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NEW OR UNAPPRECIATED AIDS  
IN THE  
TREATMENT OF STRUMOUS DISEASE

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In former communications to the Gynæcological Society and to the American Medical Association,\* I have endeavored to contribute to our practical knowledge and therapeutic control of strumous disease. I now desire to make some brief suggestions concerning the use of certain simple measures, easily available by the practitioner, and quite sure to be found of service, but some of which have not as yet obtained the general recognition that they deserve. Two of them, at least, will be of interest to gynæcologists, by whom the inter-dependence of pulmonary and uterine conditions, both in health and disease, is fast becoming understood.

1st. AS TO RESIDENCE — While we find diseased heredity, and other causes of debility that act upon the individual, existing everywhere throughout the world, there can be no doubt of the efficacy in the treatment of struma of a strongly saline atmosphere. To this is chiefly owing the benefit from long sea voyages, even allowing for the regular diet, freedom from social dissipation, etc., that are involved. Merely living upon the sea-coast, at haphazard, does not necessarily produce

\**Boston Medical and Surgical Journal*, June 27, 1878; *Transactions American Medical Association*, 1878.



the effect. The more completely insular the situation, the more decidedly saline is its atmosphere. The more complete and constant the exposure to this salt atmosphere—to obtain which, if care is used in selecting the place of residence, is perfectly consistent with protection from harsh winds—the greater is the likelihood of relief.\* Indeed, it has been found that, within a zone bounded by less than five hundred feet from the sea margin, there exists the limit of greatest saturation, as evidenced by the rime, not merely from spray, deposited upon house windows, fences and the like, and by direct analysis of the air itself. It must be recollected that it is not alone the chloride of sodium that is volatilized. There can be no doubt that it is to the practical insularity of Mentone on the Riviera, and of Bournemouth and Torquay, on the south coast of England, just as at Shanklin, and the Undereliff at Ventnor, in the Isle of Wight, that is

\*Facts like the following corroborate the above statement :

Rhode Island has a larger proportion of its territory directly bordering upon salt water than any other State in the Union. The neighboring Massachusetts touches the sea at two of its margins, but the mean annual temperature of the water at the greater of these is much lower than in Rhode Island, which is within the influence of the Gulf Stream. This latter point is proved by the sub-tropical character of its marine plants and animals, as compared with those north of Cape Cod. The following are the comparative statistics of deaths from consumption in these adjacent States :

RHODE ISLAND (Dr. SNOW, of Providence, *Twenty-fourth State Registration Report*, 1876):

| Year of census. | Population.  | Deaths from consumption | —Of the living population.— |                       |
|-----------------|--------------|-------------------------|-----------------------------|-----------------------|
|                 |              |                         | One in every                | In each one thousand. |
| 1860.....       | 174,620..... | 503.....                | 347.....                    | 2.88.....             |
| 1865.....       | 184,965..... | 547.....                | 331.....                    | 2.96.....             |
| 1870.....       | 217,353..... | 575.....                | 378.....                    | 2.64.....             |
| 1875.....       | 258,239..... | 650.....                | 397.....                    | 2.52.....             |

MASSACHUSETTS (*State Registration Report for 1875*):

| Year of census. | Population.    | Deaths from consumption. | —Of the living population.— |                       |
|-----------------|----------------|--------------------------|-----------------------------|-----------------------|
|                 |                |                          | One in every                | In each one thousand. |
| 1860.....       | 1,231,066..... | 4,557.....               | 270.1.....                  | 3.70.....             |
| 1865.....       | 1,267,031..... | 4,661.....               | 271.8.....                  | 3.68.....             |
| 1870.....       | 1,457,351..... | 5,003.....               | 291.3.....                  | 3.43.....             |
| 1875.....       | 1,651,912..... | 5,738.....               | 287.9.....                  | 3.47.....             |

"It will be noticed that the proportion of mortality from consumption, to the living population in Massachusetts, is constantly considerably greater than in Rhode Island." (*R. I. State Reg. Rept.*, 1876, p. 301.)

An equally significant fact is discovered in comparing the different portions of even so small a State as Rhode Island. Providence is its chief northern city. Here the waters of Narragansett Bay are much less salt; though still tidal, they are diluted by the fresh water of rivers. The other capital, Newport, is in the South, and, in reality, far out at sea. Now, from the State Registration Reports of Rhode Island, it appears that there is distinctly a less comparative mortality from consumption at Newport than at Providence.

owing much of the benefit of these famed local climates. Artificially, away from the sea, these conditions may be partially imitated by the atomization of sea water.

