More Work on Measles Vaccines

In 1961 a group of experts was appointed to advise the World Health Organization on vaccination against measles. As a result studies were undertaken in eight countries, and the group's report has now appeared.[1] It is an excellent review of the subject.

Both live attenuated virus vaccines[2] and inactivated virus vaccines[3] were studied. The inactivated virus vaccines failed to provide long-lasting immunity. They are therefore unlikely to be of value except perhaps to give protection against the severe reactions sometimes experienced with live virus vaccines. Of the eleven live virus vaccines investigated, seven (including the original Enders Edmonston B vaccine[4]) produced a high level of immunity, but unfortunately also produced serious reactions in some of the persons vaccinated.[5-8] The most common severe reaction was high fever ; convulsions were observed in occasional cases. Another vaccine gave rise to few reactions but proved to be a poor immunizing agent. The remaining three vaccines (the Schwarz,[9] [10] Beckenham 20, and Milovanović vaccines) had undergone numerous passages in tissue culture in an attempt to attenuate them further and were the most promising of the vaccines studied. These further-attenuated vaccines have so far been studied only in small controlled trials. One, which included Beckenham 20 vaccine, is described at page 470 of this issue by Professor R. G. Hendrickse and his colleagues in Nigeria. The results of this and the other trials of further-attenuated vaccines mentioned in the W.H.O. report indicate that though the incidence of fever is less than with the Enders Edmonston B vaccine 5 to 15% of the children vaccinated develop temperatures of 103° F. (39.4° C.) or over. Unfortunately there still appears to be some risk of convulsions in occasional cases, though this too is less than with the Enders Edmonston B vaccine. Against these disadvantages must be set the high degree of protection that the further-attenuated vaccines give and the virtual absence of serious respiratory complications.

There are several contraindications to the use of live attenuated virus vaccines. They include pregnancy ; leukaemia, lymphoma, and other malignant disease ; treatment with steroids, alkylating agents, antimetabolites, and irradiation ; severe acute febrile illness ; kwashiorkor ; and severe active tuberculosis and other chronic respiratory diseases. Vaccine should not be given within six weeks of giving gamma globulin or to infants under 8 months of age, since in these circumstances circulating antibody may neutralize the vaccine virus.

Discussing the indications for the large-scale use of measles vaccines, the report stresses the need to consider the importance of the disease in different countries individually. It shows that there is an urgent need for effective protection against measles in developing countries where the disease generally has a high death rate.[10] Against this must be weighed the characteristics and properties of the available vaccines—for example, safety, efficacy, acceptability, availability, cost, and ease of administration. Unfortunately none of the vaccines at present available is completely satisfactory. The further-attenuated vaccines are effective and relatively easy to administer, though great care is necessary to avoid contamination of the syringe with preservatives, detergents, alcohols, or other lipid solvents, since these rapidly inactivate the virus. These vaccines are expensive and not yet available in large quantities, though these objections may be overcome in the future, but the main drawback to their mass use remains—namely, the severity of the reaction in a few of the children vaccinated.

The report makes useful recommendations for future investigations, for the problem has yet to be solved of finding a vaccine which causes only slight reactions and provides long-lasting immunity. Meanwhile further trials of the Beckenham 20 vaccine are proceeding, this time in Great Britain.

[1] *Wld Hlth Org. techn. Rep. Ser.*, 1963, **263**.
[2] *Brit. med. J.*, 1961, **2**, 1274.
[3] Ibid., 1962, **1**, 1746.
[4] Enders, J. F., *Yale J. Biol. Med.*, 1961–2, **34**, 239.
[5] Goffe, A. P., and Laurence, G. D., *Brit. med. J.*, 1961, **2**, 1244.
[6] Collard, P., *et al.*, ibid., 1961, **2**, 1246.
[7] Aldous, I. R., *et al.*, ibid., 1961, **2**, 1250.
[8] Goffe, A. P., *et al.*, ibid., 1963, **1**, 26.
[9] Schwarz, A. J. F., *Amer. J. Dis. Child.*, 1962, **103**, 386.
[10] *Brit. med. J.*, 1963, **2**, 759.

Poisons Information Centres

If not exactly in response to public demand (as the impresarios are tempted to announce), then certainly as a result of professional pressure and committee recommendation,[1] three official poisons information centres in London, Edinburgh, and Belfast began operating on 2 September 1963.[2] There had been local ventures before this, notably in Leeds, where a pioneering project had made considerable progress, and in North America a start had been made many years earlier. The first began in Chicago in 1953, and nearly 450 such centres were established in the United States over the ensuing eight years, while in Canada the pattern of development has been similar. The opportunity has now arisen in Boston to review the workings of the centre there which has been functioning since 1954.[3]

From a modest start of 20 calls per month at the outset the pressure on that centre had risen by 1960 to no fewer than 500 calls per month. These figures show what a formidable problem accidental poisoning is in the United States as a whole.

In Britain it is probably too early yet to make any exact assessment, but so far as can be judged the three centres here together receive about 200 calls per month.

The Boston survey, which, as the authors emphasize, was conducted essentially by a questionary to which there was a disappointingly low number of replies, provides data from which certain deductions can nevertheless be drawn. In the first place the service provided has saved very few lives. In most of the incidents leading to inquiries somebody took a relatively low dose of a fairly harmless substance. According to the people making the calls, however, the reassurance given amounted to a valuable service of which they would not wish to be deprived. That leads to the second interesting point —namely, the people to whom the facilities were extended. In Boston, and at other American centres for that matter, any member of the public is entitled to seek help—not the medical profession alone. Of all the physicians in Boston expressing an opinion on this aspect only 4.3% wanted this arrangement altered. When, by contrast, the medical officers manning the centre were similarly approached, 60% of them favoured the channelling of all calls through doctors. Could this be a

[1] *Emergency Treatment in Hospital of Cases of Acute Poisoning*, 1962. H.M.S.O., London.
[2] *Brit. med. J.*, 1963, **2**, 515.
[3] Robb, G. L., Elwood, H. S., and Haggerty, R. J., *Amer. J. publ. Hlth*, 1963, **53**, 1751.