

methods of accomplishing anesthesia by spinal injections. One of the most radical procedures recently proposed is that of intravenous injections of ether and chloroform.

Burkhardt, after a series of experiments on animals, noted that a safe anesthesia was practicable. At least that must have been his conviction, since he did not hesitate to apply the method to the human, using first chloroform, and being deterred from further line of experimentation by hemoglobinuria. Ether was apparently much safer. He employed a 5 per cent. solution in physiological salt solution. The warm mixture was injected into the median basilic vein with some rapidity, the flow being stopped when the patient became unconscious and relaxed, and resumed as soon as there were signs of a return of consciousness and reflexes. Over thirty patients were thus treated without accident, in some instances the anesthesia being continued for over an hour. In nearly all instances the patient received a preliminary injection of scopolamine and morphine. The quantity of the solution required varied greatly, and was given at between one-third of a liter and two and a half liters. It is particularly noticed that there were no changes in the urine after this method of anesthesia, no headache, no irritation of the lungs or circulatory perturbations. It was noted that when the strength of the solution was increased to 7 per cent. hemoglobinuria resulted. The author modestly remarks that the time consumed in freeing the median basilic vein and securing therein a cannula is likely to bar this method from general use, but that it is likely to be highly serviceable under some circumstances, and it is the safest and pleasantest of all methods of anesthesia. He particularly commends it when there are respiratory or circulatory difficulties which would add to the danger of inhalation anesthesia.—*Therapeutic Gazette.*

The Treatment of Typhoid Carrier Cases

In the *Journal of the Royal Army Medical Corps*, Cummins writes on this topic and summarizes the results of treatment as follows:

1. Lactic acid bacilli have failed to diminish the excretion of bacilli in fecal cases.
2. Attempts to cure typhoid bacilluria by acidifying the urine have not been successful.
3. The administration of antiseptics invariably brought about a decided diminution in the number of bacilli excreted.