containing a ferment which converts starch into sugar, and this renders it ready for absorption by the blood; while the same gland pours through the lymphatics into the blood a ferment which destroys sugar, breaking it up into carbonic acid and water. If all glandular structures have similar complex functions, our views regarding the *modus operandi* of medicines may require complete revolution, and the chief part of the benefit produced by purgatives and diaphoretics may be due not to the secretions which they cause to be poured out, but to the alterations they produce in the circulating blood. The juices of various parts of the body, although innocuous when they remain *in situ*, may become very dangerous if they pass into the circulation generally, and Woolridge found that the juice of the thyroid gland injected into the blood would cause the blood to clot in the veins and kill an animal as quickly as a rifle bullet. But what is powerful for harm is likewise powerful for good, and the administration of thyroid juice in cases of myxœdema is one of the most remarkable therapeutic discoveries of modern times.

The first definite attempt to cure a disease by supplying a ferment from a solid, non-grandular organ of the body was probably made in Harvey's own hospital more than 20 years ago, but it is only recently that extracts of solid organs have come into much use. The microbes which are the cause of infective diseases appear to form powerful poisons or toxins and also antidotes, and when introduced into the higher animals they give rise in them to the formation of antidotal substances or antitoxins. These antitoxins have the power, not only of preventing disease coming on, but actually of curing it when it has already appeared, and the antitoxins of tetanus and diphtheria have deprived these diseases of much of their terrible power. The orator, as directed by Harvey, next exhorted the Fellows and members of the college to search out the secrets of Nature by way of experiment, directing their attention to fields of research which have received at present little attention, but promise results of great practical value. Lastly, he exhorted them to continue in mutual love and affection among themselves, directing their attention to the examples of Harvey and their late president. They were beloved by their fellows while they lived, their loss was deplored when they died, and they left behind them an example not only of goodness, but of courage. Harvey, seated speechless in his chair, distributing rings and parting gifts to his friends while awaiting the approach of death; or Andrew Clark, steadfastly determining to continue at work and die in harness, in spite of the hæmoptysis which seemed to threaten a speedy death, afforded noble examples which ought to encourage the Fellows and members of the college to follow the directions of the venerable poet Longfellow, who, taking the organ which Harvey studied, to symbolize such courage as Harvey and Clark showed, says:—

"Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing.
Learn to labour, and to wait."

—T. Lauder Brunton, M.D., in *Med. Times.*

THE DANGER SIGNAL OF THE CHLOROFORMIST.

The opinion of most of the expert anæsthetists in contradiction to the suggestions of the Hyderabad Chloroform Commission, is that the respiration alone is an imperfect guide to the condition of a patient under chloroform, and the pupil, pulse, and the patient as a whole should be watched.

It certainly seems probable that if we watch the respiration alone, we are in danger of pushing the chloroform to the point of respiratory narcosis; and since this will come on gradually, we may not recognize the condition till the patient is in a state of extreme danger.

It may be true that the patient can always be brought round by artificial respiration; this, involving as it does, the stopping of the operation in many cases, is a most inconvenient and alarming complication, and should never be allowed to occur. Any interference with the respiratory centre by chloroform, however slight, is a sign of overdosing. Again, if respiration alone be watched, how is the beginner to distinguish between shallow and irregular respiration of reflex inhibition, which so often precedes vomiting, and the insiduous onset of respiratory narcosis? If chloroform be pushed to the point of affecting the pulse, if this be possible, a dangerous overdose has been given. The heart, too, is liable to reflex inhibitions, and often becomes irregular and depressed during vomiting, and also during the violent irritation of the sympathetic system met with in abdominal operations; in either case, quite independently of the anæsthetic. Therefore, as an indication of the degree of the chloroform narcosis, the pulse is unreliable.

We require some indications which shall tell us when the cerebrum is completely narcotized, and shall also warn us when we are in danger of affecting the respiratory centre. This indication is found in the pupil. The third nerve centre which governs it is the first of the automatic centres of which we have cognizance; it is not a vital centre, like the respiratory, and its narcosis is not in itself followed by dangerous complications. The pupil, which is the visible sign of the condition of this