and Ballasalla. These, when reduced to mean sea level and 32° F., and differentiated for the whole period of twenty-four years, give a mean of 29.882, which enables him to place the Isle of Man between the isobars of 29.88 and 29.90, in absolute conformity with other places in the same latitude.

Whether Dr. Haviland's theory is right or not, I think that in the case of the Isle of Man he starts with false premisses, and therefore his deductions cannot be accepted without some hesitation. This, however, need not prejudice the second statement, namely, that the geographical distribution of phthisis is incidental with the relative exposure to strong winds. I will briefly consider this point.

Dr. Haviland's figures dealt with only three years, namely, 1880, 1881, 1882. He prepared a phthisis mortality table, giving the averages for each parish and town in the island, and satisfied himself that these figures justified his theory. In preparing a pamphlet on Manx consumption,² which I published in 1899, I worked out the results for the last fifteen years. The three years' table and the fifteen years' table by no means give the same distribution of the disease, as will be seen when the two are placed side by side. The parishes are grouped into four divisions, east, west, north, and south.

Annual Phthisis Mortality per 10,000 Persons Living.

Isle of Man		1880-82.	1883-97.			1880-82.	1883-97.
<i>Western—</i>				<i>Northern—</i>			
Peel	.....	29.65	24.66	Ramsey	.....	26.89	21.41
German	.....	29.70	16.02	Maughold	.....	23.24	23.27
Patrick	.....	30.47	22.78	Lezayre	.....	29.31	29.04
Michael	.....	27.22	15.19	Andreas	.....	36.10	26.91
Ballaugh	.....	41.19	26.66	Bride	.....	65.83	25.07
				Jurby	.....	25.29	27.57
<i>Southern—</i>				<i>Eastern—</i>			
Castletown	.....	32.24	21.40	Douglas	.....	29.46	27.19
Malew	.....	33.39	20.23	Onchan	.....	24.44	15.30
Santon	.....	22.67	24.13	Lonan	.....	37.65	41.17
Arbory	.....	44.54	24.01	Braddon	.....	35.40	30.44
Rushen	.....	39.88	29.76	Marown	.....	27.12	21.12

We now see the serious discrepancies that arose in the 1880-82 calculations, discrepancies that the author was in no way responsible for, for they were due to the fact that very limited statistics were at his disposal. In the three years' table we find that Bride had a death-rate of 65.83 per 10,000 living. In referring to this exceedingly high death-rate, Dr. Haviland explained that it was due to its open and exposed position, with a low coast-line that offered no resistance to the wind. At the southern extremity of the parish run the Bride Hills, in an east to west direction, and he contended that the parishes to the south of these hills would naturally have a less mortality than Bride, which they certainly had on the three years' calculation. On the fifteen-years basis, however, we find we have an entire reversal, as Bride is slightly below the insular average, and, with the exception of Maughold, has a lower phthisis rate than any other northern parish, while the parishes to the south of the Bride Hills, which have whatever shelter these hills may afford, have a phthisis-rate considerably higher than the insular average.

Since the prevailing winds in the Isle of Man blow from a westerly quarter, and since the western coast line does not in any way break the force of the wind before its sweeps the

adjoining parishes, we should naturally expect, if the wind theory were true, that the western division would give us the highest phthisis rate. Instead of this, however, it gives us the lowest, namely, 21.94, as against 24.19, 23.15, and 24.53 for the northern, eastern, and southern divisions respectively, and the parish of Michael, probably the most wind-swept on the island, has actually the lowest phthisis-rate, namely, 15.19.

The parish of Lezayre, which is almost an inland parish, and includes the sheltered valleys of Sulby and Glen Auldyn, and for the most part lies snugly at the foot of the mountains, consequently escaping the strong winds, ought to be fairly free from phthisis; nevertheless, we find its rate to be 29.04.

