

lence. . . . The time element is . . . all-important in making this decision. It should be done, certainly, within five minutes or will probably ultimately fail, whatever its temporary effect. . . . During respiratory arrest, the last thought and not the first should be the use of analeptics. . . . The effect for good of these drugs on the heart is seriously questioned in reported experimental and practical experience."

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DEPREE, J. F.: *Morphine-scopolamine Anesthesia—in First Aid Treatment of the Injured*. *Indust. Med.* 9: 554-556 (Nov.) 1940.

"The use of morphine-scopolamine anesthesia has been described since 1904. It was popular in obstetric practice and was commonly referred to as 'twilight sleep.' In 1918 the use of this anesthesia was introduced at the Washington Boulevard Hospital by Dr. B. F. Lounsbury, former Chief Surgeon of the Milwaukee Railroad. It was found to be very satisfactory and was supplemented by nitrous oxide or ether when necessary; and it was used in almost all major and minor surgery including the emergency room in handling those traumatic cases which required general anesthesia. Its use has been continued up to the present time and covers approximately 16,000 cases. . . .

"Morphine-scopolamine has been given to patients of both sexes, and from the age of 12 years up. In the first aid room we are using it in treating those cases requiring an anesthetic such as fractures, dislocations, wounds requiring special care, and burns. When any person with such injuries is brought to the first aid room a careful examination is made to determine the extent of injury, identification for the record which is to be kept is made, and if the patient's general condition requires immediate treatment a hypodermic injection of morphine-scopola-

mine is given. The usual initial injection consists of morphine sulphate grain $\frac{1}{4}$, and scopolamine hydrobromide grain $\frac{1}{50}$. In only the extremely young or aged is the dose smaller and then the dose is decreased to morphine grain $\frac{1}{6}$ and scopolamine grain $\frac{1}{100}$. During the subsequent thirty to forty minutes the patient is observed closely and if time is an important factor treatment is started using nitrous oxide and oxygen or ether or both. . . .

"In our experience most working men between the ages of 18 to 60 and weighing 150 to 200 pounds will require two injections of morphine grain $\frac{1}{4}$ and scopolamine grain $\frac{1}{50}$ and third of grain $\frac{1}{6}$ and grain $\frac{1}{100}$ respectively. Some men tolerate three large injections. Most women from 18 to 60 and weighing 120 to 150 pounds require one injection of morphine grain $\frac{1}{4}$ and scopolamine grain $\frac{1}{50}$ and two injections of grain $\frac{1}{6}$ and grain $\frac{1}{100}$ respectively of each drug. Larger women require the same amounts as an average man. The injections are given 30 to 40 minutes apart and the patient is observed constantly during this time, a close watch being maintained on the pulse rate and the respiratory rate. The former is seldom affected, but there is usually a decreased respiratory rate and if it drops down to 10 to 12 per minute no additional morphine-scopolamine is given. . . . In most cases no additional anesthetic is required, and the patient remains sufficiently narcotized for three to six hours to enable the surgeon to carry out the necessary procedures. Bibliography—4 references.

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SLAUGHTER, DONALD; PARSONS, J. C. and MUNAL, H. D.: *New Clinical Aspects of the Analgesic Action of Morphine*. *J. A. M. A.* 115: 2058-2060 (Dec. 14) 1940.

"Morphine is considered the best pain-relieving drug which the clini-