than the latter, and seems to be present in what may be termed "passive" increase of intracranial pressure—that is, where the intracranial pressure is increased from alteration of the circulation in the rest of the body.

14. In some conditions the intracranial circulation seems to vary independently of the circulation elsewhere. This would tend to show that, although the blood vessels of the brain are not directly controlled from the general vasomotor centre, there must be some local mechanism for altering their calibre.

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ON THE IMPORTANCE OF REST IN THE TREATMENT OF ACUTE PHTHISIS.

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THE great importance of attempting, in so far as it lies in our power, to give local rest to the diseased lung is, I think, sometimes overlooked in the treatment of acute phthisis. The deficient movement of the affected side, the tendency of the whole chest to fall into, and as far as possible to maintain, a position of expiration, the onset of unexpectedly severe dyspnoea on slight exertion, the pain induced so frequently when a deep inspiration is forcibly taken, and the consequent disinclination to make the attempt, and the tendency to persist with an irritable slight cough rather than to force a more violent one, and thus cause the chest to expand and the sputum to be dislodged in the way that occurs in bronchitis and other chest affections, all point to the fact that in acute phthisis there is a continuous flow of inhibitory impulses to the respiratory muscles which prevents them from making strong contractions; in other words, there is a continuous unconscious effort on the part of the body to keep the diseased part as much at rest as is compatible with a sufficient aëration of the blood. Arguing from the above only, one would be inclined to suggest that in all cases of phthisis an attempt ought to be made by every means in our power to limit the movements of the affected side; experience, however, has abundantly shown that this is inadvisable. For instance, the fact that phthisical patients, in whom the disease is not acute, derive marked benefit from residence at a high altitude, both in the early and later stages—under which circumstances, of course, the amplitude of the respirations is increased—in itself plainly shows that the diminution in the movement of the lung, and its consequent partial rest, are by no means always a necessity for recovery.

The cases in which the best results are to be looked for from the local rest treatment, that is to say, from limiting the movements of the affected side, are undoubtedly those of acute and progressive disease, where the temperature is materially raised, where wasting is rapid, and where all the signs of a severe toxic infection are well marked. Further, this local rest is especially beneficial when the mischief is not only active but early, and where there is reason to believe that the wide area over which physical signs can be made out does not correspond with the actual area of tuberculous dissemination, but rather with a tolerably wide area of consolidated lung, the result of a broncho-pneumonia in the neighbourhood of one or more tuberculous foci. It must have been within the experience of everyone to have seen cases where, in spite of the brief history of ill health, the

physical signs have been so marked and so widely diffused as to have suggested the rapid breaking down of a whole lobe, but yet which, after a brief period of complete rest, have improved to such an extent as to have become almost quiescent. These are the cases in which great good results from limiting the movements of the affected side. The notes of the following case, seen in consultation with Drs. Metcalfe and Crocker, afford a fair example of what may be frequently expected from rest.

A. A., aged 28. Cough and slight wasting for some months. Acutely ill, with high temperature for ten days. Has not been resting, though feeling ill. Only consulted a doctor a few days ago. *Râles* down to the root on the left side, and in the second space in front and in the supraspinous region on the right. Impaired note at both apices in front and behind. The patient was from this time on kept strictly at rest in bed. Small doses of creasote and quinine were given, and he was moved into a nursing home. A week later the general condition had much improved; the catarrhal signs in the lungs were much less marked, and the patient stated that he felt nearly well. The temperature still, however, went up to 102° at night. The sputum was still profuse, and contained tubercle bacilli in considerable numbers. I did not see the patient again for a month, by which time the lung signs had become almost quiescent; the temperature had been normal for a week, and the general health was in every way better. The patient now exerted himself somewhat more, and at the same time had a good deal of worry, the result being that the temperature again rose, and he had for about a week signs of some recrudescence. He was again kept strictly at rest, and the adverse symptoms slowly disappeared. Tubercle bacilli could still be found in the sputum in considerable numbers. Finally, after another period of rest, the temperature again became normal. The patient was then taken by easy stages to Falkenstein, where he remained for some months undergoing the rest, over-feeding, and air cure, the result being that his general condition so much improved that he was able to return to his ordinary mode of life. A year later I heard that he was still going on well.

Perhaps, however, the strongest proof of the importance of local rest is furnished by those cases in which a pleural effusion has occurred on the affected side. A most instructive case bearing upon this point has been put on record in the Hunterian Society's *Transactions* for 1895-6 by Dr. Arnold Chaplin, and the views therein expressed by Dr. Chaplin as to the advisability of not interfering with a moderate amount of fluid in cases of acute phthisis are abundantly borne out by experience.

In these acute cases as soon as the temperature has become normal, the greatest benefit may be expected to result from a stay in one of the health resorts, such as Falkenstein in the Taunus, or Nordrach in the Black Forest, where the so-called "air cure" is carried out. Lately the same method of treatment has been advocated and adopted in some of the health resorts at high altitudes, but the climatic conditions in these places appear to me to be quite unsuitable for this method of cure, and I have heard of many cases in which the patient has not only not improved, but has rapidly lost ground under this treatment. After a somewhat prolonged stay at Falkenstein, when the lung condition is no longer acute, and when the patient is able to take exercise without risk, a winter spent at Davos or St. Moritz Dorf is, however, of the greatest advantage.

BRONCHIAL AND VESICULAR BREATHING.

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To make students easily understand the mechanism by which the chief varieties of breathing to be heard over the lung are produced it is necessary to begin, and to insist by frequent repetition, with the postulate that the sounds are primarily produced in the glottis by the vibration of the currents of air as they rush past the vocal cords in inspiration and expiration; that these sounds are modified and diminished by the progressive narrowing and increase in total sectional area of the bronchi and bronchioles, and, finally, by the spongy tissue of the lung itself. The sounds