This may be helpful, but in my experience the best clue is the level of venous pulsation at the top of the blood column. On close scrutiny this can usually be ascertained. For example, in a case with congestive failure the blood column may appear to end at the posterior border of the sterno-mastoid muscle owing to pressure of the bulging muscle-belly, whereas the level of venous filling is in fact higher, as indicated by the presence of venous pulsation. Individual veins may be full because they are obstructed by muscle pressure at the root of the neck; contracting platysma, on the other hand, will obliterate the vein. Both difficulties are quickly resolved by altering the position of the head and by proper relaxation of the neck. Permanent venous obstruction is most commonly due to thyroid enlargement and, less commonly, to lymph nodes, mediastinal tumours, thrombosis of the vein, etc. Obstructed veins do not pulsate, and show no variation with change in the patient's position; unequal filling of various veins examined is a clear indication of obstruction. Deformities of the thoracic skeleton, such as severe kypho-scoliosis with increased depth of chest, will cause inaccurate measurement if the patient is semi-recumbent; in more erect positions the error becomes progressively less.

With these possible difficulties in mind it is advisable, on the first occasion at least, to make the examination and measurement according to a set routine. The patient should recline upon an adjustable back-rest, with one vertically placed pillow supporting the head and shoulders. Oblique illumination is helpful, as shadows upon full veins and areas of venous pulsation facilitate their recognition.

The external jugular veins, being largely superficial in their course, are the easiest to observe, but where they are visible other veins, such as the anterior jugular, may be used to confirm the level of venous filling. The minimal level (i.e., in inspiration) should first be identified with the patient lying midway between the vertical and the horizontal. A measurement is taken and confirmed by examination of the veins on the other side; if there is a discrepancy a mistake has been made. After this, by adjusting the back-rest, the head and shoulders should first be raised and then lowered below the original position and further measurements made; these should all closely agree, and the average figure can then be accepted as the measure of venous pressure.

The instrument can be obtained from Messrs. Chas. F. Thackray, Ltd., Park Street, Leeds.

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Medical Memoranda

Kidney Tumours in a Child and her Grandmother

The occurrence of an embryonal tumour of the kidney in a child 2½ years old and of a hypernephroma in her grandmother, aged 67, must be rare enough to be worth recording.

CASE REPORT

The Child.—Jean X., aged 2½, was seen in January, 1944, giving a history of slight haematuria two months previously. Examination showed a tumour occupying the whole left side of the abdomen and reaching across the midline anteriorly and to within two finger-breadths of the pubis. A diagnosis of Wilms's tumour was made and a pre-operative course of deep x-ray therapy was started. A maximum tumour dose of 3,150 r in 22 days was given to the left abdomen (B.J.). The mass regressed to one-third of its original size, and nephrectomy was performed (Mr. C. C. Holman) on Feb. 22. The tumour measured 12×11×8 cm. Macroscopically normal kidney structure was seen at the upper pole of the mass, which contained large cystic areas. The pathological report (Dr. H. I. Coombs) on the specimen was as follows: "The histology has been profoundly changed by the radiation, but numbers of small tubules and structures containing invaginations of stroma suggesting primitive glomeruli can be seen. These are separated by dense fibrotic stroma, but scattered foci of more primitive 'mesenchymal' tissue characteristic of a Wilms's tumour are also present."

The child made an uneventful recovery, and a post-operative course of deep x rays to the abdomen and mediastinum followed, 1,700 r being administered in 21 days. Apart from whooping-cough in November, 1944, she was well until February, 1945, when

mediastinal metastases were shown on an x-ray film. These disappeared with further x-ray treatment. The child's condition improved temporarily. She died on July 21, 1945, eighteen months from the beginning of treatment.

The Grandmother.—Jane X., aged 67, is the paternal grandmother of Jean. She was first seen in January, 1946, suffering from profuse haematuria. She said she had had similar haematuria three years and five years previously. Examination showed a large mass in the right loin extending nearly to the midline anteriorly and to below the level of the umbilicus. Nephrectomy was performed by one of us (A. R. B.) on Feb. 8, 1946. Convalescence was uneventful, and she left hospital on Feb. 26. The pathological report (Dr. R. M. Heggie) was: "Histologically the tumour submitted presents the classical features of a hypernephroma showing the characteristic large cells and delicate vascular stroma. The arrangement of the epithelium is of the solid type." When last seen, early in July, there was no sign of recurrence and she was doing her housework.

COMMENT

Without inferring any significance in the occurrence of these relatively rare tumours in child and grandparent, one cannot help wondering whether Nicholson's assertion (see Stanford Cade's *Malignant Disease and its Treatment by Radium*, 1940, p. 910) that "Wilms's tumours . . . are malformed kidneys" does not find substantiation in these cases. It seems also worth mentioning that but for the follow-up clinics held at this hospital and the National Radium Commission registration cards this coincidence would not have been found, as the most persistent history-taking in the case of the elder patient did not provide any information of kidney disease in the family.

We are indebted to Mr. C. C. Holman for permission to mention the first case, and to Drs. H. I. Coombs and R. M. Heggie for the pathological reports.

