

Pus.

Specimens of pus are rarely so urgent that they cannot be left till the morning, when they may be dealt with by the bacteriologists. Provided, however, the rest of the specimen is kept no harm will be done and time may be saved by inoculating cultures in the ward. A petri dish of blood agar and a tube of broth is required; the broth is inoculated by simply plunging the platinum loop into the pus and transferring it to the tube of the broth, being careful to sterilise before and after use. Inoculation of the plate is somewhat more difficult, the tendency is to take too much pus and so have an overgrowth of organisms on the plate, which makes it impossible to isolate individual colonies. All that is necessary is to just touch the specimen with the loop and then spread it evenly across the plates by means of a series of parallel lines. It is a good plan to first roughly divide the plate into three parts and cover each segment in turn without recharging the loop. In this manner if the first segment is overgrown the second or third will give separate colonies.

Blood Culture.

A 10 cc. syringe and needle sterilised either by boiling or in the autoclave and the usual requisites necessary for vein puncture are required, the medium used consists of a bottle of broth, the specimen being obtained by vein puncture and the 10 cc. or so of blood obtained shot straight into the bottle at the patient's bedside. Strict aseptic technique is, of course, necessary to avoid contamination.

Fæces.

Ordinary bacteriological examinations are best left to the bacteriologists, but frequently the wards are supplied with tubes of a special medium such as Sach's, which is particularly useful in the investigation of such conditions as Sonne dysentery, and all that is necessary is that a tiny pellet of fæces should be dropped into the tube.

SHOCK: ITS EFFECT UPON THE SYSTEM AND TREATMENT.

By MISS L. GODDARD, S.R.N.

Shock is a condition of prostration of all the voluntary and involuntary functions of the vital organs of the body; a violent disturbance of the nervous system, causing a sudden arrest of the heart's action and lessening the force of the circulation. It is due to many causes, such as painful impressions, sudden mental stress, surgical operations, poisons, loss of blood; after burns or a blow to the solar plexus. Frequently, death occurs from shock after an accident.

It affects women more than men and is more prevalent in war time. The symptoms are similar to syncope; the face and lips are bloodless and the voice low and sometimes incoherent, the eyes are staring and the pulse rapid and feeble, almost imperceptible; respirations panting, irregular and shallow.

Temperature is subnormal, and the skin cold and clammy; the forehead is bathed in cold sweat. Vomiting is a not infrequent symptom. The features are drawn, and there may be incontinence of urine and

fæces. Consciousness is retained unless hæmorrhage is present.

Shock may last only for a few minutes, but may develop into collapse.

In cases of shock in children, convulsions may occur.

In some cases of intense shock the symptoms may be delayed, as the stimulus to the nervous system may be so great that it may paralyse the vaso-constrictor nerves, in which case it may cause the veins of the abdomen to become filled with blood which, dilating, may cause a condition similar to a severe hæmorrhage; or the stimulus may reflexly stop the heart's action through the vagus nerves.

Treatment consists of placing the patient in bed with the head low; the foot of the bed should be raised on blocks to help promote the flow of blood to the nerve centres. Some medical men prefer to keep the patient flat and not raise the bed until definite signs of reaction appear.

Warmth is essential to raise the body temperature. If an electric cradle is not available warmed blankets and hot water bottles should be placed around the patient.

Hot stimulating drinks such as coffee and brandy, or hot brandy and water, may be ordered if the patient is conscious and can swallow, but where shock has resulted from hæmorrhage stimulants must not be given unless medically ordered.

When shock is due to loss of blood the limbs may be wrapped in cotton wool and bandaged firmly from below upwards. This method is used to allow the blood to circulate to the trunk and head and replace the blood lost in that area.

Blood transfusion is sometimes given when shock is due to excessive hæmorrhage.

Subcutaneous injections of sterile normal saline may be ordered or rectal infusion of saline and glucose with brandy and coffee.

If shock is due to loss of body fluids an intravenous infusion is given in some cases of normal saline solution. Stimulants such as Coramine, 1.7 cc., and brandy combined may be given, or strychnine (usually one-sixtieth gr.), which is a respiratory and nerve stimulant.

Pituitrin $\frac{1}{2}$ to 1 cc. raises the blood pressure, or Ether, 30 to 60 m., which is a general stimulant, may be ordered.

Collapse, unlike shock, comes on more insidiously, and does not reach its peak of severity for several hours; it may follow shock in cases of severe hæmorrhage.

The symptoms are similar to shock; the patient lies in a state of utter prostration and is unconscious, the eyelids half-closed. In some cases, this does not occur until the approach of death.

Treatment is the same as for shock.

A patient recovering from shock or collapse passes into a state of reaction in which the pulse improves and the temperature rises above normal; any desire for sleep should be encouraged and care taken that the heat of the body is maintained as there is a liability to a sudden relapse.

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