

this coign of vantage they may be distributed, still by the air channels, to almost every part of the lung, setting up a condition of tubercular catarrhal pneumonia characteristic of the later stages of the so-called acute phthisis. In many cases this acute phthisis is nothing but an acute secondary pneumonic tuberculosis following a rapid distribution of tubercle bacilli embedded in the caseous material derived from a chronic primary focus. It should be noted that in these cases caseation of the epithelial tissues usually takes place at a comparatively early stage of the process.

So much for the distribution by the air-passages. We now come to a second system of distributing or infection channels which appears to play a prominent part in every case of tuberculosis, chronic or acute—the lymphatic system. Between the cells of the tissues and especially around such structures as the blood-vessels, even the smallest of them, there is a kind of network of channels or spaces (the lymph spaces) that has sometimes been compared to the system of pores seen in a sponge. Such terminal spaces gradually lead into small definite channels and finally into tubes or vessels of considerable size and with distinct walls—the lymphatic vessels. These tubes lead to little filters known as lymphatic glands. Much of the fluid that in the process of nutrition passes from the blood-vessels passes into these lymphatic spaces, and from this fluid the tissues take up their nutrient material, throwing back into it their waste or effete products. The fluid throws some of these waste materials back into the blood, but certain of the more solid particles pass to the lymphatic vessels and by them are carried to the lymphatic glands, where the coarser particles are filtered out, and where, too, certain changes appear to be effected even in the composition of the fluid lymph.

Let me give you an illustration. If a patient tattooed on the forearm could be examined within a few days of the operation, small particles of pigment would be found in the tissues (cells in and lining the lymph spaces) at various points between the tattooed patch and the elbow, and even above the elbow. If the patient were to live for some months and then were to die, it would be found that, except at the tattooed patch and in some little hard nodules in front or at the side of the elbow or under the armpit, there is no pigment, but in these latter positions black, red, or blue pigment, according to the material used by the artist, has accumulated, often in considerable quantities, so that it can be seen with the naked eye.

Most of you know how the glands under the arm swell after vaccination. This is because the lymphatics of the arm carry the vaccine virus to the glands, they are irritated by the vaccine matter, there is prolifera-