LETTSONIAN LECTURES

ON

THE INFLUENCE OF CLIMATE IN THE
TREATMENT OF PULMONARY
CONSUMPTION.*Delivered before the Medical Society of London.*By C. THEODORE WILLIAMS, M.A., M.D. Oxon., F.R.C.P.,
Physician to the Hospital for Consumption and Diseases of the Chest,
Brompton; etc.LECTURE II (*concluded*).

State of the Lungs.—The condition of the lungs immediately before and after the patient underwent climatic treatment has been carefully noted, and the principal results are tabulated (Table II). Without troubling you with all its details, I will draw your attention to the leading facts. Of the 243 patients, 149 were in the first stage; *i.e.*, in 61 per cent. or three-fifths, tubercular consolidation of the lungs was detected: of these, 54 had the right lung affected, 39 the left, and 56 both lungs affected. This carries out the law, based on my previous larger statistics, that the right lung is more liable to attack than the left. Thirty-eight patients were in the second stage, the right lung alone being affected in 11; the left alone in 14; and softening being present with consolidations in 13. Thus, 15½ per cent. of the patients were in the second stage. Excavation was present in 56, or 23.06 per cent.—nearly a fourth; the right lung being excavated in 23, the left in 31, and double cavities existing in 2 patients. Here, again, we find well demonstrated the now recognised law of the left lung being more prone than the right to excavation. As regards unilateral or bilateral affection, we may cite that of the whole 243, 96 had both lungs affected, and in 147 only one lung was attacked.

between Worthing and Bognor; I passed a winter at Queenstown, Cove of Cork, a well-known warm retreat, one of the first that catches the Gulf-stream influence; 58 spent 79 winters in the Undercliff (Isle of Wight), either at Ventnor or Bonchurch, and for convenience I have classed these together as Ventnor, there being no important difference between them in climate; 3 spent 11 winters in Cornwall, for the most part at Penzance; and 114 wintered in various parts of Devonshire, of whom 100 spent 153 winters at Torquay, I wintered at Ilfracombe, and 13 passed 24 winters in parts of South Devon, such as the coast towns of Dawlish, Teignmouth, etc., excluding Torquay.

Thus, 386 winters were spent at various sanatoria by 268 patients, or rather by 243 patients, as 25 of them spent winters at more than one health-resort, and are therefore duplicates. This gives an average of 1.44 winters per patient. By the term winter, I mean a period of at least three of the coldest months of the year, though, with the great majority, it includes five or six months, the usual period being from October to April.

A glance at our list shows that, at the places included, the invalids were not likely to have suffered from want of nutritious food or good medical advice, both articles being abundant in these places, and probably the food-supply of a better quality and more suitable for invalids, than is to be met with out of England. Cod-liver oil was ordered to all these patients, and was taken regularly by the majority, but in forty it was ascertained to have been taken irregularly. The general treatment was of the sustaining character now in vogue in this country, combined with such an amount of counter-irritation as local exacerbations justified, and of palliative measures in the form of sedatives, as the cough rendered necessary. The tonics chiefly used as a vehicle for the oil were the various mineral acids, phosphoric, nitro-hydrochloric, sulphuric and nitric, combined with vegetable bitters, such as strychnia, quinine, calumba, quassia, cascarilla, gentian, and orange. A few of the patients took hypophosphites of soda and lime, and I cannot discover that these improved more than the others; but I take this opportunity of correcting an error which appeared in the work of an author whose name is closely connected with the use of hypophosphites

TABLE II.—*State of Lungs in 243 Consumptive Patients who wintered at Home-Station.*

	Patients.	Per ct.	State of Lungs before wintering at the Health-Station.	State of Lungs after wintering at Health-station.							Summary.		
				Cure and Decrease.	Stationary.	Advance.	Advance & Extension.	Extension.	Unknown.*	Worse.†	Improved.‡	Stationary.	Worse.
First Stage	149	61.31	54 had the right lung alone affected. 39 " left " " 56 " both lungs affected."	58	32	20	17	13	9	50	41.42	22.85	35.71
Second Stage	38	15.63	11 had the right lung alone affected. 5 the right in 2d stage & the left in 1st 14 the left lung alone affected. 5 the left in 2d stage & right in 1st 3 both lungs affected.	14	3	15		3	3	18	40.00	8.57	51.43
Third Stage	56	23.04	13 had the right lung alone affected. 2 " right in 3rd st. & left in 2nd. 8 " right in 3rd st. & left in 1st. 16 " left lung alone affected. 15 " left in 3rd & right in 1st. 2 had both lungs in 3rd stage.	18	15	10	5	3	5	18	35.30	29.41	35.30
Total	243		Totals	90	50	45	22	19	17	86	39.82	22.12	38.05
Right lung alone affected in ..	78	32.10											
Left	69	28.40											
Both lungs affected	96	39.50											

