

physical signs. When tubercle bacilli are found in an abundance of sputum the case is not one of early tuberculosis. To keep the patient under observation until suspicion develops into apprehension, and apprehension into certainty, is a reproach on our diagnostic acumen. The earliest beginning of a tubercle in the lung can not be detected by any known method; the Roentgen rays, however, will pick out a tuberculous focus, in many cases, before either the stethoscope or microscope. To infer, however, that the rays can diagnose tubercle off-hand would be a mistake. As with the stethoscope, so with the ray, we must carefully consider each individual case. In our examination with the ray we look first to the diaphragm. Physiologists tell us this muscle becomes flatter with each inspiration. This is a mistake. It plunges up and down piston-like, the curve remaining practically unaltered. Even when the disease is confined to an apex, the movement of the diaphragm on the affected side is much less than on the non-affected. Lessened excursion of the diaphragm, together with a cloudy or flocculent shadow of an apex or other portion of lung on the screen, should excite our gravest suspicions. A careful consideration of the case, using all the other means at our disposal, will usually clear up the diagnosis. One other point—the diagnosis of a cavity. That the X-ray can detect a cavity in the lung is a fact beyond question; that auscultation frequently diagnoses a cavity, which the rays show has no existence, is also a fact. This I have verified in the *post mortem* room.

THERAPEUTIC USES.

Therapeutically the X-rays are in the early stage of development. That certain skin lesions should be relieved by the rays without causing either pain or inconvenience to the patient is surely marvellous, but it is nevertheless true. Just how they act is not known. It was believed that the inflammatory process set up—the X-ray dermatitis—was sufficient to injure the life conditions of micro-organisms, and therefore their continuance, but this had to be modified in view of the