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A. R. BANHAM, F.R.C.S.
B. JOLLES, M.D.

A Case of Refractory Anaemia

Cases of pernicious anaemia which are refractory to parenteral liver therapy are occasionally encountered and have been classified by Davidson *et al.* (1943). A year after the introduction by Davis *et al.* (1943) of proteolysed liver for the oral treatment of megalocytic anaemias Davis and Davidson (1944) reported on its effectiveness in the treatment of refractory anaemias, particularly those with megaloblastic erythropoiesis. The following case illustrates how a typical Addisonian pernicious anaemia was treated successfully with oral proteolysed liver when it had failed to respond to parenteral liver extracts.

CASE REPORT

A married woman aged 68 was first seen at the Nelson Hospital on April 24, 1945, having suffered from breathlessness, palpitation, and swelling of the ankles for five months. On examination she showed the usual manifestations of severe anaemia, and her blood picture was typical of pernicious anaemia: haemoglobin, 40%; red cells, 1,670,000 per c.mm.; colour index, 1.2; white cells, 5,400 per c.mm.; a blood film showed anisocytosis, megalocytosis, and poikilocytosis. She was referred back to her own doctor, who gave her intramuscular injections of "hepatab" 2 ml. three times a week for six months and then every ten days until she returned a year later. Her condition improved at first but was followed by a gradual deterioration. The only blood count during this period (on May 19) showed no response to the liver.

She was seen again on May 16, 1946, having felt progressively worse since the previous Christmas, and was admitted three days later. On examination she presented the characteristic clinical picture of pernicious anaemia, with brown pigmentation, jaundice, smooth tongue, enlarged liver, and palpable spleen, and with congestive heart failure superadded. A full blood count on May 20 showed: red cells, 950,000 per c.mm.; haemoglobin, 25%; colour index, 1.3; reticulocytes, 3%; a blood film showed marked anisocytosis and poikilocytosis, with a few normoblasts, macrocytes, and ghost cells.

Urine examination revealed no abnormal deposit or organisms. There was no free acid in the fasting gastric juice or after injection of histamine. Red cell fragility, normal. Van den Bergh reaction: direct, negative; indirect, 4 mg. per 100 ml. The specimen obtained on sternal puncture was not rich in cellular material, but the primitive red cells were of megaloblastic type. Hippuric acid test: 35% excreted after two hours (normal, 50%). The fat content of the dried faeces was normal. A barium meal followed by screening showed a normal stomach and duodenal cap. No occult blood was present in the stools, and the Wassermann reaction was negative.

To check the potency of her previous liver injections the patient was given "anahaemin" 2 ml. intramuscularly on May 20, but there was no reticulocyte response. On May 24 the treatment was changed to one tablespoonful of proteolysed liver by mouth and marmite daily. Her clinical condition improved satisfactorily, and she was discharged five weeks after the commencement of treatment. The evening temperature ranged between 100° and 102° F. (37.8° and 38.9° C.) during the first week after admission, 99° and 100° F. (37.2° and 37.8° C.) during the second week, and was normal after the third week. Her blood counts showed marked and rapid progress; after the first three weeks of treatment the haemoglobin

had increased by 31%, and the red cells by 2,300,000 per c.mm. There was no apparent reticulocyte response.

She was re-examined as an out-patient on July 3, when she felt very well. The jaundice had vanished, the filiform papillae had reappeared on her tongue, there were no signs of cardiac failure, and the liver and spleen were no longer palpable. The result of the latest blood count (July 22) was: haemoglobin, 80%; red cells, 3,200,000 per c.mm.

I wish to thank Dr. A. J. Beard for permission to publish this case, and Dr. J. M. Lever for the laboratory investigations.

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Chicken-pox Eruption Treated with Benzyl Benzoate

During the early part of this summer a fairly extensive outbreak of varicella occurred in this district. I had noticed during the latter part of my service in the R.A.M.C. that pruritic skin eruptions, of whatever nature, were very largely treated empirically with benzyl benzoate, and with considerable success, at any rate so far as the itching was concerned. Accordingly, remembering how unsuccessful the usual applications habitually proved, it was decided to use benzyl benzoate for the itching pustules in this epidemic, and 16 cases in all were treated with it. It is not too much to say that it acted like a charm, and by controlling the scratching may have done something to shorten the convalescence. While this is too small a series on which to base any firm conclusions, the results were striking enough to make it seem worth while recording them, in the hope that they will be confirmed by others who may give the treatment a trial.

The method was as follows: A complete application of the emulsion was made to all the affected areas, except the hairy part of the scalp, on successive days. For the scalp lot. crinalis was used and found to be satisfactory. After treating three or four cases patients were warned that they must not expect relief from the irritation until anything up to 24 hours after the second application, and, by the same token, that the apparent failure of the first application was no excuse for omitting the second. Relief occurred on the average in about 10 hours after the second application, and thereafter was complete. The first four cases were advised to continue the application to any fresh pustules or areas where there was still irritation; but it was quickly evident that two applications properly made were sufficient to complete the treatment. It is well recognized that many skins, particularly those of children and the fair-haired, are sensitive to benzyl benzoate. Luckily no complications occurred, and it is thought that experience may show that reaction to the drug is rare except where application has been constantly repeated. The following is a record of the most striking case in the series.