* Unknowns excluded in percentages.

† Under Worse are bracketed "Advance", "Advance and Extension", and "Extension".

‡ Under Improved are included "Cure" and "Decrease".

Summing up, we must bear in mind that three-fifths of the patients were in the first stage, and two-fifths in the second and third stages; also, three-fifths had one lung attacked; two-fifths had disease in both lungs. The patients passed one or more winters at one of the British coast stations, as will be seen by the accompanying list. (*See Table III*). Twenty patients spent 20 winters at Bournemouth; 6, 11 winters at Brighton; 6 spent 7 in the Channel Islands on the picturesque shores of Jersey and Guernsey; 57 passed 75 winters at Hastings; 3 spent 4

to the effect that the increased duration of life in the statistics of consumption, published by my father and myself, was due to the use of hypophosphites. The number of patients taking them, compared with the whole number, was so insignificant, as not to affect the after-history one way or another. I may mention that, since this climatic treatment, 45 of the 243 patients are ascertained to have died.

And now we come to the results of the climatic treatment, which must be considered under two aspects: *general*, that is, the effect on

the patient's general health, on appetite, digestion, sleep, cough, strength, colour, respiration, temperature, pulse, and weight; *local*, the effect on the lungs.

The general results have been arranged in four classes, and are sufficiently indicated by the terms used—1. Much improved; 2. Improved; 3. Stationary; and 4. Worse. We find that out of the 243 patients, 66 were much improved, 94 were improved, 18 were stationary, and 65 were worse. Expressed in percentages, the results were

Much improved...27.16 } Stationary 7.41
Improved38.51 } =65.67 Worse26.74

Thus, we see, that 65.67, or nearly two-thirds improved, only 7½ per cent. remained stationary, and rather more than a quarter deteriorated. The general results must, on the whole, be considered satisfactory.

We will now turn to the local results. These are included under six classes, and are arranged in Table II. First, as to *cure or decrease* of disease, it was hardly thought necessary to make a separate arrangement for cures, *i.e.*, absolute arrest; and we have therefore mixed them with "decrease", this indicating that the physical signs of disease are perceptible over a smaller area of the lung. *Stationary* implies that the physical signs remained much the same as they were before climatic treatment. *Advance, extension, and advance and extension*, all speak for themselves. The table shows us a total of 90 decrease, 50 stationary, 45 advance, 22 advance and extension, 19 extension, 17 unknown; or, counting advance, advance and extension, and extension as "worse", we arrive at a total of 86. Excluding the "unknown", and expressed in percentages, the improved were 39.8; the stationary, 22.12; and the worse 38 per cent. This forms a marked contrast to the changes in general health, and demonstrates only too faithfully how all the appearances of an improved state of health may be present, and yet the disease may continue its insidious and steady march unchecked. We have 40 per cent. of locally improved, against 65 per cent. generally better; and 38 per cent. worse locally, against 26¾ generally so. The moral is, that we must not trust too much to general appearances, and that an opinion to the effect that the patient has improved must not be given unless a very careful examination of the chest confirms it. The extension of disease does not seem to have proceeded very rapidly, for we find that only 41 of the 243 showed extension, whereas, as has been indicated, 67 showed advance. As regards each stage, 41½ per cent. in the first stage improved; 40 per cent. in the second; and 35 per cent. in the third: 22 per cent. in the first stage remained stationary; 8½ per cent. in the second; and 29 per cent. in the third. The first stage shows 35 per cent. worse, the second 51 per cent., the third 35 per cent. The first stage has, therefore, as might be expected, the largest number of improved, and the third the smallest; the second, as we might predicate of a shifting condition, has the smallest number of stationary, and the largest of worse.

