children on account of mastication not being essential for this diet. This fault may be counteracted by including in the diet crusted bread, rusks, Vienna rolls, and the like, which should be taken "dry," and not merely washed down with fluid, as is often the case. The inclusion of such articles of diet in the breakfast will ensure that due attention is paid to the development of the muscles of mastication, salivary glands, and jaws, a point of very great importance in the dietary of children. Secondly, clinical experience teaches us that certain children cannot properly digest and assimilate oatmeal. This feature is, in my experience, most frequently observed in the offspring of typically gouty parents. The parents of such children tell us that they cannot take porridge because of its "heating" properties, the objective indications of disturbed nutrition being found chiefly in a concentrated urine and in various skin eruptions. These symptoms are, however, much less frequently observed if the porridge forms the main article of the meal and is not followed by other highly nitrogenous food, such as bacon and eggs, as is frequently the case. There are, however, some children who cannot properly digest and assimilate porridge, and these are better without it, but, if careful attention be paid to the details of the dietary as a whole, it will, I believe, be found that these cases are much rarer than is commonly supposed.

ON THE PRESENT POSITION OF THE TREATMENT OF TUBERCULOSIS BY MARINE CLIMATES.*

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[AN examination of some of the principles of marine climatic treatment and of the requirements of the pulmonary affection was the subject of the address, which began with some general remarks on thalassotherapy, or sea treatment (sea air, sea water, sea bathing, sea voyages, and the pharmacology of the sea), and with a brief reference to Quinton's subcutaneous sea-water infusions.] *Ocean climate* differs from all others in its exclusively marine character and its *equability*, in contrast with the *sea-coast climates*, which are the *most variable* and offer endless combinations between the features of the coast and those of the sea, none of them being the ideal one for consumption, because not always at their best, whilst some may prove to be *too protective* in the individual case, and others *too active* for some of the complications.

Climate and open air can have no direct effect upon the bacillus, and the beneficial effects of the *seaside and its sea air* are mainly dependent upon the patient's power of "reaction" on the one hand and, on the other, upon the all-important effect upon the tendency to catarrh.

Touching the forms of tuberculosis, Nathan Raw has recently urged an etiological and clinical distinction between the infection from the "bovine" bacillus and that from the "human" bacillus, which agrees well enough with our climatological data and practice, all cases of "bovine" infection (surgical, glandular, scrofulous, cutaneous, serous, and visceral other than pulmonary) being almost unreservedly benefited by the sea. This is not always the case with the pulmonary affection, for which alone the "human" bacillus invasion would be to blame.

The multiple types evolved by individual predispositions (constitutional, organic, and functional) fall into the two groups: *Uncomplicated Tuberculosis* and *Catarrhal Tuberculosis, or Phthisis Pulmonalis*. In the first group, tuberculosis may be "latent" and healing, or "declared" and spreading. In the second (which includes the acute caseous form) catarrh is the chief agent of mischief as well as the first object of climatic treatment. To describe as "consumptives" the bearers of latent and spontaneously-healing tubercles would be inaccurate; and, on the other hand, "tuberculosis" does not depict the varied miseries of catarrh, of pneumonia, and of caseation in the painful record of advanced consumption. Bacillary infection

("tuberculosis" *per se*) may mean little or much damage, but "consumption" (or, in the Greek vernacular "phthisis") is always a big affair, and in pathology it spells "catarrh." We now have to reverse the famous dictum of Niemeyer, and to recognize that "the worst fate that can befall the patient infected with tubercle is that he should develop phthisis."

The *aërotherapeutics* of tuberculosis are thus, practically speaking, those of catarrh; but whereas sea air is curative of some forms of simple non-bacillary bronchitis, it is not always sufficiently dry for the cure of catarrh based upon tubercle. Whether we consider the meteorological factors or are guided by the results observed clinically, it cannot be gainsaid that the altitude is likely, and proves itself, to be more effectual in obviating early catarrh and curing it at any of its stages than the climate of the coast. In this connexion Dr. William Gordon's investigations upon the influence of wet winds are most suggestive, although he has not hitherto formulated any conclusions beyond the broad fact that the prevalence of phthisis is definitely increased by it.

But as we have not any altitudes available in this country, we should adopt an opportunist policy and make the most of our unrivalled assortment of "protecting" and "bracing" seaside resorts by careful selection of cases, by progressive elaboration of their clinical treatment, and by measures tending to correct any imperfections of the local climates. The "bracing" resorts possess the highest restorative efficiency, but their suitability for pulmonary tuberculosis is limited. The criterion of fitness for these climates is integrity of the mechanisms of "reaction," which are dependent above all upon cardio-pulmonary efficiency. Thanks to the possession of sound lungs and of a sound heart, the great majority of cases of tuberculosis other than pulmonary — surgical, scrofulous, cutaneous, etc. — are eligible for the bracing resorts and derive there the greatest benefit. Many cases of "latent" pulmonary tuberculosis are for analogous reasons eligible. But "declared" pulmonary tuberculosis, even at an early stage, and "early phthisis pulmonalis," claim the most careful climatic management, with a view to the avoidance or the cure of catarrh, and need protection from the stronger kinds of sea air. All cases of "advanced" phthisis, as well as the group of "chronic quiescent phthisis," admit of no alternative — they are to be sent to the milder stations.

The present position of the treatment by marine climates rests upon the recognition of the fact that mere "airing" and "salting" are not competent of themselves to cure the pulmonary complications of the disease when it affects the lungs. "Open air" and "sea air" are a basis for treatment, but cannot supersede the scientific methods of modern therapeutics. The marine resorts should add to their natural resources increased facilities for a systematic treatment planned upon a combination of the hospital idea and of the sanatorium idea. On this scheme alone can they look forward to an increased curative efficiency.

Meanwhile a much greater field of usefulness is open to them in *prevention*. The sanatorium movement is gravitating in that direction; but the seaside is *par excellence* the place for the "Prevention-Sanatorium" or "Preventorium," the inmates of which should be recruited from the most threatened ages and from the most dangerous surroundings. This is the direction in which a more extensive and systematic use of our marine climates is indicated. Their wider employment for the extirpation of tuberculosis in the coming generation is a possibility and a public duty.

Lastly, the task of improving the local opportunities for climatic treatment is not beyond the skill of modern engineering. Some of our prosperous stations rejoice in a sandy soil suitable for the growth of the pine; others in a mild and sunny hinterland; others in cliffs combining available shelter and altitude. Among them the city of our welcome is not the least favoured, and may yet secure a future of unequalled efficiency in the struggle against tuberculosis.

DR. T. LAFFAN of Cashel informs us that the County Council of the South Riding of Tipperary is to be added to the list of those which have accepted the opinion of Sir H. Poland, K.C., that the medical officer of a Poor-law institution is entitled to inquest fees under the Coroners' Act.

* Abstract of opening address at the Hastings meeting of the Balneological and Climatological Society, March 16th.