2d. AS TO DIET.—In general terms, the employment of fish and other products of the sea, Irish moss or carrageen included, have been frequently eulogized in the treatment of strumous cases. I think, however, that greater attention might be given, in this direction, to matters of detail. We are all of us, for instance, satisfied as to the merits, as a medicine, of cod liver oil; but we do not sufficiently appreciate that with a little judicious training of the patient, it may be made an actual article of food. The fresh livers themselves, from which the oil has or has not been extracted, and cooked in a variety of ways, are not unpalatable. Indeed, to many invalids, this method of taking the oil would seem the preferable one. Of this I speak from personal knowledge.

Then there are sea fishes—pre-eminently the various species of herring, including shad, the alewife, menhaden, etc.—in which not the liver merely, but the whole body, is saturated with oil. I do not hesitate to recommend these, especially the latter, menhaden, as a valuable addition to the diet table, and an efficacious means of treatment.

Besides these sources of oil, we may utilize the fresh roes of many sea fishes. I may mention perhaps especially that those of the cod are a most delicate and delicious article of food, indicated like all other eggs, for special reasons, in the cases of which I am speaking.

3d. AS TO MEDICINE.—To what I have said of cod livers and their oil, I may add that a foreign writer has lately asserted that equal, if not even greater, value is to be found in the liver of the skate. This fish is frequently taken upon our seaboard, and is ordinarily thrown aside as worthless. There are also species of shark, the livers of which, abounding in oil, would, in practice, probably be found to be useful. It is not unlikely that the prejudice that has hitherto been excited against them by the makers and vendors of cod liver oil is, in reality, unfounded, and has been availed of for the purpose of keeping up the market price of the so-called genuine article.

4th. AS TO EXTERNAL APPLICATIONS.—From oil inunction every physician has obtained benefit, who has taken the trouble to see that it was faithfully employed. Ordinarily, olive oil has been ordered, on the ground that it is cleaner. I am quite sure, however, that in fish oils, the odor of which, when prepared and kept with care, is no worse than many remedial agents that are constantly prescribed, we have a drug of greater specific power. Their price, especially the oil of menhaden, as compared with that of the olive, is much less, and on this account is of importance, certainly in hospital and dispensary practice.

Sea water is so easily procured, so close at hand to many of our profession, that we are apt to forget that it is, in reality, a "mineral water" of exceeding value. Let the same, or very nearly the same formula be discovered in any spring existing inland, as is the case with some of the most famous health resorts in this country and Europe, and language in praise of it is exhausted by medical men; but then this sea water is so very common. Allowing for all the benefits that change of air, of diet, of scene, and of thought have for an invalid brought to the sea side, there yet remains, and prominently, the effect of the sea bathing; and this, too, where the water is still, and the stimulating shock of surf is absent.

Much of the advantage to be derived from sea water, can no doubt be obtained from its natural salt, procured by evaporation, which the skill of the chemist has in vain tried to imitate. It is now somewhat difficult to obtain real sea salt, as almost all the evaporating vats along the coast have been allowed to fall to pieces since the general use of rock salt, and that from salt springs; but it would be for the advantage of invalids were it and sea water added to their list of necessities by druggists and country physicians. A pint of sea water, or half an ounce of sea salt dissolved in a pint of rain water,\* will, if used with care, furnish an abundant sponge

\*The water of the Atlantic contains, according to the but slightly varying analyses of Bouillon Lagrange and Vogel (*Annales de Chimie.*, t. LXXXVI, p. 190). Schweitzer (*Philosophical Magazine*, July, 1839), Figuier and Mialhe (*Journal de Chimie. et de Pharm.*, t. XIII, 1848, p. 407), and Marcet, a total of from thirty to forty grammes of the chlorides of sodium, potassium and magne-

bath. Careful analysis of the true and factitious sea salts may seem to give identical results, but in effects the latter will be found to be lacking in a certain something that is possessed by the former.

Sea water, it may here be said, has the same advantages as other mineral waters, where indicated for internal use. In an over-dose, like them, it will vomit and purge. In more reasonable quantities it produces, like them, a tonic, alterative, resolvent, deobstruent effect.

