SHEET OF DIRECTIONS GIVEN THE PATIENT AFTER A TONSIL OPERATION, INCLUDING THE TREATMENT OF POST-OPERATIVE HEMORRHAGE.*

BY EDWIN PYNCHON, M. D., CHICAGO.

Having recently read a paper on the "Treatment of Post-Operative Nasal Hemorrhage" at a meeting of the South Branch of the Chicago Medical Society, which was well received, and having just revised my "Sheet of Directions to Patients After a Tonsil Operation," I take the privilege of presenting the same, chiefly owing to the consideration given therein to the treatment of post-operative hemorrhage.

Any persistent or profuse hemorrhage following a tonsil operation is an annoyance to both the operator and patient and may, if not promptly and properly treated, even prove dangerous. The old adage which deals with the truism that "a stitch in time saves nine" applies nowhere more appropriately than in the treatment of tonsillar hemorrhage, for, while in most cases it can be quickly controlled by prompt and efficient treatment, it may otherwise continue, or intermittingly recur, much to the patient's discomfort.

A hemorrhage from the throat or nose generally unnerves the patient more than would the loss of an equivalent amount of blood from some other location. Furthermore, owing to free salivation, nausea and even vomiting often thereby induced, the amount of blood lost seems to be greater than it really is.

In order to meet emergencies arising in practice I have for several years followed the custom of giving the patient from time to time printed sheets of instructions to insure the following of directions, and to provide for complications which may occur. In no place is such a sheet of directions of more value than after a tonsil operation as a guide to both diet and treatment, and particularly in order to meet the possible occurrence of post-operative hemorrhage at any time within about eight days following the operation. I herewith append a copy of this particular sheet of directions:

DIRECTIONS TO THE PATIENT AFTER A TONSIL OPERATION.

For the first two or three days avoid all violent exercise or sudden motion. In going up stairs the ascent should be made slowly. Use the voice in moderation and do not attempt to sing or to

*Read at the meeting of the Chicago Laryngological and Otological Society, March 9, 1909.

speak too loud. In order to *avoid stooping* the use of the sniffing medicine may be omitted for the first 24 hours after the operation.

During the first night after the operation the patient should sleep with the head well elevated by using several pillows or else by putting an inverted chair under the bolster and pillows, the legs of the chair being against the head of the bed, with the back of the chair sloping on a downward incline towards the middle of the bed. A still better way is to rest for the first night in a *reclining chair*. A large rocking chair, tilted well back, and held in this position by placing a small box or even a bureau drawer under the forward end of the rockers, will also serve admirably. If possible so to do, it is better to avoid sleep for the first night and pass the time by reading an entertaining story.

Use the soda gargle every fifteen (15) minutes while awake. It is made by adding a teaspoonful of *Merck's* bicarbonate of soda to a glass of water, or what is still better, and more agreeable, add the teaspoonful of soda to a 25 percent solution of some one of the pleasant vegetable antiseptics, as thymoline or oleoseptine, which means one-fourth (1-4) glass of the antiseptic selected and three-fourths (3-4) glass of water. In place of the soda gargle some have preferred a weak solution of green castile soap. *Sozodont* well diluted might also be suggested.

As the wound is deep after any operation whereby the tonsil is thoroughly removed, and as such deep wound is often not well cleansed by gargling, there is advised additionally the hourly use of a suitable syringe whereby the wound may be well cleansed with the same solution (the soda gargle). The best form of syringe to employ is a hard-rubber 1-2 ounce post-nasal syringe, the several openings of which insure efficiency. By having a mirror in a window, or by a gas jet, the wound can be easily seen, particularly if the tongue is held down with the handle of a table-spoon so the patient can direct the stream with sufficient force into the wound. In addition to the hourly use of the syringe, the gargle should be used between times every 15 minutes as directed for the first day or two, and less frequently thereafter during the remainder of the first week.

