

pneumonia and a moderate degree of anemia were also seen. Besides, the well-recognized involvement of heart, eyes, ears and brain was found as in other studies.

The diversity of abnormalities encountered indicates that generalized viral infection is responsible for the clinical manifestations of this acute rubella syndrome. It is likely that the virus undergoes multiplication in various tissues, since it was isolated from several organs in aborted foetuses and from infants after birth. Systemic and pulmonary arteries showed deficient elastic tissue and presence of intimal proliferation.<sup>8</sup> These vascular changes possibly contribute to the spread of virus from blood to the tissues.

Laboratory tests showed that the affected babies are infectious to attendants and contacts.<sup>9</sup> Unlike adults,

no complement-fixing antibodies were found. Two types of neutralizing antibodies were detected—I<sub>g</sub>M fraction-attached which is formed by the foetus, and those linked with I<sub>g</sub>G globulin which is formed by the mother. It seems therefore, that foetal synthesis of antibodies occurs before birth and continues in the neonatal period. It is known that immunity to re-infection is associated with the presence of neutralizing antibodies, and therein lies the hope of active prophylaxis by means of a rubella virus vaccine.

The new features found in the acute rubella syndrome have to be borne in mind in order to make an early and correct diagnosis. Repeated virological tests on throat washings and other secretions would confirm it, even in the absence of an obvious history of rubella during early pregnancy or exposure to a rubella patient.

R. K. C.

8. Campbell, P. E. *Brit. Heart J.* 27 : 134, 1965.

9. Schiff, G. M. and Dine, M. S. *Amer. J. Dis. Child.* 110 : 447, 1965.

#### ERRATUM

On pages 274, line 14 under "Treatment" of the August, 1965 issue of the *Journal*, "0.75 mg. per kilogram" should read "0.075 mg. per kilogram". This error was drawn to our attention recently.