OUR PRIZE COMPETITION.

DESCRIBE BRIEFLY THE OBJECT AND EFFECTS OF VACCINATION, DESCRIBE THE METHOD OF INTRODUCING THE LYMPH, AND THE STAGES OF DEVELOPMENT IN A SUCCESSFUL VACCINATION.

We have pleasure in awarding the prize this week to Miss J. G. Gilchrist, Gillespie Terrace, Edinburgh.

PRIZE PAPER.

The objects and effects of vaccination are (1) to protect the person from the disease of variola or smallpox by the scientific preventive method of inoculation with an active vaccine virus, by which means the effect on the system is produced and an acquired immunity established by the new resistant power acquired in the blood corpuscles through contact with a foreign element which has to be resisted and overcome. Smallpox is one of the most dreaded and fatal of epidemic diseases, the more so as the germ is air-borne as well as directly contagious, and successful vaccination is a sure preventive of smallpox for a considerable number of years, which has been conclusively proved since its introduction by Jenner in the year 1796, and has been the means of saving thousands of lives throughout the world. (2) Vaccination is effective in preventing the development of smallpox even if performed two or three days after coming in contact with the disease; and (3) should a vaccinated person contract the disease, the attack will be greatly modified, and the chances of recovery increased in contrast to the unvaccinated unprotected persons.

Those likely to be exposed to infection should be re-vaccinated at periods of about twelve years to ensure complete immunity.

Method of Introducing the Lymph.—The skin on the upper arm or calf of the leg, whichever site may be selected, is made perfectly clean, then the scarf skin is scratched away by a scarifier or knife blade to expose the true skin for about an eighth of an inch in all directions, not so deeply as to cause bleeding. The lymph is then smeared on to this area, and allowed to dry in. The lymph generally used is glycerinated vaccine lymph prepared from the vaccine vesicles as they have developed on the body of a healthy inoculated calf. This lymph is put up for use in small glass tubes, hermetically sealed to avoid contamination before use. At one time "arm-to-arm vaccination" was frequently employed, the lymph being procured from one patient at the highest stage of development and inoculated into another, but this has now rightly been discontinued as uncertain in efficacy and unhygienic in principle. Vaccination in infancy should be always advocated if the child is in good health. About three months old is a good time, as the child is not old enough to move about much and get the arm hurt; the part need only be kept clean and dry. It is often a good plan to wash with boracic lotion and a little wool to relieve the irritation, afterwards covering the part with a piece of clean lint. The stages of development in a successful vaccination extend over a period of fifteen to twenty days, and are four in number. (1) From the third to the fifth day after inoculation a reddish papule forms, surrounded by a reddened area. (2) From the fifth to the eighth day this papule becomes a vesicle, increasing in size, and filled with thin clear lymph. (3) From the eighth to the eleventh day the top of the vesicle sinks in, and the fluid becomes opaque and yellow, while the surrounding area of skin is inflamed and the whole arm painful. Sometimes the lymphatic glands near the part may be swollen and tender, and constitutional symptoms may show themselves in a rise of temperature, general feeling of malaise, and a slight rash may appear over the body. (4) From the eleventh to the fifteenth day the symptoms subside, the vesicle begins to desiccate, the scab is formed, and separates about the twenty-first day, leaving a red scar, which gradually fades, leaving the familiar white pitted mark.

In re-vaccination the stages may appear modified, but vesiculation must be present to ensure it has "taken" properly. In vaccination it is also customary to inoculate two or three areas at the same time.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss E. A. Noblett, Miss B. Barnes, Miss Owen, Miss H. Ballard, Miss A. Phipps, Miss M. Mackenzie, Miss J. Evans.

Miss Noblett says:—"In ordinary circumstances vaccination should be postponed if the child is feverish, if it has any specific infectious disease, any cutaneous disease, especially eczema, or if it has diarrhœa."

QUESTION FOR NEXT WEEK.

What diseases may flies convey? What would you suggest to prevent the presence of flies in hospital wards containing cases of infectious disease?

One competition paper has been received without either coupon or name. Will competitors note that the coupon, with name and address, must be enclosed, or they are disqualified?

previous page next page