

parent part in the dark background of the liquid. When the patient is sitting up, the level of the fluid may be disturbed by shaking and waves can be seen distinctly passing across the patient, and the pulsations of the heart can be counted by the waves on the surface of the liquid. Thus the condition of the lungs or heart can be easily made out and more especially when there is thickening of tissue or displacement.

In the *abdominal cavity* the viscera are so much more dense and the muscular walls back and front are so much more opaque, that it is much more difficult to make out the condition satisfactorily. Still something can be done. The upper surface of the liver shows and corresponds with the dome of the diaphragm. The stomach can generally be made out as a transparent portion in its proper place; this can often be more distinctly made out by giving a dose of carbonate of bismuth, which throws a shadow more or less the shape of the stomach so that movements thereof and of the intestines can be made out by these means. The kidneys can sometimes be made out but not always, and stones in the kidneys, ureters or bladder may be made out. This depends to a certain extent on the composition of the calculus; cystin is almost transparent, so is uric acid, but the phosphatic or mixed calculi will sometimes show their structure in layers of alternate transparent uric acid or opaque phosphate of lime.

In making a *fluoroscopic examination*, it is necessary to use a fluoroscope or a screen. I have already described the screen which must be used in a dark room, by dark meaning absolutely without light, the patient being placed upon the couch and the tube below. The screen is placed above the patient and a shadow of the body will be seen and by moving it about over the patient the different parts of the body will soon be recognized, taking care that the tube be moved also so as to have the antikathode parallel with the screen. Before attempting to see anything on the screen it is well to remain in the dark for a good ten or twenty minutes or more, so as to allow the retina to recover its activity and to rid itself of previous impressions. After a little practice it will soon be possible to make out the different organs and the medical man who wishes to become a good fluoroscopist must become familiar with the normal appearances in health.

The nearer the object is to the screen on which the shadow is thrown the sharper will the shadow be, and the further off from the screen the less distinct will be the shadow. Having examined the patient fluoroscopically, or whilst doing so, a piece of celluloid and a bit of tracing paper may be put over the screen, and with a pencil with a metallic point the different organs may be drawn on the thin tracing paper for future reference. If a picture is needed, a photographic plate with