If the iron medicine is prescribed, it should be taken as directed immediately after having used the soda gargle. The dose is one-half (1-2) teaspoonful to be introduced in the back part of the mouth, avoiding the teeth, and swallowed slowly. Immediately thereafter rinse the forward part of the mouth and the teeth with the soda gargle. Repeat the dose every two hours for two or three

days, say at 2, 4, 6, 8, 10 and 12 o'clock. After this use less frequently, say every three or four hours as directed. *Caution.*—The iron medicine is not to be taken until the day following the operation.

Should there be pain in the ear, apply dry heat, which is best done by the use of a Japanese hot-box. After the "feu" is lighted and placed in the box it should be wrapped loosely in a porous cloth, as fly netting or cheese cloth, and tied with tapes over the painful ear. The heat will continue ceaselessly for four or five hours, particularly if two or three "feus" are employed, and the patient can meantime be sleeping. In lieu of the hot-box, either a hot-water bag, a hot plate wrapped in a towel, or a heated bag of hops, sand or salt may be used. Should either of the latter be selected, a pair will be required so one can be in the oven heating while the other is being applied.

A wet pack worn about the neck at night, and when in the house, will often assist in diminishing the soreness. The pack is made by loosely wringing a towel after having been dipped in ice-cold water. It should then be so folded that it will be about three inches in width and long enough to reach twice about the neck. After applying cover it with a strip of flannel, a dry towel, or still better with a strip of thin rubber cloth, as dentists' rubber dam, or oil silk, in order to retain the moisture. When the wet towel becomes warm, wring out afresh in cold water and re-apply as before, repeating every half hour. In place of the wet pack, if preferred, a bag of heated hops applied about the neck will prove soothing.

Inhaling steam from the spout of a tea-kettle, or from a steam atomizer, three or four times a day when convenient so to do, will also tend to allay the soreness of the throat.

If constipation occurs, take a tablespoonful of epsom salts in water, or else a bottle of the effervescing solution of the citrate of magnesia made ice-cold.

After the first week, in place of the soda gargle, use a weak solution of the chlorate of potash, made by dissolving a teaspoonful of the crystals in a glass of water, and gargle with same every half-hour or hour. If too strong, add more water. Another good gargle is made by adding 10 drops of the tincture of myrrh to two tablespoonfuls of water.

DIET.

Abstain from all alcoholic drinks, tobacco and highly spiced or hot foods.

For the first day or two after the operation depend chiefly upon milk and cream taken ice-cold. If drawn through a straw or glass tube the swallowing will be easier. Ice cream is also recommended. Malted milk (taken in accordance with the printed directions upon the container) will be found to be a most excellent food. Kumyss or Matzoon might also be suggested.

After the first day or two oatmeal in cream, cornmeal mush, cold soups, bread and milk, milk toast, raw or soft-boiled eggs, tapioca pudding, corn starch and cup custard may be eaten. Raw oysters, when in season, may be taken, the smaller size, as blue-points, being preferable, each oyster being cut in two or three pieces which can be easily swallowed. Ralston Health Food deserves particular mention as a food easily eaten and highly nutritious. The same may be said of currant jelly. Usually by the fifth day, and sometimes earlier, the throat has sufficiently improved to permit of indulgence in a more liberal diet, though solid foods had better not be taken until after the first week. By the eighth or ninth day the throat will have sufficiently healed so anything can be eaten as usual.

During the first few days, while the throat is sore, it may be found to be easier to swallow if the tongue is pressed firmly against the front teeth of the upper jaw, while the head is thrown well back. Sometimes better results are attained by pressing the tongue against the lower front teeth and taking liquid food from a spoon introduced well back in the mouth, the head, meantime, being tipped backward as before.

HEMORRHAGE.

