OUR PRIZE COMPETITION.

WHAT IS SURGICAL SHOCK? STATE SOME OF THE COMMONER INJURIES AFTER WHICH IT MAY OCCUR. HOW IS IT TREATED?

We have pleasure in awarding the Prize this month to Miss Maggie Neal, S.R.N., R.M.N., Nurses' Home, Barming Heath, Maidstone.

PRIZE PAPER.

"Surgical" shock implies some tramatic element in its production, including that by operative surgery. It may be defined as a condition of dangerously low vitality, consequent upon some catastrophe, and its effect upon the nervous system, characterised by a lowered blood pressure, sub-normal temperature and shallow respirations, and accompanied by the typical picture of pallor, cold clammy skin, sunken eyes, feeble pulse, and general decrease in muscle tone. The mental accompaniment is usually one of apathy, unless the shock be due to hæmorrhage, when restlessness and air hunger with great thirst will be present. Vomiting and rigor may occur—consciousness is not usually lost.

Metabolic activity is low, and various vascular phenomena have been demonstrated in recent findings. A certain amount of stasis will result in escape of lymph through the capillaries, which in some cases become most permeable. This, in its turn, will result in increased viscosity in the blood, and this will further retard tissue circulation—a vicious circle thus occurring.

Shock may be moderate or severe—primary or secondary.

In primary shock, the pain, fear, and damage occurring suddenly, and together, by their combined effect on the nervous centres will act as the causal factor.

Secondary shock may result from the production in the tissues of "histamines" and the effect of this chemical substance when absorbed.

A good example of this is seen in a severely-burned patient—the initial shock very severe, having been overcome—the life of the patient may be lost after 7 to 10 days when the burnt tissues disintegrate, and the histamines are absorbed, and the patient dies of surgical or secondary shock.

The common injuries after which this condition may occur:—

Burns and scalds from any cause—the severity of the condition bearing relation to the *degree* of the burn and its *extent*—burns of the second and third degree causing much shock—and the *situation* of the burn—burns of the trunk being apparently more dangerous to life than those of the limbs.

Fractures, either compound or complicated. Falls, or other violent accidents. Alterations in atmospheric pressure, such as occur in "blast" from explosive causes.

Hæmorrhage caused by penetrating wounds. Severe manipulations of abdominal viscera in surgery, and exposure of the gut by accidents to the abdominal wall.

Strangulated hernia, intestinal obstruction, biliary and renal colic—perforation of gastric, duodenal ulcers, or of a typhoid ulcer. Fractures of walls of cavities with involvement of the contained organs.

Surgical operations of long duration and large extent.

War wounds of all kinds. Poisoning.

The Treatment of Surgical Shock.

Where possible, as in that anticipated by manipulative surgery, the treatment should primarily be prophylactic. This would include: Avoidance of dehydration by excessive purgation—of acidosis by the administration of glucose before operation—the procuring of sleep previous to operation by warmth and comfort, and by using those means at our disposal for eradicating fear, and, if necessary, by obtaining permission to give a sedative.

Slight shock usually responds to rest in the recumbent position. Warmth, and quiet, and warm fluid given by mouth, if possible—if not, by rectum. Warm, sweet tea is considered safe in most cases—(alcohol is contra-indicated where there is any likelihood of bleeding)—and reassurance is aimed at. The raising of the lower part of the body by blocks under the foot of the bed may help. Where hot water bottles have been inserted these must be carefully examined for soundness—correctly stoppered and covered, and anchored—particularly where the bed is on the slant. Medical assistance will be required.

Severe shock will necessitate sterner measures. Blood transfusion or plasma transfusion relief of pain by sedatives, saline infusions—the constant attendance of the nurse, and the most careful carrying out of all the doctor's instructions—the oxygen tent or administration of warmed moistened oxygen by intranasal methods and of saline if given intravenously, the introduction of gum acacia or other colloid substance, to prevent osmosis into the tissues occurring too rapidly. If the shock is due to burns the air must be excluded and morphia is generally ordered to give relief from pain—and fear. All measures undertaken for shock must be prompt, and the actual cause be treated, otherwise the measures may be unavailing.

To summarise:—

Mechanical Aids.—The lowered blood pressure is assisted by the raising of the bed at the foot, and the bandaging of the limbs, which helps the blood to gravitate to the vital centres in the brain.

Replacement.—The loss of circulating fluid is compensated for by blood transfusion—plasma transfusion, by intravenous infusion of suitable fluids isotonic with the blood plasma. Also by subcutaneous injection of saline fluids, or rectal injections, and by mouth of glucose drinks, or sweetened tea.

Warmth.—Warmth restores heat lost from the skin, and supplies warmth for vital processes during the period of arrested metabolism. Quiet and rest allow Nature to do its recuperative work, and expense of energy is minimised.

Thirst is relieved by fluid intake.

Anæmia is relieved by oxygen administration.

Reassurance dispels anxiety.

The nurse must be very observant to recognise the typical signs and symptoms of shock, and to act promptly.

PRIZE COMPETITION QUESTION FOR NEXT MONTH.

How are the functions of Circulation, Respiration and Digestion regulated by the Nervous System?

previous page next page