wait till the patient takes one or two breaths and is relieved. With a patient composed and breathing regularly we have, if the intervals and doses are equal, a regular absorption of the anæsthetic. In this way we are able to saturate the blood more equally. But where the inspirations vary in depth and regularity we must also vary the dose and time also. If the patient be breathing very deeply and rapidly we may give our chloroform well diluted for fear of its effect on the heart and vaso-motor centre.

Chloroform has a specific paralyzing effect on the heart muscle, the heart of the frog ceasing to beat instantly if exposed to the direct action of this drug. Ether primarily has a stimulating action on the heart and vaso-motor centre. As before mentioned, the tension of the pulse indicates the degree of paralysis of the vaso-motor centre. Pain causes stimulation of this centre and a rise of tension, as we may observe in an operation when the incisions are being made. In operations, therefore, on less sensitive parts, or when the pain is short in duration, we do not need to administer as much chloroform as will be required in such operations as on the rectum, scrotum, eye or ear.

In passing, I would mention the point that in abdominal operations the most painful incision is that through the skin; the bowel may be handled and incised with little or no pain. Through the first stage of anæsthesia the pulse rate and breathing is rapid, the pupil dilating, the hearing is more acute, tactile sensibility and coordination impaired; in alcoholics we nearly always have struggling and excitement, the patients laughing, talking, singing or swearing. With them we must watch particularly the pulse, the color of the face, the degree of cyanosis and congestion of the vessels, and graduate the dose accordingly. In the second stage the patient becomes unconscious, the muscles relax, the reflexes are lost, the pulse and respirations gradually return to the normal rate, the pupil slowly contracts as the anæsthesia deepens, till it comes to the normal size. The pupil through this stage, in the majority of cases, is a good guide, for, as a rule, we will see the contraction progress evenly after each dose, and in less painful cases we need only effect a medium degree of contraction. The corneal reflex is not always the most sensitive, but when it is lost the operator may proceed, as we can quickly go beyond that, according to the indications.

It is always well to have the ear in reach of the breath sounds, or the hand near the nostrils to feel the current of expired air; we do not then need to watch the abdominal or chest movements, which, at any rate, are not as reliable signs of regular breathing.