In case of bleeding after operation, discontinue regular medicines until bleeding is controlled, and gargle continuously with *very cold ice water made by adding a little water to a glassful of pounded ice*. To this may be added either a little lemon juice, or vinegar, or, still better, a *teaspoonful of powdered alum*. A small piece of ice held in the back part of the mouth is often of value. The same may be said of an ice bag applied about the neck. Ice used as suggested will generally prove efficient. Should the ice gargle not control the bleeding, then take this paper to the nearest druggist and have compounded the following prescription:

℞ Acid Gallic ʒi
 Acid Tannic ʒiii
 M et ft pulv

Directions: Put a tablespoonful of the powder in a glass and add a tablespoonful of water, stirring until mixed. Dose, one-half tea-

spoonful swallowed slowly and repeated every one or two minutes. A little of this mixture may also be added to the alum gargle, which should be used during the intervals between the doses of the gallo-tannic acid mixture.

If after this the bleeding should still continue, call in a near-by physician and give him this sheet of directions. In such case I would respectfully make the following suggestions:

Hemorrhage after a tonsil operation is most likely to occur within the first six or twelve hours after operation, and when local anesthesia has been employed is owing to paralysis of the muscular coat of the bleeding vessels so they cannot contract as they normally would. This paralysis is due to the after effect of the cocaine. The hemorrhage will generally be found to be capillary and to be from the entire surface of the wound.

Fainting generally causes a cessation of hemorrhage, therefore, the patient should be *kept standing* with head erect and meantime instructed to *take long and deep breaths*. If, furthermore, the arms are elevated above the head the blood pressure is diminished. As this position becomes tiresome, the clasped hands may be held upon the head. See that the neck is not constricted: *a tight collar, for example, should be removed.*

Ergotole used hypodermically is of great value:

R Ergotole (S & D) 5ii

S. Inject hypodermically minims XX, repeating same dose in fifteen minutes and even again in another fifteen minutes if required. Three doses are usually sufficient so the desired effect is produced, or toxic symptoms manifested as syncope and nausea, which depress the heart's action, and as above stated tend to control the hemorrhage. *Aseptic ergot* may be used in the same manner.

One hypodermic of morphine, preferably a maximum dose, is to be particularly recommended in lieu of the ergotole in case the latter is not at hand. Norwood's *Tr. Veratrum Viridic*, administered hypodermically (say 5 or 10 minims), has been employed successfully, it being like morphine a cardiac depressant, and furthermore causes nausea. The relaxation from vomiting will often prove effective. With this object the hypodermic administration of 1-10 grain of *apomorphine* has been employed. Bosworth recommends an emetic of zinci sulphas. As cardiac depressants, and relaxing agents, are chiefly indicated, it becomes apparent that *alcohol* in any form is *to be avoided*, as are also hypodermics of strychnia, atropia, etc.

Astringents applied directly to the bleeding area are often effective. The wound should be packed with gauze medicated with the astringent selected. For patent reasons one end of the gauze should be secured outside of the mouth. The following astringents might be suggested:

a. A paste made by adding powdered tannin to a 20 percent solution of antipyrine.

b. Powdered permanganate of potash made in a paste by the addition of 4 percent of vaseline.

c. $\mathcal{R}$ Tr. Benzoin Comp. $\mathfrak{z}$ i
Iodoform $\mathfrak{z}$ i M

d. Styptic collodion, which is a combination of collodion, alcohol and tannin.

e. Turpentine.

Adrenalin 1-1000 would naturally occur to one as a proper agent to employ. In my experience it has proven more efficient in preventing hemorrhage than in stopping it after it has begun. In its use there is, though, the danger of recurrence, owing to its secondary effect. If employed at all it should be used, as are the other astringents, by packing the wound with gauze saturated therewith, in which case due credit must be given to the gauze packing, as tonsillar hemorrhages are often controlled by simply packing the wound with unmedicated gauze.

