centre, is the danger signal for which we are looking. The pupil has a regular cycle as the patient goes under. It is first dilated and active, it then becomes contracted, and lastly it becomes dilated and fixed. The first state is a sign of imperfect narcosis, the second of complete and safe narcosis, and the third of danger of imminent narcosis of the respiratory centre. The cause of this cycle is as follows: Imperfect narcosis, going under or coming round, the pupil is dilated because impulses, mental, sensory or sympathetic, affect the half-narcotized cerebrum, and cause reflex inhibition of the third nerve centre; and active because the centre itself has not been reached by the anæsthetic. A similar dilatation is produced under ordinary conditions by fright, pain, or a blow on the abdomen. As narcosis deepens, the pupil contracts because the cerebrum is completely under, all cerebral reflexes are barred, and the third nerve centre is consequently unimpeded in its action. A similar state is seen in deep sleep. If the narcosis be pushed further, the pupil will slowly dilate and become less active to light till it is widely dilated and fixed, because the narcosis has now reached the centre itself, and has gradually overtaken it; consequently nervous control has ceased and the pupil has dilated; at the same time the light reflex has been abolished. A similar condition of pupil is seen in general cerebral compression. This fixed dilatation indicates great danger, for respiratory narcosis is imminent; indeed, under no circumstances should narcosis be pushed to the extent of full dilatation of the pupil. Thus the golden mean of safety is indicated by a contracted pupil, any material dilatation means "Look out." The patient is either coming round and developing reflexes, or going too far toward respiratory narcosis.

It is easy to distinguish between commencing reflex dilatation and early narcosis dilatation. In the first, the pupil is active and other reflexes—shallow respiration, vomiting, or movements will follow; in the second, the patient is stertorous, the pupil sluggish, and the eyeballs fixed. In the first, the indication is for more chloroform, in the second for the suspension of the drug till contraction recurs in consequence of the recovery of the third nerve centre. If the pupil be read in this way all interference with respiration or the heart can be avoided.

For all ordinary operations, a contracted pupil should be maintained, but in abdominal surgery it is sometimes necessary to combat the violent sympathetic irritation by pushing the chloroform till there is slight narcosis dilatation of the pupil. Beyond this, it is useless as well as dangerous to go. Any further abdominal rigidity is due either to inflammatory fibrosis or to the development of abnormal reflex links between the sympathetic and spinal nerves in highly neurotic subjects. In either case the condition is beyond the control of anæsthesia.

The time during which the closest attention should be paid to the respiration is while a patient is going under. At this time he is liable, intentionally or from too strong a vapor, to hold his breath. The respiratory centre is thus debili tated from lack of oxygen; then when the necessity for breathing overcomes all other impulses, a gasping inspiration is taken, the centre is flooded with chloroform, and cannot resist it, the pupil dilates, and death supervenes. Whether or not the heart is affected is undetermined, the point being to avoid the occurrence in any case. This can be done by encouraging the patient to breathe regularly, and if he holds his breath, by seeing that only a small dose of chloroform is accessible.

In children it is better to use a Junker's inhaler, so that whether they scream or hold their breath, only a limited amount of vapor can be taken in; an overdose is thus avoided. In these cases it is my practice to give chloroform till contraction occurs with slight stertor, and then to suspend the administration until some slight reflex is seen, then to give a little more, and so on. I do not think that the pupil is quite so reliable as in the adult, as sudden overdosing with fixed dilatation seems sometimes to occur. Possibly the pupil reflex is imperfectly developed; this I am sure is the case with the corneal reflex, which is quite unreliable as a sign of narcosis in children. Slight stertor is the reliable indication.—Arthur H. Ward, M D., in *The Lancet.*

A MODEL SURGICAL CLINIC.

Scene, a spacious room. At a large table in the centre is seated the surgeon; his secretary is opposite, an enormous folio register open before him. A group of students is clustered about the table. Benches filled with waiting patients occupy the sides of the room. The secretary calls No. 120,-736. A man aided by crutch and cane limps forward. The surgeon's examination into the biography and genealogy of the patient (four folio pages carefully written out by the secretary) being ended, the attendant removes the multiple wrappings of the right foot, exposing an inflamed great toe with ulceration upon one side of the nail. The surgeon gives it a hasty glance, and turning, addresses the students as follows: "Gentlemen, a few years ago a case of this kind—evidently an ingrowing nail—would have been at once submitted to local treatment, and I admit, with fair prospects of obtaining a good result. But now that we have learned the general interdependence of the different organs of the body, we feel that a thoroughly scientific treatment demands the examination by specialists of these different organs,