Having briefly stated the general and local results of these 243 cases, we may now consider the individual health-stations, as given in Table III, and see how our patients fared at each. Take the general state first. Now, I am sorry to say that the numbers are too small to enable us to draw deductions about all the localities, but it will be seen that 20 wintered at Bournemouth, 57 at Hastings and St. Leonard's (these towns being, for the sake of brevity, classed as Hastings), 100 at Torquay, and 58 at Ventnor (including Bonchurch); and with these numbers we can deal in percentages, as I have shown in Table III, which, I am afraid, may prove a little hard to understand, but will repay study.

First, we come to Bournemouth, where 20 patients passed 20 winters, 6, or 30 per cent., were much improved, 7, or 35 per cent., improved, 2 remained stationary, and 5, or 25 per cent., became worse. Thus 65 per cent. improved, and 25 per cent., or one quarter, deteriorated.

What of Hastings? Here 57 patients passed 75 winters, 23 being much improved, 18 improved, 3 stationary, and 13 becoming worse; or, in percentages, 72 per cent. were improved, 5¼ per cent. remained the same, and 22.8 per cent. were worse.

Torquay had 100 patients for 153 winters, and of these 19 improved much, 41 improved, 10 were stationary, and 30 worse; *i.e.*, in percentages, 60 per cent. improved, 10 per cent. remained the same, and 30 per cent. became worse.

Lastly, Ventnor had 17 much improved, 23 improved; *i.e.*, a total of 40 improved, 4 stationary, 14 worse; or, in percentages, improved 68.96 (nearly 69) per cent.; stationary, 6¾ per cent.; and worse, 24 per cent.

Now, these are remarkable figures. Hastings stands by far the first in this list, both in large percentages of "improved" and in small number of "worse". Next comes Ventnor, then Bournemouth, and, last of all, Torquay, which in the "improved" list falls short of Hastings by 11 per cent., and of Ventnor by 9 per cent.

Bear in mind that these general results assign the largest amount of benefit to the most easterly stations, and follow a course exactly the reverse to that of the warmth of the localities; Hastings, the coldest, being at the top of the list, and Torquay, the warmest, being at the bottom.

Now for the local changes. Excluding "unknowns", the Bournemouth patients showed local decrease of disease in 7, a stationary condition in 7, and advance or advance and extension in 6. This gives us roughly 35 per cent. improved, 35 per cent. stationary, and 30 per cent. worse.

Hastings gives decrease in 24, stationary condition in 14, advance of disease in 9, extension in 2, and advance and extension in 5. Arranged in percentages, this gives us 44½ per cent. improved, 26 per cent. stationary, and 29½ per cent. worse. Torquay shows 35 instances of decrease, 18 stationary, 19 advance, 8 extension, 10 advance and extension; or, in other terms, 39 per cent. improved, 20 per cent. stationary, and 41 per cent. worse. Ventnor shows 23 decrease, 9 stationary, 10 advance, 8 extension, 3 advance and extension; or 43 per cent. decrease, 17 per cent. stationary, and 39½ per cent. worse.

Now, these local results differ slightly from the general ones. In number of "decrease" cases, Hastings comes out first, then Ventnor follows closely after, and, separated by a long interval, comes Torquay, Bournemouth bringing up the rear. In percentages of "stationary" cases, Bournemouth, as might be expected from the small numbers of decrease, stands at the top of the list. Next comes Hastings, followed by Torquay and, lastly, Ventnor.

In the category of "worse", Hastings has the smallest number, Bournemouth next, Ventnor comes after, *longo intervallo*—there being a difference of 10 per cent., and Torquay is last. It will be remarked that here, too, excluding Bournemouth, which, owing to the smaller number of cases, does not afford us such satisfactory data as the others, the result is, *the more westerly the station the greater the number of "worse"*. What deductions, then, may we draw from the combination of the general and local results? And here the greatest caution is necessary and the only safe path to pursue in the cause of impartiality and truth

TABLE III.

