

tive mortality; it may be of use with regard to life-assurance purposes, and may be interesting to those who have some idea of entering the naval medical department.

ARTICLE XI.—*Indications and Counter-Indications of Davos (Switzerland), with some Statistics.* By Dr O. PETERS, Physician at Davos.

PRINCIPIIS OBSTA! Making use of an essay published by Dr A. Spengler in the *Bericht über die Rätischen Bäder und Cürorte*, I take the liberty to bring the following medical notices on Davos. Since about fifteen years, Davos, a valley in the Grisons, 1556 m. above the sea-level, is known a sanitarium for people suffering from phthisis. In 1862 Dr Spengler gave an account of complete absence of pulmonary consumption at Davos, and urged, no place might be more suitable for treating chronic disease of the chest. Thus every year the number of patients coming in search of help against the complaint of the human society was increasing, and a great number returned home cured for ever. Now I hope it might not be quite superfluous to publish some hints for physicians, very much being written already by laymen on Davos, its inhabitants, geological, meteorological, and other circumstances.

The chief mistake often made by physicians in climatic treatment is to send the patients hither in a stage in which they might not be rescued from the jaws of death. Indeed, it would be cruel to recommend the high altitude of Switzerland a man suffering from high hectic fever, intense night-sweats, wasting, persistent and distressing cough, without any strength nor resistance against the exciting Alpine climate, or even complicated with organic disease. He had better stop at home and try the sunshine of the south coast.

I suppose, to-day no medical man shall hesitate to concede that pulmonary consumption is to be considered as a consequence of the impairment of the general health by several bad influences. Decidedly such a disease might be cured in the high altitude as quickly and surely as nowhere else. By the pure, fresh air exciting the respiration, the circulation of the blood and the nerves, by the low barometric pressure and the atmospheric rarefaction and the expansion of the lungs thereby caused, the weak, sick body soon is strengthened, the appetite increasing every day, the food being assimilated without any trouble, the sleep being corroborative, the original weight being regained by-and-by. In this way the local affection of the lungs gradually is diminishing, lastly cured, together with the improvement of the general health.

Dr Spengler, in the above-mentioned essay, appointed *seven* indications, well confirmed by experience.

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| 1. Prophylactic residence. | 5. Reminders of pleurisy. |
| 2. Catarrhal phthisis. | 6. Nervous asthma. |
| 3. Induration of the lung. | 7. General weakness. |
| 4. Chronic bronchial catarrh. | |

1. Everybody with family or hereditary predisposition should settle in a high mountain climate for several years, until he is strengthened enough to undergo his due daily occupation without running the risk to die of phthisis. In these cases we obtain by far the best results. The same we do in those cases where a hæmorrhage suddenly occurs, the physician not being enabled to detect anything but perhaps at one little patch the auscultation sounds slightly diminished. These hæmorrhages usually arise in the bronchial mucous membrane by congestion of the blood and tenderness of the bloodvessels, and very often are the beginning of an acute and rapidly increasing phthisis. By those hæmorrhages *no* counter-indication is given. On the contrary, they are very seldom repeating at Davos, and by a longer residence the patient will be saved from pulmonary consumption.

2. At the top of the lung even the slightest catarrh being manifest, by no means the physician should hesitate to send his patient into a high altitude. Here is one exception, however. The climate of Davos being very exciting indeed, a patient suffering from pulmonary catarrh together with an erethic constitution, *i.e.*, too irritable nerves, is to send hither *on no account*, for such a condition has been shown to grow worse very rapidly at Davos. Very soon an inflammation of the adenoid tissue is to be met with, at last softening is present, and death unavoidable (phthisis gallopans).

