Correspondence

Renin and aldosterone response in human newborns to acute blood volume change

Sir,
We read with interest the report of Dillon and associates (Archives, 1978, 53, 461) on this subject. In a paper to be submitted to Rivista Italiana Pediatria we studied plasma renin activity (PRA) in 13 newborn infants undergoing exchange transfusion with ACD stored blood for hyperbilirubinaemia of various aetiology during the first 6 days of life. Exchange transfusions were such that the infants were kept normovolaemic. Weights ranged from 2400 to 3810 g, and gestational ages from 37 to 41 weeks. PRA and haematocrit were determined on umbilical vein samples before, midway, and at the end of the procedure, and from the transfused blood. The amount of blood administered ranged from 63.7 to 155.8 ml/kg, and the exchange rate from 0.964 to 5.288 ml/kg per min.

Statistical analysis of data was performed by a step-wise multiple regression program (UNIVAC 90/30), taking into account as dependent variable the average rate of renin production during the period of exchange transfusion and as independent variables the weight, postnatal age, basal PRA of the newborn, donor's PRA, and exchange rate. Allowing for the dilution caused by the donor's blood, hyperproduction of renin occurred in all cases. All these variables influenced, in various directions, the rate of renin release but the rate of exchange appears to be the most important factor in the activation of the renin-angiotensin system (multiple correlation coefficient = 0.774; F-value for analysis of variance = 16.404; standard error of estimate = 0.078; t = 4.050; P < 0.01).

G. F. SPENNAI, S. PLACIDI, B. PERSICHETTI, AND F. DE MATTEIS
Cattedra di Clinica Pediatrica, Ospedale San Salvatore, 67100 L'Aquila, Italy

Periperal pulmonary artery stenosis

Sir,
The observation by Salisbury and Keeling (Archives, 1978, 53, 428) that polyploid lesions in the peripheral pulmonary arteries of an infant, recalls a controversy that was resolved over 20 years ago. Originally described in systemic arteries by Bucicante in 1945 and later by many others, these structures became known as 'pedunculated nodules' or 'polypoid cushions' and were interpreted as flow regulation mechanisms. Later studies
Familial neurodegenerative disorder associated with raised urinary VMA.

A J Barson

Arch Dis Child 1979 54: 80
doi: 10.1136/adc.54.1.80-a

Updated information and services can be found at:
http://adc.bmj.com/content/54/1/80.2.citation

Email alerting service

These include:
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/