Monsel's Solution is not to be recommended for different reasons. As usually employed, by applying it to the wound with a swab, a coating is formed under which the hemorrhage continues, the blood meantime being swallowed. Furthermore, after its use the wound heals more slowly, hence my preference is for other methods of treatment. It may, however, be effective if gauze moistened therewith is tightly packed into the wound, though, as before stated, due credit must be given to the packing of gauze regardless of the astringent employed. If for any reason iron is used, it must not be applied while there is present any tannin or an inky precipitate will form. The value of *Ferropyrin* has been highly extolled. It is a dry powder consisting of equal parts of the chloride of iron and antipyrin. It is applied to the bleeding area upon gauze, and in case of tonsillar hemorrhage would be packed into the wound. Owing to previously mentioned statements other methods of treatment are to be preferred.

Peroxide of hydrogen is another agent of use for the control of hemorrhage, though it is of but little value in tonsillar hemorrhage.

If used as a gargle an immense amount of froth is produced, under which the bleeding continues, and the *froth may prove a danger if aspirated in the lungs*. The only advisable method of use would be to pack the wound with gauze moistened therewith, in which case the unmedicated gauze would prove nearly if not quite as effective.

The *hot-water douche*, which is so efficient in controlling surgical hemorrhage generally, might be employed. In such case no good can be expected unless the water is absolutely as hot as can be borne (about 130° Fahr.), and the stream must be *intermittingly applied directly in the wound* by means of a fountain syringe with a long tube, as a metal catheter, the patient meantime holding the breath and leaning well forward. Having the water acidulated with vinegar would probably increase its efficiency. On the whole it is not to be recommended in the treatment of tonsillar hemorrhage, and is only mentioned as a substitute for other treatment in emergency should there not be available other agents required.

Fig. 1. Writer's Tonsil Presser ($\frac{1}{2}$ size).

A strong solution of nitrate of silver, say 20 or 25 percent, is one of the best applications for the *prevention* of hemorrhage after a "cautery dissection" operation, by coagulating the albuminous element of the tissue and thus forming a dense coating, but, *after* a hemorrhage has begun, the exuding blood dilutes it and washes it away so as to prevent its acting as it does when applied to a bloodless wound. It furthermore finds its way to the larynx and is thus distressing to the patient.

Continuous pressure, efficiently applied, will probably control any secondary tonsillar hemorrhage to be met with, and is the most practical and surgical method of treating hemorrhage of this kind. This can be done with the thumb, it first being wrapped with gauze. There are special instruments devised for this purpose (figure 1), though any instrument shaped like a *placental forceps*, or even a *small pair of tongs*, can be substituted, both points being wrapped with gauze or muslin, and continuous pressure made therewith. Strong pressure applied externally with the thumb on the carotid might also be tried.

Should it be possible by inspection to recognize a bleeding vessel, it should be grasped with an artery forceps and torsion applied, though, as before stated, bleeding from a tonsil wound is most often of an oozing character, and seems to come from the entire surface of the wound. As continuous pressure applied by the hand becomes tiresome to the physician, and very annoying to the patient, it is better to employ, if available, a tonsil hemostat, one form being shown in figure 2.

In any case where there has been a considerable loss of blood certain methods of systemic treatment should be employed.

Bandaging each limb near the trunk will diminish the amount of blood in circulation. If this is done, one bandage at a time should be released, so the circulation of the limb will not be too long obstructed. In this way three limbs can be kept distended with blood.

Fig. 2. Writer's Tonsil Hemostat. ($\frac{1}{2}$ size).

Chloride of calcium, given by mouth or rectum in doses of ten grains dissolved in two ounces of water, and repeated hourly for three doses, has been employed with benefit in case of persistent and oozing hemorrhage. After the third dose it should be discontinued for a few hours before being again used; 40 to 60 grains in twenty-four hours is regarded as the maximum dose as an anti-hemorrhagic. The lactate of calcium has also been advised, a single dose of 30 grains in water being given.

Hypodermatoclysis. Should the hemorrhage have been very severe, it is advisable to administer a subcutaneous injection of normal saline fluid into the cellular tissue at the most favorable point, or else, as an alternate, a full enema ($\frac{1}{2}$ gallon or more) of the same fluid may be employed.

No. 103 State Street.