Lonan, the bulk of whose inhabitants live in the sheltered Glen of Laxey, which is only exposed to the east wind, the prevalent wind in the island, holds the unenviable position of having the highest phthisis mortality rate—namely, 41.17 per 10,000 living.

With the causes of the high phthisis mortality in the Isle of Man, and of the geographical distribution of the same—which have been fully dealt with by me in the small work mentioned above—we are not at present concerned, further than determining to what extent, if any, wind exposure is a contributory factor.

In studying the distribution of consumption among a small nation and over a small area of land, I do not feel justified in formulating or refuting general principles, especially when put forward by so great an authority as Dr. Haviland. Nevertheless, I feel bound to say that, after careful investigations, covering a period of fifteen years, I find that the results obtained can in no way be considered to support the theory that strong winds are accountable for the peculiar distribution of the disease in the Isle of Man, whatever may be the case elsewhere.

With regard to Dr. Gordon's paper I have little to say. It is excellent work and excellently carried out, and must be recognised as a valuable contribution to the study of phthisis. I have no knowledge of Devonshire and its minute topography, and am therefore not in a position to criticise the details.

It is, however, well to remember that in dealing with the statistics of small parishes containing from 70 to 1,000 inhabitants one must be prepared to take into account fifteen or twenty years at least, or the results will be of little value. It is also a little misleading to speak of phthisis among women and children who shut themselves up in small cabins to escape the inclemency of the winds as being due to wind exposure; it is due to a vitiated atmosphere and infection. The adult males in such districts are doubtless remarkably free from the disease. It is well, therefore, to give the sex-mortality when investigating the effects of wind exposure on phthisis.

REFERENCES.

- 1 BRITISH MEDICAL JOURNAL, January 12th, 1901, and October 27th, 1900.
- 2 *The Causes of Consumption, with Special Reference to its Prevalence in the Isle of Man.* Douglas, I.O.M.: Brown and Sons Limited.

THYROID EXTRACT AS A REMEDY, WITH ILLUSTRATIVE CASES.

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AMONG the many remedies introduced to the notice of the medical profession during the last ten years, few possess the therapeutic range of the preparations of the thyroid gland. It is apparently a specific in myxœdema and allied conditions, it has proved its efficacy in skin diseases of infinite variety, it has been of service in cases of extreme obesity, and, in inoperable carcinoma it has in many instances, with or without oöphorectomy, exercised a restraining if not a curative influence upon the progress of the malady.

But although such results are recognised yet it must be admitted that the action of the drug, except in cases of myxœdema, is often uncertain and disappointing in the extreme. Notwithstanding, the remedy is very valuable.

As a small contribution in its favour, I shall briefly relate a few instances in illustration of its therapeutic usefulness.

CASE I.—A lady, aged 44, came under my care two and a half years ago, said to be suffering from valvular disease of the heart. She was wasted to a shadow, weighing only 93 lbs. Her chief complaint was of great weakness.

On uncovering the chest, with the view of examining the heart, a remarkable state of matters presented itself. Both mammae were of stony hardness. They were freely movable on the subjacent tissues and the nipples were not retracted. Studded over the front of the chest were numerous small subcutaneous nodules, the largest about the size of a walnut, lying in the fourth left space near the sternal edge. Similar nodules were scattered freely over the back and sides of the thorax, and one or two could be felt in the upper part of the abdominal wall. A few nodules were present in the front and sides of the neck, and one of considerable size projected from the right cheek. All the nodules had similar characteristics; they were hard, painless, and movable. They numbered about fifty. The supraclavicular and axillary glands on both sides were enlarged and hard. The heart was somewhat hypertrophied. Its action was forcible and regular and accompanied by a loud systolic murmur, having its greatest intensity in the pulmonic area. There was no evidence of visceral disease. The urine was natural. Menstruation was regularly performed. The temperature as a rule was abnormal, and it was difficult to keep the patient warm.