	Patients.	Winters.	Average of Winters.	LOCAL RESULTS.								GENERAL RESULTS.					
				Cure and Decrease.	Stationary.	Advance.	Advance & Extension.	Extension.	Unknown.*	Improved.†	Stationary.	Worse.‡	Much Improved.	Improved.	Stationary.	Worse.	
										Per ct.	Per ct.	Per ct.					Per ct.
Queenstown	1	1				1											
Cornwall	3	11	3.67	2	1								1	2		1	
South Devon	13	24	1.87	7	2	3			1				4	7		2	
Torquay	100	153	1.53	35	18	19	10	8	10	39.00	20.00	41.00	19	41	10	30	60
Ilfracombe	1	1		1													
Channel Isles	6	7	1.16	2	2	1		1					1	4		1	
Bournemouth	20	20	1	7	7	3	3			35	35	30	6	7	2	5	65
Ventnor	58	79	1.36	23	9	10	3	8	5	43.40	16.98	39.62	17	23	4	14	68.96
Worthing and Bognor ..	3	4	1.33	1				1	1				1	1		1	
Brighton	6	11	1.83	2	1	2	1						1	3	1	1	
Hastings	57	75	1.31	24	14	9	2	5	3	44.45	25.92	29.62	23	18	3	13	71.93

* Unknowns excluded in percentages.

† Under Improved are included "Cure and Decrease".

‡ Under Worse are bracketed "Advance", "Advance and Extension", and "Extension".

is not to go an inch beyond what the facts justify. Whatever these deductions may be, I can conscientiously say that they were arrived at after careful and disinterested study of facts, accumulated without any special object of proving or disproving theories. The cases were taken by Dr. Williams and myself, and, as may be seen from the account of them, were not specially selected, but were such as occur daily in physicians' practice, and, moreover, the climatic treatment was not always in conformity with our advice, but had frequently to be adjusted to private considerations, whether of purse, family, or the convenience of the patient.

The following deductions may be drawn. Torquay was locally and generally the least beneficial of the four health-stations, then came Ventnor and Bournemouth, with so little difference between their results, taking into consideration the smaller data about Bournemouth, that we are not justified in placing one before the other; and we must, therefore, bracket them, as is done in the Cambridge Triposes. Hastings was decidedly the most beneficial both in regard to local and general improvement.

The question naturally arises, Can this disparity of result not be accounted for by the nature of the cases? Were the worst patients sent to Torquay, and the most promising ones to Hastings? I need not remind the Fellows of this Society how difficult it is to make a comparison of cases of consumption, where a small amount of local mischief may coexist with great constitutional disturbance, and when, *vice versa*, with a large amount of lung-consolidation, or even excavation, the general health may be very little affected. Nevertheless, I have made some attempt to arrive at a relative estimate of the cases before undergoing the climatic treatment, taking as a basis the nature and origin of the disease in each, according to my previous classification, as well as the condition of the lungs.

TABLE IV.—*Nature of the Disease in the Patients wintering at the subjoined Sanatoria, expressed in Percentages.*

	Inflammatory (Pneumonic).	Catarrhal.	Chronic Tubercular.	Scrofulous.
Hastings	21.52	21.52	54.37	1.90
Ventnor	22.41	15.51	58.62	
Bournemouth	35.00	15.00	35.00	15.00
Torquay	19.00	23.00	49.00	7.00

We find that, comparing the patients sent to Torquay with those who wintered at Hastings, in each case nearly half of them trace their disease to inflammation of various kinds; but that rather more catarrhal origin was traced in the Torquay cases against a preponderance of pneumonic or pleuro-pneumonic origin in the Hastings ones. Also a few more of scrofulous origin went to Torquay than to Hastings, where there was a larger number of the ordinary chronic tubercular kind. So, after all, the difference is quite unimportant, as cases of scrofulous origin have a better prognosis than the average chronic tubercular, though catarrhal phthisis is not quite so favourable as phthisis following pneumonia.

As regards the nature of the case, the Ventnor patients closely resembled the Hastings ones, but counted a few more of the ordinary chronic type. On the other hand, the twenty Bournemouth patients differed considerably from the rest; the proportion of phthisis arising from pneumonia and pleuro-pneumonia, and of scrofulous origin, being larger, while that of ordinary tubercular phthisis is smaller. So, considering the ascertained prognosis of the two first classes, these patients ought to have done better; but let us see what light the state of the lungs throws on these differences.

TABLE V.

