

Dr. Seelig writes of it as an adjuvant in the administration of general anæsthesia and presents a series of sixty-five administrations, and Dr. Emil Ries reports its use as a general anæsthetic in seventy-two cases.

Scopolamine is an alkaloid of *hyoscyamus niger* and is akin to hyoscine, hyoseyamine, atropine and daturine. It is most closely related to hyoscine. In 1900, Schneiderlin published the first paper advocating the use of scopolamine as a substitute for general anæsthesia sufficiently profound to permit the performance of any operation.

Seelig, in his cases, gave a hypodermic injection of scopolamine hydrobromate  $\frac{1}{16}$  grain, and morphine  $\frac{1}{6}$  grain, one-half hour before the administration of the general anæsthetic (ethyl chloride first and then ether). The results were considered highly satisfactory. The advantages are stated to be: almost one-half of the ether usually required, is used; vomiting is lessened—it did not occur at all in seventy-seven per cent. of the cases—and nausea is infrequent; the patients are in a peaceful state of mind and go under the influence of the general anæsthetic without excitement; salivation is nearly always absent: there is less pain and discomfort and restlessness after operation.

Ries has used scopolamine-morphine as the general anæsthetic in his cases, and not as an adjuvant as in Seelig's cases, sometimes, however, giving a small amount of chloroform when necessary to complete the anæsthesia. The injections are given, in three doses, two and a half, one and a half, and one hour before the operation. One-tenth milligramme scopolamine and twenty-five milligrammes of morphine are divided into the three doses. The patient sleeps for about five hours after the last injection.

There appears to be some doubt of the safety of the drug when given in this manner, while when given as an adjuvant to ether in a smaller dose, it is thought to be safe.

The whole question is now upon trial, and the advantages or otherwise can only be determined after prolonged experience. This can readily be appreciated when one realizes that the relative advantages of chloroform and ether are still debated.

In the meantime, one feels inclined to stand aside and allow some one else to make the investigations.