

# THE MEDICAL TIMES.

VOLUME I—NO. 20.]

KINGSTON, (CANADA), SATURDAY, NOVEMBER 15, 1873.

[PRICE FIVE CENTS.

## PRACTICAL MEDICINE.

### THE TREATMENT OF SPASMODIC ASTHMA.

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The treatment of spasmodic asthma is by no means easy, and in a disease where the modes of causation are so varied it is difficult to lay down rigid rules. The grand principle should be: Avoid all exciting causes of the attack, and place the patient under conditions most likely to allay, and keep allayed, spasm. The treatment may be divided into *climatic* and *medicinal*; the former being, as a rule, vastly more important than the latter. We have to discover a climate in which the patient can breathe—no easy task, indeed, in a disease the course of which follows neither rhyme nor reason, and often seems to depend wholly on the idiosyncrasy of the individual.

The only safe guide to follow in obstinate cases is the doctrine of contrasts, and, whatever the climate of the locality be where the disease has been contracted, to boldly resort to its very opposite: should it be a damp one, to resort to a dry one; if a dry one, to a moist one; and if inland, to the sea, and so forth. High localities suit some asthmatics; sea air a few; cold places some; warm localities others; but the atmosphere in favour of which the strongest evidence exists is that of populous towns, and the more smoky and drier the town the better for the asthmatic. Trousseau and Sée give marked instances of asthmatics who were cured by quitting their country homes and residing in Paris. Salter enumerates many striking examples, and even concludes that the worse the air is for the general health, the better for the asthma. Thus he considers the worst parts of cities—i.e., the least hygienic—the best for asthma; and, conversely, the best or most hygienic parts the least suitable for asthma; and in London he prefers the City to the West-end.

With reference to the advantages asthmatic patients derive by removing to the crowded portions of cities, a well-known physician of Nice furnished me with a good instance. An asthmatic English nobleman, who had resorted to the sunny south for sunshine and balmy air, took up his residence in a beautiful villa on the Promenade des Anglais, facing the sea. The situation was excellent, and the hygienic conditions as good as can be obtained at Nice; but he could not breathe, and spent night after night in great and breathless anguish. He had made up his mind to quit the place, and was one day wandering about the old town, a closely packed, ill-smelling neighbourhood, in search of a hair-cutter, when he espied a small and by no means tempting-looking shop of the sort. He entered, and in the somewhat ill-ventilated, low-ceilinged room found to his astonishment that he could breathe with comfort. He gave up his grand villa, took up his

quarters in the barber's first-floor, slept soundly, and ceased to wheeze.

Without going so far as Dr. Salter, I may say that I have found the air of London beneficial to by far the majority of my asthmatic patients, and I consider this the more remarkable because the localities they have quitted have been very dissimilar. Some come from high table-lands with little or no vegetation, others from deep valleys abounding in trees, some from damp river-sides, some from the sea-coast, some from hot, some from cold climates. Even in town atmospheres asthmatic patients show themselves extremely sensitive to slight differences of situation; some can sleep in a back room and not in a front one of the same house, others in a garret better than in a first-floor, while a few feet of rise or fall in a city has been known to make great difference. All densely-populated smoky towns appear to exercise this good effect; for instance, Manchester, Leeds, Birmingham, Glasgow, have furnished instances of asthmatics improving in their atmospheres with little aid from medicine. It has sometimes surprised me to witness severe attacks, which have lasted in the country for days and weeks, subside in a few hours in the much-abused atmosphere of the metropolis.

Now, what do we know about the air of cities? How does it differ from the pure air of the country? First, it is drier than that of most country places; secondly, it contains, according to Dr. Angus Smith's careful analysis, more carbonic acid; thirdly, it contains less oxygen. Dr. Smith made numerous analyses of the air in various parts of the metropolis, in each postal district, near the riverside, in the parks, in the most densely-populated portions; and in the subjoined table I have given some of the results which appeared to me to bear more closely on our subject. I have compared them with those of Glasgow, and, what is more to the purpose, with Dr. Smith's admirable analysis of specimens of air taken from the summits of nine or ten of the principal mountains in Scotland (the wind not being strong at the time of observation), as well as with the air of the Scotch seaboard and of open heaths of no great elevation.

	Carbonic acid,	Oxygen,
	per cent.	per cent.
Mountains of Scotland (average) . . . . .	0.332	20.93
Seashore and open heaths " . . . . .	—	20.99
Glasgow . . . . .	0.502	20.90
London . . . . .	0.439	20.88
" near London Dock (maximum) . . . . .	0.523	20.76
" E. & E. O. Districts (average) . . . . .	0.474	20.86
" W. & W. O. Districts " . . . . .	0.411	20.92

This table shows a decided increase in the percentage of carbonic acid, as well as a diminution in the oxygen percentage, present in the atmospheres of Glasgow and London. The differences in the air of the various postal districts are much what experience would have indicated, the air becoming purer as we advance to the west in consequence of the large extent of parks and open

spaces. The differences in the amounts of oxygen and carbonic acid, when taken in relation to the whole percentage, are by no means great, and are only to be found in the first or second place of decimals. But when we remember the small percentage of impurity which suffices to render drinking water injurious in spite of the disinfectant power of the gastric juice, and the usually small amount of water swallowed, can we wonder that the lungs, in the course of respirations 16 to 20 in the minute, and unprotected by any filtering apparatus, may introduce in the course of a whole day a sufficiently large quantity of a certain gas to have a decided influence for good or evil, even though the percentage of the said gas may be comparatively small. Dr. Angus Smith says: "We take into our lungs 1,000 or 2,000 gallons of air daily. The addition of one two-thousandth at each inspiration will give us fifteen grains in the day—an amount by no means to be overlooked." This excess of carbonic acid in the London atmosphere, combined with the diminished amount of oxygen, may have a deadening effect on the pulmonary mucous membrane, and render it less sensitive to slight excitants. If it is not the excess of carbonic acid, or the smaller amount of oxygen, it may be the unconsumed carbon, or some other component of town air which dilutes and renders it a less potent draught to the asthmatic lungs than the pure, fresh, champagne-like air of the mountains or open country.

The late Sir James Simpson was in the habit of having a certain amount of carbonic acid mixed with the atmosphere inhaled by asthmatics, and the baths of St. Moritz and Ems and others are sometimes used on account of the carbonic acid which the waters give off.

The great difficulty with regard to introducing a certain amount of carbonic acid into the atmosphere is the regulation of the quantity introduced, for too great care cannot be taken on this point, as a very small excess of carbonic acid may prove fatal. Martius concludes, from experiments, that carbonic acid is the principal result of the burning of the popular remedy of nitre paper, and if this be the case this is one of the safest methods of administering this gas.

(To be Continued.)

### THE TREATMENT OF SKIN DISEASES BY ELECTRICITY.

The (New York) *Medical Record* for August 16th contains a remarkable collection of cases of obstinate skin diseases which have been treated by Messrs. Beard and Rockwell by means of central and local galvanisation and faradisation. "During the past two years," they say, "we have treated a number of cases of eczema, prurigo, and acne, by *central galvanisation* alone, without making any application to the diseased surface whatever; and under this method of treatment