	First Stage.	Second Stage.	Third Stage.	Both Lungs affected.
	Per cent.	Per cent.	Per cent.	Per cent.
Bournemouth	60.00	15.00	25.00	55.00
Hastings	57.62	18.64	23.72	40.67
Torquay	61.76	16.67	21.56	38.23
Ventnor	62.06	15.51	22.41	37.93

The above table (Table V) shows the patients at the four sanatoria, classified according to the stage of the lung and the circumstance of one or both lungs being affected. We see that the largest percentage of first stage cases was at Ventnor, and the smallest number was at Hastings; that the largest number of second stage patients was at Hastings, and the smallest at Bournemouth; in the third stage category, there is no marked difference; but Bournemouth has slightly the largest number, and Torquay the smallest. In the matter of having

both lungs affected, Bournemouth is far the worst; Hastings being the next, and Torquay and Ventnor having about the same percentage. The general impression derived from a study of this table is, that the worst cases as regards state of the lung went to Hastings, the next to Bournemouth, and the most favourable to Torquay and Ventnor, the patients at these latter places not differing much. Therefore, on the whole, taking into consideration the double affection, the worst cases went to Bournemouth and the next to Hastings. Torquay and Ventnor had the most favourable ones.

It is evident, therefore, that we cannot explain the contrast in results between Hastings and Torquay on either of these grounds, and I am not aware of any other ones which could be adduced. If the fault did not lie in the patients, it should be sought for in the place. We know that at all these places good food and accommodation are equally obtainable. At all of them medical men of eminence and ability reside, and we may be quite sure, that whatever assistance the science of medicine can render to arrest disease or to assuage suffering was equally at hand at all these sanatoria. The questions of drainage and water-supply, important though they be, do not bear specially on our inquiries, because, as far as we know, none of these patients suffered from those diseases which arise from or are aggravated by defects of drainage or by impure water.

We discussed the doctrines of immunity from phthisis at some length in the last lecture, and it would be interesting to bring this theory to bear on our present statistics. This, owing to the laborious and enlightened labours of Mr. Haviland, is an easy task; for, in his beautiful map representing the geographical distribution of phthisis among females in England and Wales, the relative phthisis mortality of the various districts in which these health-stations are situated is depicted; and we find Bournemouth among the districts where the mortality is highest; viz., 37 to 40 deaths from this cause in 10,000 living. In the second class, where the deaths are 33 to 36 per 10,000, Hastings comes; while in the fourth class, where the deaths are only 25 to 28 per 10,000, stand both Ventnor and Torquay, this being below the general average mortality of England from this disease.

If, therefore, the immunity ground stood good, we should expect better results from sending our patients to Torquay and Ventnor than to Bournemouth and Hastings, an expectation quite unwarranted by our statistics.

Soil does not throw any great light on our inquiries, as, although it has been proved by our eminent orator Dr. Buchanan that phthisis prevails more on impermeable than on permeable soils, none of the places under our immediate consideration are distinctly situated on clay.

Torquay is shown by Mr. Pengelly to stand on slate and limestone, surrounded by hills composed of red sandstone and conglomerate.

Bournemouth is famous for its great depth of sandy soil, extending in parts at least fifty feet downwards, though in the narrow valley in which runs the river Bourne some clay is reported to be present; but the general character of the soil is essentially dry and permeable.

Ventnor in the Undercliff, according to Dr. Scoresby-Jackson, is situated on a very permeable soil. Geologists state that this side of the Isle of Wight consists in the upper part of chalk and marl, overlying green sand, dark marl, and ferruginous sand. We know that the action of water on this marl has formed it into mud, much of which is therefore washed away, and the green sand and chalk, being left without support, fall down, and in this way have been formed the picturesque terraces called the Undercliff.

At Hastings, the Wealden clay is overlaid with sand to a sufficient extent to render the soil dry, and the cliffs behind the town are of Hastings sand and of chalk.

Therefore, all these soils are more or less permeable, though, perhaps, that of Bournemouth enjoys in this respect the pre-eminence.

Torquay has no suspicion of clay about it, and its rocky nature affords every facility for ample surface-drainage.

By the process of exhaustion, we are brought to purely climatic phenomena for the explanation of our differences of results, and we will now consider these phenomena.