On recognising the case to be one of widespread carcinoma, I prescribed tabella thyroidei (5 grains) to be taken twice a day, gradually increasing the dose until four such tabloids were taken daily. Occasionally the number of tabloids had to be reduced owing to complaints of cardiac uneasiness, but their administration was never altogether abandoned. This plan of treatment was persisted in for six months. At the end of that period, May, 1899, a remarkable change had taken place in the patient's condition, a change which began to make itself manifest a few weeks after the commencement of the treatment. Over the chest anteriorly and laterally, and in the abdominal wall, not a single nodule could be discovered, even the large one in the left fourth space had disappeared, while posteriorly only two nodules remained. Those on the cheek and neck, however, seemed little altered, but the supraclavicular and axillary glands, as well as both mammae, were somewhat softer and smaller than before. The patient had also gained more than a stone in weight. Her general appearance had improved, and she no longer complained of inability to keep warm. The body temperature was now normal. Soon after this date she went home to England, when, although the thyroid treatment was most faithfully persisted in, she commenced to lose ground. The nodules gradually reappeared all over the thorax, retraction became evident near the right nipple, strength began to fail, and the body weight to decline. When I next saw the patient, July, 1899, the thorax was once more studded with nodules, anteriorly, laterally, and posteriorly, and a few existed in the abdominal wall. In all I counted 150. Some of the nodules were extremely prominent and the skin over these was tight, glistening and red, as it on the point of giving way. The puckering on the right breast had proceeded to ulceration and the appearance of the ulcer was characteristic of malignant disease.

In spite of this relapse the treatment was persisted in, and the patient again began to improve. But although the nodules decreased greatly, in number the mammae resumed their original hardness and there was a steady, though slow, increase in the size of the ulcerating surface previously referred to. During the whole of the winter, 1899-1900, and the summer of 1900, the disease remained practically stationary as far as the number of the nodules were concerned. The ulcer on the breast, however, still increased, and occasionally was the source of hæmorrhage. The thyroid treatment was maintained.

A few weeks ago the patient returned to the Riviera, and I again saw her. The subcutaneous nodules were more numerous and larger than ever before, a hæmorrhagic fungating ulcer occupied a large area of the right breast, and there was distinct evidence of enlargement of the liver and consolidation of the lower half of the right lung. All the weight previously gained had been lost and there was much distress due to dyspnoea induced by the slightest exertion and to dyspeptic troubles. Menstruation had been absent for six months. Although the case seems now to have reached its last stage thyroid treatment is still continued in the lingering hope that it may yet be able to retard the progress of the malady.

REMARKS.

I think that it may fairly be claimed that in the case narrated treatment by thyroid extract exercised for a time an extraordinary influence on the disease. The almost complete disappearance of the nodules, little short of marvellous, and the accompanying general improvement, led one to hope that the patient's case would eventually prove to be an example of the cure of inoperable malignant disease through the agency of an internal remedy. But though these hopes have not been realised the treatment undoubtedly gave great relief, and restored the patient for a time to comparative health and to the enjoyment of life. Notwithstanding the fat-reducing properties of thyroid extract it is interesting to note that in the early stages of the treatment the patient gained weight, considerably, a result manifestly due to the improvement in her nutritional powers, coincident and probably connected with the reduction in the number of nodules. Although the mammary, supraclavicular, and axillary glands were to a certain extent beneficially influenced by the drug it was very evident that its chief effect was exercised on the subcutaneous nodules and not on the affected glandular tissue.

Within the past few years I have met with only two other

instances of inoperable carcinoma. In both cases the mammae and axillary glands were extensively affected, but in neither case were there any subcutaneous nodules. Both patients took thyroid extract faithfully for a considerable time, but it had not the slightest effect on the course of the disease.

In the case just narrated it is worthy of record that the prolonged exhibition of the remedy gave rise to no unpleasantness except occasional palpitation, and that it produced neither glycosuria nor albuminuria. Indeed, its effect was rather agreeable than otherwise, for it raised the body temperature to the normal standard, thus removing the chilly sensations which were at one time so troublesome.

