

## A SATISFACTORY LOCAL ANESTHESIA FOR THE SUBMUCOUS RESECTION OF NASAL SEPTUM

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Realizing the difficulties encountered by many in securing a satisfactory local anesthesia for the submucous resection of the nasal septum, I offer to the profession this method, which has been very satisfactory to me in over four hundred resections. Some years ago I was not entirely satisfied with any of the methods I had seen used and I began to try out various methods in the hope of securing a technic that would eliminate the objectionable features of all methods, which are fright, nervousness, toxicity from cocain and epinephrin solution, shock, hemorrhage obscuring the operative field and the sequelae of severe headaches and toothache as the effect of the cocain wears off.

The several elements in my anesthesia are not original, but as far as I am aware the whole technic is original and is given below.

Half an hour before I begin to produce the local anesthesia the patient receives by mouth  $\frac{1}{150}$  grain scopolamin hydro-mid. This drug allays the patient's fears, overcomes any nervousness and is the therapeutic antagonist to cocain. It is used extensively by neurologists in the treatment of the insane and very nervous patients.

Half an hour after the patient has taken the scopolamin, I apply with a cotton wound applicator to every portion of the mucous membrane of the septum a 20 per cent. solution of cocain hydrochlorid, first painting very gently over every portion of the septum on the right side and then on the left side. Immediately after the first application over both sides of the septum I repeat the application as before. This makes two complete applications of a 20 per cent. solution of cocain to each of the septal mucous membranes. For each application I use a fresh cotton wound applicator moistened with the 20 per cent. cocain solution.

These two applications of 20 per cent. cocain solution are followed immediately by a similar application to every portion of the septal mucous membrane of a solution of 1:1,000 epinephrin solution. I then inject under the septal perichondrium and periosteum on each side from 8 to 10 c.c. of a sterile normal salt solution to which 5 minims of 1:1,000 epinephrin solution has been added immediately before injection. This injection completes the anesthesia, infiltrates every portion of the septal membrane, blocks off the nerves preventing shock and renders the operation practically bloodless. It also aids very materially in elevating the perichondrium from the cartilage so that the dissection of the mucous membrane and perichondrium is quite easy.

I use only 5 minims of epinephrin solution in the injection because this amount does not exceed the physiologic dose by hypodermatic injection, and experience has proved to me that this amount will render the field bloodless without producing toxic symptoms.

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**The Cost of Pasteurizing Milk.**—In Bulletin 85 of the Department of Agriculture it is estimated that the cost of pasteurizing with a properly operated plant averages for milk 0.00313 cents a gallon and for cream 0.00634 cents. Tests also show that the "flash" process, by which milk is raised to 165 F. and kept there for a moment only is more expensive than the "holder" process, by which milk is held at the temperature of from 135 to 145 F. for thirty minutes. The "holder" process has been found to require 17 per cent. less heat than the "flash" method, and there is also a saving in the expense of cooling. For hygienic reasons also, the "holder" process is to be recommended. An item of economy in the pasteurization of milk is the utilization of exhaust steam from engines and steam-driven auxiliaries. An arrangement by which the pasteurized milk is made to assist in heating up the raw milk may aid the economy of the process.

## Therapeutics

### SOME OVERLOOKED CAUSES OF CHRONIC ILLNESS

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#### CHRONIC DYSPEPSIA

Before a condition is termed dyspepsia, nervous dyspepsia, chronic gastritis, or intestinal indigestion, although any one of these conditions may be present, we should most carefully seek the cause. This large subject is referred to only to present some of the frequently overlooked causes of chronic indigestion; we should never be satisfied with any one of these diagnoses.

Frequent causes of these digestive disturbances are reflexes from eye-strain, or from the appendix, ulcer of the stomach or duodenum, reflexes from the gall-bladder and a loose kidney. The frequency of these etiologic factors perhaps is in the order named. Ptosis of the abdominal organs is more or less readily determined, and need not be here considered. Also, it is not necessary to refer to the classic symptoms of any of the above-mentioned causes of indigestion, but it is urged that clinicians should never be satisfied to say that the condition is one of gastric hyperacidity, or that there is insufficiency of hydrochloric acid in the stomach, or that a patient has recurrent "bilious" attacks.

Chronic appendicitis, or, perhaps as frequently, pericolicitis with adhesions around the colon in the region of the appendix, generally caused by a previous appendicitis, can give reflex pain referred to the cap of the duodenum, and can cause hyperacidity and dyspepsia, which may sooner or later cause epigastric tenderness and symptoms of disturbance in the upper abdomen. A chronic irritation of the appendix may cause only gastric flatulence. Sometimes the region of the appendix will be found entirely insensitive, but we should make repeated abdominal examinations of a patient who has indigestion and is not benefited by the ordinary corrections of diet and simple medicinal treatment. Also, we should urge that whenever the patient has an attack of pain he should be examined at once by his physician, and very often distinct, positive trouble will be found localized near the appendix.

On the other hand, prolonged irritation in the abdomen may allow ulcer of the stomach or duodenum to develop through the irritation of the mucous membrane of the stomach and destruction of the protective mucus, which results from the protracted hyperacidity. It seems to be a fact that hyperacidity of the stomach is a preliminary stage of gastric ulcer, and likewise of ulcer of the upper part of the duodenum. One factor in the cause of ulcer of the stomach seems to be the absence of normal mucus protection, and anything which will cause the mucus coating of the stomach to become normal tends to prevent erosion. We can readily understand this when we note the irritation that occurs in a dry throat, larynx or trachea; anything that tends to increase the mucus in these regions cures the condition. We should, therefore, recognize a preulceration stage of gastric or duodenal ulcer, in which there is likely to be hyperacidity; the cause may be great debility, mistakes in eating, or a chronic appendicitis. The immediate treatment of such a condition by proper diet and improving the general con-