Torquay is situated in a corner of Torbay, whose beauties have been compared, and not unjustly, with those of the Bay of Naples and of Porto Ferrajo in Elba; the promontories on each side of this bay completely protect the district from westerly and easterly winds, while the distant range of Dartmoor and a series of intervening hills form a sufficient bulwark against northerly blasts. The series of hills over which the town is scattered, viz., the Warberry, Park Hill, and Warren Hill, besides affording protection, provide sites for villas with the most varied aspects and elevations. This feature has been utilised. The well-built villas which bespangle their sides, each in its own garden, and generally fulfilling the sanitary requirements of an invalid

residence, appear to offer an almost perfect winter asylum. Mr. Vivian's tables teach us that Torquay has the highest winter temperature in England, and, excepting Penzance, the greatest equability. Though situated in a somewhat rainy county, Torquay has a small average rainfall and a moderate number of rainy days. The Dartmoor range attracts much of the rainfall, which would naturally come to the share of Torquay—a fact realised, to their cost, by our valiant autumn campaigners when they encamped on the moors of that wild district!

The scenery of Torquay is very exquisite, combining the mingled attractions of mountain, sea, and woodland beauty, and its mild climate has made it the resort not only of consumptives from England and the Continent, but also of numerous aged persons, many of them of our own profession, to whom the avoidance of extremes, especially of severe cold, means length of days.

The mean winter temperature is 44 deg. Fahr., its range being 29 deg. The rainfall in winter (three months) is 6.82 inches, distributed over thirty-five days.

Bournemouth is more open to the sea than Torquay, and far less sheltered to the north and east; its protection being chiefly derived from distant hills, and from the fine grove of fir trees which surround the villas on every side, imparting fragrance to the air without increasing the damp of the atmosphere. Here the mean winter temperature is 42.38 deg. Fahr. The annual rainfall is 28.9 inches.

Ventnor is built on a series of steps facing the sea, and open to the south, south-east, and south-west winds, though sheltered from all other winds by the lofty downs, which rise 500 to 700 feet immediately behind the town. The mean winter temperature is 41.81 deg. Fahr., the range being 29 deg. The winter rainfall is 4.65 inches, divided among thirty-nine days.

Hastings and St. Leonards may be described as the most "blowy" of these four places; the two towns are backed by an efficient screen of cliffs which protect from the north and north-east; the old town of Hastings nestles among the hills, while St. Leonard's is extended along a narrow strip hemmed in against the sea by the more or less precipitous ridges. This town, as well as part of Hastings, is exposed to a certain amount of east wind. The mean winter temperature is 39 deg. Fahr., with a range of 33 deg. Fahr. Rain falls on thirty-nine days in winter to the amount of 7.59 inches.

It would be superfluous for me to describe further those places which are known to most of you, and about which so much has been published; recently they have been described, especially in their health aspects, in an admirable series of articles in the *Sanitary Record*.

Comparing the health of the patients during their stay at these four watering places, I find that at Torquay a larger proportion lost appetite, and from bilious or other derangements of the digestive system were unable to persevere in the use of that most important drug—cod-liver oil. I also find that diarrhoea was more prevalent here.

At Hastings, on the contrary, as a rule, the appetite improved; cod-liver oil was taken regularly, and diarrhoea was a less frequent symptom.

Before closing, a word should be said about the other stations, which have not furnished sufficient numbers to yield percentages for comparison. The six patients who passed eleven winters at Brighton yielded as general results four "improved", one "stationary", and one "worse", and locally a decrease of disease in two, a stationary condition in one, and a worse one in three. Of the six Channel Islands patients, only one became worse generally, and two worse locally. The three Cornwall ones who spent eleven winters there, all improved generally, and had no worse locally. The thirteen South Devon patients, other than those at Torquay, did fairly well, having only three locally and two generally worse at the end of the time. The single cases at Queens-town and Ilfracombe hardly call for any remark; nor do the three patients who spent four winters at Worthing and Bognor.

