

vaccination, that anti-vaccinia gamma globulin should be administered at the same time as vaccination (a dose of 0.5-1 g. should suffice), and that the multiple-pressure technique of vaccination should be used.

As regards other immunological procedures, a course of poliomyelitis vaccine should be given, followed by diphtheria and tetanus vaccine. It is most desirable that this baby should be actively immunized soon, mainly because of the grave danger of anaphylactic shock in the event of horse serum, such as tetanus antitoxin, having to be administered. Incidentally, this is the type of child who should be provided with a personal medical record which will state both his allergic history and his active immunization history.<sup>1</sup> Triple vaccine should not be repeated: the pertussis component is likely to cause trouble in a patient of this type, and in any event the most dangerous period for whooping-cough will have been passed. When beginning a course of diphtheria and tetanus vaccine a trial dose of 0.1 ml. should first be given: if no general reaction occurs within 24 hours the remainder of the dose may safely be given. If possible, the live, attenuated (oral) polio vaccine should be used, although the Salk-type vaccine is also unlikely to produce any reaction.

## REFERENCE

- <sup>1</sup> See Fry, J., Parish, H. J., and Cannon, P. A., *Brit. med. J.*, 1961, 2, 1647.

**Unretractable Foreskin**

**Q.**—*How can failure of retraction of the prepuce due to adhesions be differentiated from failure due to smallness of the preputial opening (assuming an opening larger than a pin-hole)? Is there any manœuvre other than circumcision which can cure non-retraction due to smallness of the opening?*

**A.**—The answer to this question depends on the age of the patient. In early infancy a small preputial orifice and adhesions are usually physiological; provided the infant has been observed to pass a stream of urine and there is no "ballooning," no intervention is necessary. If by the age of 3-4 years the prepuce cannot easily be retracted, either because of adhesions or because of abnormal tightness, treatment is advisable. Adhesions can be seen and may be gently separated by probing or dividing by blunt dissection with scissors. A general anaesthetic may be required for this. Absence of adhesions would indicate an unusually small preputial orifice; this may be relieved by making a dorsal slit in the prepuce or, preferably, by circumcision.

**Treatment of Starvation**

**Q.**—*What should be the immediate dietetic or other treatment in persons suffering from prolonged starvation? What principles govern the reintroduction of food in these people?*

**A.**—During starvation, when glycogen and fat reserves are used up, tissue proteins must be sacrificed. In this there is some selection: essential tissues such as brain and heart are least affected, while muscles, liver, and spleen become grossly expended. In extreme cases 50% of body weight may be lost. Changes in the gastro-intestinal mucosa may be such that digestion and absorption of food is almost impossible.

The first essential in treatment is absolute rest in bed with conservation of body heat. For the first few days fluid nourishment should be given "little and often" in the form of skimmed milk, broth, and meat juices. Proprietary nutritive preparations are also available which are well balanced and easy to administer. Even though patients in extremis can usually take fluids in small sips some authorities prefer to give amino-acids intravenously—e.g., hydrolysate of casein 3 g. per kg. of body weight daily. For the first two to three days 500 to 1,000 calories is ample, followed by a similar period of 2,000 and thereafter 3,000 calories with a high protein and vitamin content throughout. Dehydration, diarrhoea, infection, and mental instability may require special attention. When starvation has been excessively prolonged, as it was in some prisoners of war

and in inmates of concentration camps, irreversible degenerative changes, especially in the nervous system, may have developed. Severe cases may need many months of patient hospital treatment and rehabilitation.<sup>1,2</sup>

## REFERENCES

- <sup>1</sup> Lipscomb, F. M., *Lancet*, 1945, 2, 313.  
<sup>2</sup> *Proc. roy. Soc. Med.*, 1945, 38, 388.

**Determination of Sex**

**Q.**—*Is there any evidence that the sex of a child can be influenced by dietary measures by either parent before conception?*

**A.**—Chromosomal sex is determined by the type of spermatozoon fertilizing the ovum. According to Shettles<sup>1</sup> the head of the Y-carrying spermatozoon is smaller than that of the X-carrying spermatozoon. The smaller head may allow easier penetration of the ovum and the zona pellucida, and this is postulated as a reason for more males than females being conceived. The fact that one sex seems to predominate in certain families may be because the males produce mainly smaller-headed spermatozoa. This trait, however, is probably genetically determined. Maternal diet could affect sex determination only if it in some way selectively altered the penetrability of the cervical mucus or the ovum to the different spermatozoa. Paternal diet could operate only if it altered the relative numbers of the X- and Y-carrying spermatozoa. Both possibilities are highly conjectural, and I know of no evidence to substantiate the idea that sex is influenced by the diet of either partner.

## REFERENCES

- <sup>1</sup> Shettles, L. B., *Bull. Sloane Hosp. Wom. N.Y.*, 1960, 6, 48.  
<sup>2</sup> — *ibid.* 1961, 7, 74.

**Cause of Measles Rash**

**Q.**—*What causes the rash in measles?*

**A.**—The rash in measles is said to be due to exudation of serum which causes swelling of the epithelial cells below the keratinized layer; cells or groups of cells may undergo necrosis. There is proliferation of endothelial leucocytes in the corium, and the vascular endothelium in the rash area is swollen and shows granular changes in the cytoplasm. Post-eruptive staining is due to capillary stasis, with red blood cells and broken-down pigment adhering to the damaged intima.<sup>1</sup>

## REFERENCE

- <sup>1</sup> Gunn, W., in *Modern Practice in Infectious Fevers*, vol. 2, edited by H. S. Banks, 1951. Butterworth, London.

**Correction.**—The Brigadier R. D. Cameron mentioned in the article "Anglo-Yugoslav Medical Relations in Peace and War" (December 16, 1961, p. 1634), should have been Brigadier W. Moore Cameron.

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