3. Consolidation of one or both lungs may be cured at Davos by absorption. But nevertheless the affected area of the lung usually appears for a long time not quite in order, yet because the bronchial mucous membrane is changed into fibroid tissue. The same we find in the lower parts of the lung; the epithelial elements after an acute pneumonia remaining behind unresolved often get absorbed in an uncommonly short time. But sometimes the improvement does not proceed in this way, several tubercles being intermixed, which may not be healed but by softening, of course only within a longer time. On that account patients with one lobe of the lung mixed with tubercles had better stop at home. If only the top of the lung is affected by consolidation, a climatic treatment still may be proved, as it is confirmed by experience that softening goes on at Davos very slowly, usually without any high fever nor other disagreeable occurrences. And this may also be the reason why we do not see at Davos as many hæmorrhages as elsewhere, the bloodvessels of a cavity being obliterated long before getting corroded by the matter of the melted tissue. Of course it would be very ridiculous to expect Davos or any place else in the world to be free of hæmorrhages. Hæmoptysis occurs at Davos as well as at Hastings or Madeira, sometimes even fatal, a larger bloodvessel being corroded, or a bloodless, weak

patient being attacked by frequent though little hæmorrhages. But these occurrences are by no means the result of the climate of Davos; nay, I hope to convince the reader by the following statistics that hæmorrhages do not occur at Davos as often as in the lower country. The chronic inflammation proceeding especially in the interlobular tissue, the case sinks into the ordinary chronic consumption, the common "phthisis," which may be healed by shrinking of the tissue (fibroid phthisis). It is in these cases that the patient is to be sent to Davos as soon as possible. If he regains his appetite and gets strengthened, we may prevent the softening of the indurated area. Should ever a larger part of the lung be affected, and shortness of breath be the result of the shrinking and the vicarious emphysema, Davos is to be avoided. Those patients had better go to the "South" to the Riviera, to Ajaccio, or to the Lac de Genève.

4. If the chronic catarrh of the pulmonary mucous membrane has attacked a large part of the lung, or existed a considerable time already, complicated with emphysema and dilatations of the bronchi, it is no longer suitable for Davos. As regards the disease of the larynx, it is a mistake to consider the slightest affection of the mucous membrane or of the vocal chords including a counter-indication of Davos. Except the pharyngitis granulosa, very often treated at Davos, the most of the patients are suffering from hyperæmia of the larynx caused by the persistent cough and the matter passing through the glottis. But the improvement of the pulmonary disease increasing, this hyperæmia is diminishing by itself, as well as the common chronic catarrh of the larynx. But as soon as the submucous membrane is swelled, giving rise to shortness of breath, or if ulcerations or tubercles of the larynx are formed, Davos will be of no use.

5. A great number of pulmonary diseases are traceable to attacks of pleurisy, a certain amount of consolidation or thickening remaining behind, a source of local irritation, thus in time giving rise to the formation of tubercle. We may, however, prevent the tuberculization of the lung by the arresting power of mountain climate and the method practised at Davos. A patient suffering from empyema had better stop at home for to be operated, and should not come to Davos until the traces of his disease have nearly disappeared.

6. Asthma is to be cured at Davos if neither before nor after the attacks any catarrh or emphysema could be detected, *i.e.*, in cases of pure nervous asthma. Dr A. Spengler gives an account of several cases of nervous asthma all cured by the curative influence of Davos. Medicines never have been prescribed.

7. Now for the seventh indication. All people overworked at indoor pursuits or impaired by other unsanitary conditions, suffering from want of appetite, constipation, weakness, and hypochondria, attain the best results passing several months at Davos; but they must not be more than about sixty years of age, else they will become sleepless and lose their appetite, the mountain climate being too exciting for them.

General Treatment at Davos.—By this term I mean the way how the patients are to be treated in the high altitude. The open, pure air, warm milk, and the Italian wine of Valtelina, suffice the cold douche, the regular change of walking and resting, by these things we are enabled to cure the cases included in the above-mentioned indications. As to the five douches existing at Davos, they are furnished most properly with a high pressure, and well-informed servants, and are applied by nobody but the physicians.