Do not the facts, on which we have been dwelling, permit us to infer that in the treatment of consumption a bracing though gusty climate avails more than a mild, still, and somewhat relaxing one? and that, instead of seeking for a sedative atmosphere to allay the cough and reduce irritability, we should in most cases select a stimulating one to increase the appetite and to invigorate the systems of our patients? And what is it that renders the western end of the British Channel less beneficial in climate to consumptive patients than the eastern end? We may infer that it is the stronger influence of the Atlantic warm current and its accompanying winds on the shores of Devonshire and Cornwall, which, though it raises their winter temperature many degrees, clothing their hillsides with verdure, and causing what would otherwise be waste places to bloom with rare exotics, deprives them of the stimulating and bracing influence which is possessed by the less beautiful shores of Sussex, with its breezy downs and colder winter climate.

CASE IN WHICH ADAMS'S OPERATION FOR SUBCUTANEOUS DIVISION OF THE NECK OF THE THIGH-BONE WAS PERFORMED ON BOTH SIDES, IN THE SAME PATIENT FOR STRAIGHT ANKYLOSIS.*

By EDWARD LUND, F.R.C.S., Surgeon to the Royal Infirmary, Manchester.

AT our annual meeting held in Newcastle-upon-Tyne, August 1870, Mr. William Adams read a paper entitled "Remarks on Subcutaneous Division of the Neck of the Thigh-bone, as compared with other Operations for Rectifying Extreme Distortion of the Hip-joint in Bony Ankylosis", in which he observed that "cases of extreme deformity at the hip-joint, with the thigh flexed upon the pelvis, and generally adducted or drawn towards the opposite limb, sometimes even crossing over the opposite limb, are not uncommonly met with in surgical practice, as the result of various forms of hip-joint inflammation"; and he described in detail a very simple and ingenious method of so dividing the neck of the femur in such cases as to remedy the deformity and greatly benefit the patient. But, in the cases so referred to, and in others subsequently published by Mr. Adams in the form of a pamphlet, two things are observable: the operation was had recourse to to correct angular ankylosis of the limb when held in an useless or distorted position; and, secondly, after the operation, in only one case was Mr. Adams able to record the attainment of motion in the false joint thus formed at the point of section of the bone, and this occurred in the practice of Mr. Jessop of Leeds. The operation had been performed on August 1st, 1870, and, on November 11th in the same year, it was reported: "The range of motion in the new joint was not diminished, and her command over the limb had increased. She could now place the foot somewhat firmly on the ground, and could distinctly bear a little weight upon it. The attempt to use it in progression gave rise to some pain; but this did not prevent her from persevering." In the case which I here relate, the ankylosis was complete; it existed in both hip-joints; the thighs were fixed exactly in a straight line with the axis of the trunk, and they were perfectly immovable, so that the patient could not by any means assume the sitting posture; yet, since the operation, the patient has acquired excellent motion in each hip-joint; he can support the weight of his body on either leg; and he has greatly benefited by an operation in which we must all take great interest, as having been originated and first performed by one of the many distinguished surgeons who are members of the British Medical Association.

My case was that of William Shone, aged 20, who had been admitted into the medical wards of the Manchester Royal Infirmary for chronic rheumatism affecting both hip-joints, and also to some degree producing a stiffening of the vertebral joints in the lower dorsal and lumbar regions, with some general fixing of the cervical vertebrae, so as to cause him to hold the head and body generally in a very fixed and curious position. It was determined to transfer the case to the surgical wards, to see if some attempt could not be made to correct this confirmed ankylosis of the hip-joints. He was, therefore, placed in my ward, and came under my observation early in last March.

As I have just said, the ilio-femoral articulation on each side was firmly ankylosed in a straight line. The history which the patient gave of himself was this. He had always enjoyed good health; had been engaged from boyhood in attending to farm duties, especially driving cattle and sheep, often through damp marshes and meadows, and under all conditions of weather. He had on several occasions remained many hours in damp clothes, and at times had even laid down and slept on the damp grass. These circumstances combined appear to have caused a severe attack of rheumatism about three years ago, for which he was confined to his bed for many weeks. At first, the right hip-joint was the seat of the disease, and in a few weeks afterwards the left side was similarly affected. He had also worked as a smith, and so been exposed to great heat and cold, which had increased the tendency to rheumatic disease. After recovering from the first attack, he was able to work at the forge for a short time, but then a return of the disease set in, and it was on this occasion that he discovered, after being in bed several weeks, that he had lost all power of bending the thighs upon the trunk, or, in other words, they were per-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Edinburgh, August 1875.