MEDICAL MATTERS.

SOME PROBLEMS IN INFECTION AND ITS CONTROL.

Professor Simon Flexner, Director of the Rockefeller Institute, New York, who delivered the Huxley Lecture at Charing Cross Hospital last week, gave a very interesting account of the investigation of poliomyelitis, or infantile paralysis. The parasite of this disease is invisible, ultra-microscopic, and filterable, and there is a close correspondence between the virus of the disease and those of ultra-microscopic organisms in general—for example, those of yellow fever and dengue fever. Recovery is produced by immunization, during which microbicidal substances, which can destroy the virus, appear in the blood. The virus is highly resistant to drying, light, and chemical action; in dust it survives for months, and in diffuse daylight indefinitely.

The Professor is of opinion that the site of infection in man is the nasal mucous membrane, from which the virus ascends first by the nerves of smell to the brain, multiplies in and around the olfactory nerves, and passes on into the cerebro-spinal fluid, by means of which it is carried to all parts of the nervous organs. But there are also other possible modes of infection, and the fact that poliomyelitis is commonest in the late summer and autumn indicates the probability of an insect carrier of infection. Thus house-flies may act as carriers, and in one instance infection has been produced in bed-bugs, but the result did not show that multiplication occurred within them or that they acted as the agents of inoculation. It is, however, significant, as showing that insects are capable of taking up the virus from the blood where it exists in miminal quantities, and of habouring it in an active state for a considerable time.

The employment of the immune sera exercises a definite, though perhaps not very strong protective action. The disease, if not entirely prevented, is so modified as to be of greatly diminished severity, but at present scientists have only touched the fringe of the problem of the cure of the disease. So far as drugs are concerned, if the inoculation of virus and the administration of urotropin are begun together and continued for some days, paralysis is sometimes, but not always, averted. The modification of urotropin with other antiseptic groups in some cases renders it more efficacious than the original compound. In others this appears to promote the onset of paralysis.

OUR PRIZE COMPETITION.

WHAT WOULD YOU PREPARE FOR AN INTRAVENOUS INFUSION, AND WHAT PRECAUTIONS WOULD YOU TAKE IF ASSISTING IN ITS ADMINISTRATION?

We have pleasure in awarding the prize this week to Miss Elizabeth Martin, the Royal Halifax Infirmary, Halifax.

PRIZE PAPER.

Normal salt solution, for its purity, cleansing, resisting, and stimulating qualities, is considered to be the very best preparation procurable, which to a very great extent incorporates the properties and resembles the composition of human blood, and it is therefore universally used in both medical and surgical work.

Saline solution is given in several different ways, but for an intravenous infusion the requirements are as follows:—Instruments and ligatures, saline solution, aseptic dressings and iodine, sterilized dressing sheets or towels, mackintosh, and bandage.

The instrument packet should contain:—Two pairs artery forceps, one pair dissecting forceps, one pair scissors, one aneurism needle, one bulldog clip, two scalpels, two needles (both of which may be threaded with a strand of silkworm gut when the instruments are sterilized).

A separate packet should contain:—One enamelled pint measure, one funnel, with tubing and cannula attached.

Both these packets may be "dry sterilized," and are therefore always ready for immediate use, and should be kept in the "ward emergency box."

When about to prepare for an intravenous infusion get a dressing table (a glass one if obtainable), and cover with a sterile dressing sheet or large towel, fix on the infusion rod for regulating the height of the funnel; then place the instrument packet on the table (after having taken off the outer cover), also the packet containing the measure funnel and tubing, &c.; a small jar of prepared catgut, a sterile gallipot containing iodine, saline solution in large sterile jug, thermometer, sterile towels, dressings, &c., receivers for soiled swabs and instruments.

The precautions to be taken when assisting with an intravenous infusion are:—Absolute aseptic surgical cleanliness; the careful mixing of the saline, testing the heat and regulation of the same; expelling all air from the tube: the solution should be flowing from the cannula when introduced into the vein; *never allow the funnel to run empty*, even at the end of the administration, or air may very easily enter the vein, and might prove a very serious matter.

previous page next page