And now let us enter on the statistics, furnished by Dr Spengler. 323 patients are treated by him from June 1877 till January 1879.

Prophylactic cases,	.	.	...	...	19
Nervous asthma,	.	.	...	...	7
<i>First Stage—</i>					
<i>a.</i> Unilateral,	.	.	...	112	...
Right lung,	.	.	43	...	...
Left lung,	.	.	69	...	...
<i>b.</i> Both lungs,	.	.	...	19	...
<i>Second Stage—</i>			...	...	204
<i>a.</i> Unilateral,	.	.	...	158	...
Right lung,	.	.	106	...	...
Left lung,	.	.	52	...	...
<i>b.</i> Both lungs,	.	.	...	46	...
<i>Third Stage—</i>			...	...	50
<i>a.</i> Unilateral,	.	.	...	45	...
Right lung,	.	.	24	...	...
Left lung,	.	.	21	...	...
<i>b.</i> Both lungs,	.	.	...	5	...
					<hr/> 411

We have got 411 cases, because 88 of them, having both lungs affected, one in first, the other in second or third stage, are duplicates.

Cure,	.	.	.	.	73
Improvement,	.	.	.	.	190
Worse on account of too short a residence,	.	.	.	.	18
Worse on account of the disease being too much advanced or the climate not being suffered,	.	.	.	.	19
Died here,	.	.	.	.	11
Died at home,	.	.	.	.	14
Stationary,	.	.	.	.	17
					<hr/> 342

You see the number of 342, 19 patients being treated twice and mentioned twice.

The limited space will forbid my entering into detailed particulars of the statistics; beyond an outline sufficient to give some of the leading features of the indications of Davos, I did not intend to elaborate. My essay must be looked on as a provisional, and not final. I only take the liberty to pass to an important question, viz., the *hæmorrhages at Davos*.

Out of those 323 patients treated by Dr Spengler, had hæmorrhages—

- 178 neither at home nor here;
- 126 at home, here never;
- 16 at home and here, *i.e.*, 5 per cent;
- 3 at home never, but here, *i.e.*, 1 per cent.

Summing up, we find well demonstrated that 304 patients—that is to say, 94 per cent.—never had any attack of hæmoptysis, and yet at 39 per cent. of them hæmorrhage formerly was present once or more. In 5 cases the hæmorrhage was fatal; 3 of them died instantly, patients in third stage, 1 already drawing to his end when arrived at Davos; the 2 others died of exhaustion and paralysis of the heart. The remainder very soon recovered from hæmoptysis, and left Davos, 2 cured, 8 improved, 4 worse.

I am of opinion these reports may be able to destroy all doubt concerning the hæmorrhages at Davos.

ARTICLE XII.—*Case of Coin in Air-Passages treated by Inversion of the Patient.* By JOSEPH BELL, F.R.C.S. Ed., Surgeon to the Royal Infirmary.

ON 10th May 1881 a waiter amused himself by throwing into the air a sixpenny-piece just received from a traveller. He intended to catch it in his mouth, but the coin disappeared. Fancying it had passed into his œsophagus, he came to the Infirmary, where he was seen by my house-surgeon, Mr Ross, who failed to find any evidence of its presence in either œsophagus or stomach, for the examination of the throat caused vomiting, and the coin was not found.

No laryngeal or pulmonary symptoms were present, though patient pointed to his left chest as being painful.

A laryngoscopic examination, however, satisfied Mr Ross and Dr Maxwell that the coin was lying edgeways in the left bronchus, just at the bifurcation.

There being no symptoms, he was left quiet, all preparations being made for tracheotomy if necessary, and Mr Ross slept in the side-room of the ward.

Next day I carefully examined chest and air-passages, with negative results; immediately after this, however, when I was in the act of operating on a sarcoma in the theatre, the patient was reported to be choking. Mr Ross found him in a paroxysm of