When used as a bath, there are many methods, usual and unusual, by which to employ sea water for strumous cases. I have spoken of the possibility of producing a temporary and local saline climate by its atomization. Here, in reality, we bathe and stimulate the respiratory mucous membrane, as well as obtain medicinal absorption thereby. In precisely the same way, by the atomizer, by the direct douche, and by the "internal soak," as it may be termed, where the cavity is partially filled, and allowed to remain unemptied for a considerable period of time, the rectal, vaginal, and even vesical coats may, for various indications, receive sea water applications.

In studying the therapeusis of struma in Southern France and in Italy, I made frequent employment, externally, of an emulsion of sea water and olive oil. There could be no doubt whatever as to the effect produced. Of this I repeatedly wrote to Dr. Warner, of Boston, during the years 1873-7. I should now expect to find as good results from a similar emulsion of sea water and fish oil.

For any medicinal purposes, I need hardly say that the sea water should in reality and invariably be taken from the sea, and not from foul creeks and estuaries, especially in the neighborhood of large cities.

Again, in sea mud, deposited in tide eddies and slack water, we have another most valuable means of treating a patient externally; and even internally, in pelvic affections, by the vagina. In collecting this mud, still greater care than

sium, the sulphates and carbonates of magnesia and lime, the oxides of iron and manganese, bromide of magnesium, ammoniacal salt and iodine, to the kilogramme (1000 grammes). The above quantitative formula is, therefore, very nearly that existing in nature.

with the water is necessary, to avoid all chance of pollution from the filth of factories and sewage. Used hot, as a poultice, the mud of certain mineral springs has long had repute in the treatment of indolent tumors and subacute inflammations. I have seen instances of its effect, and indeed had practical illustration upon my own person, at the hot springs of the island of Ischia, between whose deposits and those of the sea there is no very essential difference. The sea mud may also be dried, and, after pulverization by the fingers, used in this condition, thus approximating to the method of Dr. Addinell Hewson, of Philadelphia; or it may be again moistened by hot water or by steam, and applied as a poultice; or allowed to stiffen like a plaster bandage, thus indefinitely prolonging its medicinal effect as an alterative and stimulant.

Finally, a large proportion of the iodine of commerce is still produced from sea weed. I have long been convinced that in the various algæ (kelp, rock-weed, etc.), of which, occurring upon the south coast of New England, Dr. Farlow, of Cambridge, has catalogued no less than one hundred and three different species, we have a hitherto unused means of assisting in the treatment of strumous disease. It would have seemed unreasonable but a very short time ago to have sought in the foot-stalk of kelp or sea-tangle (*laminaria*) for one of the most efficient materials for uterine tents. I venture to predict that these neglected sea weeds will be found useful by the profession for a variety of indications, in the treatment of strumous disease. They may be used entire or comminuted, and hot or cold, as poultices. Crushed and soaked in sea or fresh water, they afford an easy and efficient form of medicated bath, general or local; and when they are treated understandingly by the pharmacist, we may expect that new and valuable preparations, to be recognized as such by the profession, will be obtained. Indeed, just as cod liver oil, of more worth than much of that in the market, may be extracted from the fresh livers by any housewife over her kitchen fire, it is probable that efficient infusions, etc., of algæ, of greater value than the much vaunted "sea-weed tonics" of empiricism, may be prepared in the same homely way. This is as true of the fresh carrageen, recently torn from the

rocks, as of the other algæ. As sold by grocers and druggists, the carrageen of the market has not only lost some of its chemical value during the processes of drying and bleaching, but it often has also undergone partial decomposition. I have tested the green carrageen, gathered alive, upon my own table, and have found it excellent.

In the presence of consumption and equally fatal forms of strumous disease, and indeed in many other constitutional conditions familiar to the gynæcologist and general practitioner, we cannot wonder that simples like these are so often employed by the friends of the patient, to the neglect of our own more costly prescriptions, and we do well if we ourselves try to utilize and direct them. In this belief, I have suggested to one of the Newport fishermen, Mr. James O. Swan, that he make the experiment of supplying to the profession these various sea products, in fresh and reliable condition, and at prices that will merely remunerate him for his time and labor. To do this, it is my impression, has never, as yet, been systematically attempted by any one in this country.