The patient was a male aged 46, who had the most extensive eruption I had ever seen, and was running a temperature up to 102.6° F. (39.2° C.). He was in great distress from the irritation, and very disappointed when he got no relief from the first application. However, he was persuaded to persevere, and the second application was given about 9.30 a.m. on the following day. By that evening he had complete relief, and was so delighted that nothing would stop him plastering himself with the emulsion from time to time, to prevent recurrence, as he thought. He had no further trouble and recovery was rapid.

A brief analysis of the cases is given in the following table.

Case	Sex	Age (years)	First Seen (days from onset)	No. of Applications	Relief of Irritation (hours from 2nd application)
1	F.	6	Day of onset	2+	About 12
2	M.	4	"	2+	" 24
3	M.	10	"	4	" 10
4	M.	8	"	3+	" 12
5	M.	46	"	4+	" 9
6	M.	7	Day of onset	2+	6
7	F.	15	2	2	12
8	M.	2	2	2	7
9	F.	4	1	2	6
10	F.	3	Day of onset	2	9
11	M.	13	3	2	10
12	F.	11	1	2	7
13	M.	7	2	2	8
14	F.	19	1	2	10
15	M.	3	Day of onset	2	6
16	M.	4	"	2	8

Bedale, Yorks.

J. H. BEILBY, M.B., B.Ch.

Reviews

PHYSIOLOGY OF FOOD AND NUTRITION

Food and Nutrition. By E. W. H. Cruickshank, M.D., D.Sc., Ph.D., M.R.C.P. (Pp. 326. 16s.) Edinburgh: E. and S. Livingstone Ltd. 1946.

This is a brief survey of the present state of our knowledge on the physiology of food and nutrition written for the general medical reader, although it is so clearly and simply written that the educated layman should have no difficulty whatever in following it. A number of historical anecdotes add to the interest of the book. A prominent feature is a discussion on the impact of the war on problems of national nutrition and a survey of the rationing system. There are chapters on the energy requirements of man, the basic foodstuffs, minerals, vitamins, the planning of diets, and the dehydration and preservation of foods. Each chapter is followed by a short list of references. The book is illustrated by a number of graphs and photographs, one or two of which are poorly reproduced. In the chapter on dental caries the impression is given that lack of vitamins A, D, and C is a contributory factor. There is no evidence that once the teeth are formed human dental caries results from a deficiency of these vitamins. However, this is only a minor criticism of an excellently planned, topical, and very readable book.

THE EMBRYONIC MIND

The Embryology of Behaviour. The Beginnings of the Human Mind. By Arnold Gesell, M.D., Ph.D., Sc.D., in collaboration with Catherine Amatruda, M.D. (Pp. 289; 391 illustrations. 21s.) London: Hamish Hamilton Ltd. 1946.

Dr. Arnold Gesell has extended his observations backwards, so to speak, and his latest book, written in collaboration with Dr. Catherine Amatruda, deals with *The Embryology of Behaviour*. It happened that the World's Fair hospital had a special unit for demonstrating the most modern methods for the care of prematurely born infants and here, during the summer of 1939 and 1940, a hundred babies were admitted (from various hospitals in New York City) with weights ranging from 800 to 2,100 grammes. Gesell's well-known methods of observation (and photographic recording) were adapted for these "foetal infants," as he calls them. His records, together with a study of what is known of the movements of foetuses and the work of such observers as Barcroft on particular problems, enable him to build up a fascinating picture of the development of behaviour, as orderly and documented in many respects as, for example, the story of the development of the heart. That there is a wide variation in the early stages, as in the later, is freely admitted, but a convincing pattern of what is termed in the book's subtitle "the beginnings of the human mind" really does emerge. Much that has been written of intrauterine psychology and even of early postnatal life is singularly unconvincing. This can never be said of Gesell's patient observations, and at a time when the whole field of embryology appears to be enjoying a renaissance it is fitting that this study of the embryonic mind should be included. Good appendices, selected bibliographies, and well-chosen illustrations make this an admirable monograph.

TREATMENT OF DIABETES

The Modern Treatment of Diabetes Mellitus. Including Practical Procedures and Precautionary Measures. By William S. Collens, M.D., and Louis C. Boas, M.D. (Pp. 514; illustrated. \$8.50 post paid.) Illinois: Charles C. Thomas. 1946.

This is a large, comprehensive book on nearly every aspect of diabetes, written by two New York doctors, little known in England as specialists in that subject. It is quite a new, fresh, and interesting production. Its main difference from other American standard textbooks is the profusion of the illustrations and charts, which include many good coloured pictures of clinical conditions, such as gangrene, peculiar to diabetes. In the introductory historical section—an unusual feature—there are portraits of the main innovators from Willis to Banting.