Correspondence

Archives of Disease in Childhood, 1974, 49, 970.

Blood pressure measurement in infants

Sir,

Dr. A. M. Elseed and colleagues (Archives, 1973, 48, 932) referred to 4 methods of indirect measurement of blood pressure: palpation, auscultation, flush, and Doppler. May I draw your attention to a fifth method which will measure systolic and diastolic blood pressure with reproducible results, even in very small infants—oscillometry. This method was first used by Mlle. L. Koessler (1912). By using a Pachon oscillometer, measurements were improved and used extensively by Balard (1912a, b, 1913), including observations on newborns in the first day of life. Using a similar instrument with a specially designed double chamber cuff, originally designed by Gallavardin (1922), I did measurements on term and premature infants (Kafka, 1967). Nelson (1968) designed an electronic oscillometer which could be used with the commercially available single chamber cuff. This instrument has proved to be very effective, as shown in a study conducted by Dr. Oh and myself (Kafka and Oh 1971).

The oscillometric method for indirect blood pressure measurements has obvious advantages.

1. It measures systolic and diastolic blood pressure.
2. Reliable and reproducible measurements can be taken on the upper as well as on the lower limb.
3. Measurements can be taken in very small infants.
4. The method will still be usable in conditions where blood pressure drops to low levels as in shock-like states or where there are low diastolic values due to shunts or low systolic measurements as in coarctation.

The rounding off of figures of blood pressure values widely used in clinical medicine is not acceptable for statistical studies, according to Armitage and Rose (1966).

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Koessler, L. (1912). L'oscillometrie appliquée à l'étude de la tension artérielle chez les enfants. (Quoted by P. Balard, 1913.)


Childhood lymphoma resembling Burkitt's tumour in the Southern Argentine

Sir,

Burkitt's lymphoma is an uncommon finding in nontropical zones of the world. We report a case observed in the southern part of the Argentine, which is characterized by its scarce vegetation, low degree of humidity, an average rainfall of 287 mm/year, and a mean annual minimum temperature of 9·5°C, considerably lower than that described in connexion with the African disease. The patient was born and lived in a town situated on the seacoast, where malaria and other tropical diseases are unknown.

A 4-year-old white girl coming from San Antonio Oeste (Long. 64°57'W; Lat. 40°44'S) was admitted on 4 February 1973, with a history of acute intestinal obstruction. Laparotomy did not reveal any outstanding pathology except for an ileoileal intussusception. Biopsy specimen of the resected intestine showed massive necrosis. 3 months later physical examination was remarkable for palpable abdominal masses. A new laparotomy showed enlarged ovaries, which were excised, enormous mesenteric lymph nodes and diffuse tumour involvement of the retroperitoneum. Imprints of fresh tumour and histopathological studies disclosed the typical pattern of Burkitt's lymphoma (Wright, 1963): vacuolated, P.A.S. negative immature lymphoblasts, numerous macrophages, and a 'starry-sky' pattern. The small intestine was also infiltrated with lymphomatous tissue. Peripheral blood and sternal bone marrow were normal, as well as head, neck, and chest x-rays. No peripheral lymph nodes were noted. Because of the clinical signs, the anatomical distribution and the histological picture, the diagnosis of Burkitt's lymphoma was suggested. As it has been stated (Wright, 1964), bilateral ovarian tumours are so rare in other types of
Hyperllysinaemia

Sir,

I would like to add to the article by Drs. van Gelderen and Teijema (Archives, 1973, 48, 892) by recording three important findings that support their thesis that hyperlysinaemia due to lysine-ketoglutarate reductase deficiency is a harmless inborn error of metabolism. 4 patients with this condition have been under biochemical and clinical scrutiny for periods up to 12 years. 3 are sibs: a girl (the propositus) now 12½ years, a boy 9½, and a girl 8. The fourth patient, a cousin, is now 18½ years old. Though many clinical and biochemical features of these familial hyperlysinaemics have been recorded (Woody, 1964; Woody, Hutzler, and Dancis, 1966; Woody, Ong, and Pupene, 1967; Dancis et al., 1969) three important findings have not been published.

First, 3 of these children have had normal growth and development. Growth and developmental delays were seen only in the index case and probably represent a sampling artifact. The other children manifest the biochemical findings of hyperlysinaemia to the same degree as the propositus and have normal growth and intelligence. They have also lacked the ligamentous and muscular aspernia found in the index patient. Only the boy, with bilateral ectopia lenticis, might be considered to have a connective tissue abnormality somehow related to defective lysine metabolism. All 3 have had normal EEGs.

The second important observation is that 2 of these children, the boy and younger girl, did not manifest increased serum lysine levels until they were 6 months old. Since it must be assumed that the enzyme defect was present at birth, an alternate minor pathway via pipecolic acid has been postulated to function actively below the age of 1 year (Woody and Pupene, 1970, 1971). This serves to maintain normal lysine levels during early infancy when rapid growth—and its high requirement of lysine for protein synthesis—keeps lysine catabolism low and within the capacity of the pipecolic acid pathway to handle. As growth slows after 6 months, the balance between absorption and utilization of lysine shifts towards the catabolic side. Such a shift unmask's the defect in lysine-ketoglutarate reductase activity with an accumulation of lysine and lysine metabolites.

The third finding is the presence in these children of normal levels of serum ammonia despite serum lysine and arginine levels far in excess of those reported for patients with congenital lysine intolerance (Table). The relation of lysine metabolism to ammonia production remains obscure.

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REFERENCES


Correspondence

To our knowledge, this day. A and the Rufino, C., Teijema with this old. Though and familial deficiency is important findings of three important Ong, Woody, Hutzler, and Dancis, 1964; sampling artifact. Sir, have a EEGs. with bilateral serum increased defective acid has was served to for when the children, acid has was described (1963). Burkitt's tumour. The first in the southern zone.

M. AGGIO, J. LUCANERA, S. BRONFEN, and M. CRIVELLARO Policlínico Ferrovíario, Bahia Blanca, Argentina.

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Simultaneous serum levels of ammonia, lysine, and arginine

<table>
<thead>
<tr>
<th></th>
<th>Ammonia (µg/100 ml)</th>
<th>Lysine (µmol/l)</th>
<th>Arginine (µmol/l)</th>
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<tr>
<td>Familial hyperlysinaemia</td>
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<tr>
<td>Sib 1</td>
<td>43±5</td>
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<td>110</td>
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<td>Sib 3</td>
<td>38±2</td>
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<tr>
<td>Congenital lysine</td>
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<td>Intolerance*</td>
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<tr>
<td>Normal values</td>
<td>18-48±</td>
<td>71-151±</td>
<td>25-80±</td>
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Letter: childhood lymphoma resembling Burkitt's tumour in the southern Argentine.
M AGGIO, J Lucanera, S Bronfen and M Crivellaro

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