Another illustration of the efficacy of the treatment by thyroid extract is afforded by the following case:

CASE II.—A child of 3 years came under my care in Aberdeen a few years ago. When I saw him he was covered with an eruption exactly like that of measles. His eyes were red, his features swollen, and his temperature raised. In a few days convalescence set in and was quickly established. But about a fortnight afterwards I was again called in to see him suffering in exactly the same way. The eruption was now, however, more extensive and intensely itching. Although general it was more pronounced on the face and trunk than on the limbs. In some places spots of erythema alone existed; in others they had been converted into flattened bullæ, here and there with hæmorrhagic contents. After a few days of fever and intense itching, abolishing all sleep, the eruption waned, the bullæ withered without bursting, and the patient slowly recovered. But only for a time. Again and again the disease recurred at intervals of about ten days, passing through the various phases of cedema, erythema, bullæ, and subsidence, with slight scaling. On one occasion, when a particularly severe relapse was at its height, the resemblance of the patient to a case of confluent small-pox in the vesicular stage was striking in the extreme.

With every fresh relapse of the disease the child's strength diminished. He could not sleep owing to the intense itching; he would not eat owing to the pain induced by the movements of his oedematous lips; he could not lie comfortably in bed; he became extremely emaciated, and altogether his condition was most alarming. The case puzzled me exceedingly. Its symptoms did not conform to any cutaneous disease with which I was acquainted, and it proved refractory to all ordinary treatment, local and general.

As a last resort I prescribed thyroid extract in doses of half a grain two or three times a day, and in a few days the effect of the remedy was evident. The cutaneous inflammation and with it all the local symptoms gradually subsided, and the temperature became normal. Without going into wearisome details I may state that convalescence once established went on uninterrupted, and that the administration of the remedy was maintained as a precaution for several weeks after all symptoms had disappeared.

The last instance which I shall adduce in testimony of the extraordinary power of thyroid extract is the following:

CASE III.—A very stout gentleman, aged about 50, had long been the subject of chronic Bright's disease, but in spite of repeated warnings he lived his ordinary life, taking a very full diet, and paying no attention to such details as the use of alcohol and the dangers of cold and wet. Becoming alarmed at his increasing stoutness—he weighed 208 lb.—he sought my advice, and, not without some misgiving as regards his albuminuria, I suggested that he should try the effects of tabloids of thyroid extract in 5 gr. doses thrice a day. He consented gladly, and persevered in the use of the remedy for about a month before any reduction in weight was apparent. At the end of that time, however, he began to get less stout, and in a few months more he had the satisfaction of knowing that he had lost about 3 st., that his bodily activity had been restored, and that no evil effects had resulted from the treatment. He still keeps down his weight by having recourse to the tabloids from time to time.

I have used thyroid extract in several other cases of obesity, but in none were the results so satisfactory as in the instance just detailed. Possibly the patients failed to carry out the treatment faithfully and for a long enough period, not recognising that the fat-reducing properties of the remedy are by no means energetic, and at first may be almost imperceptible.

These three cases seem to me to afford very marked testimony in favour of the power of this remarkable drug. At the same time it must be admitted that results such as I have narrated are by no means invariable even in cases which are similar, and it is to be regretted that the absence of definite knowledge as to the physiological action of thyroid gland when administered internally renders its use in practical medicine generally so uncertain, so inconstant, and so empirical.

A STATE EPILEPTIC COLONY FOR ILLINOIS.—A colony for epileptics in the State of Illinois is to be opened, and North-cliff, near Elsah, Jersey County, has been conditionally accepted by the State Board of Charities as its future situation. Governor Tanner is reported to have stated, on December 5th, 1900, that there were more than 5,000 epileptic inmates of the various eleemosynary institutions of the State.