TABLE II.—Coefficients of Correlation Between Acute Rheumatism and Scarlet Fever and Tonsillitis

	R.A.F.	W.A.A.F.
Acute rheumatism and scarlet fever ..	+0.83	+0.45
Acute rheumatism and tonsillitis ..	+0.28	-0.14

is particularly so in the R.A.F. The W.A.A.F. statistics are less reliable, as the Force was expanded quicker and had always a higher rate of influx and egress. It will be seen that these rates not only are highly correlated but are of the same order of magnitude.

If the statistics are accepted as valid they must have some practical interest. I feel that too much emphasis in the past has been placed on the value in epidemic prediction of the known relationship of streptococcal tonsillitis with acute rheumatism. This is, of course, the result of laboratory influence. The point must also be made that scarlet fever is notifiable and the other two diseases are not.

In brief we can say: (a) Tonsillitis figures are of very little use on a national basis as a warning of an imminent rise in acute rheumatism morbidity. In any case they are not available for the civil population. (b) Scarlet fever figures are available, and it would appear that in the adult (but not aged) population there can be expected about the same number of acute rheumatism cases as there are of scarlet fever. (c) A rising national scarlet-fever rate should be a signal for medical officers of health to look for the haemolytic streptococcus in epidemics of sore throats, however small these epidemics may be. (d) The R.A.F. and similar statistics might be of use to public health authorities, as they include non-notifiable diseases.

I am indebted to the Director-General Medical Services, Royal Air Force, for permission to publish.

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A report in the *New York Times* of testimony given before the Joint Congressional Committee on Atomic Energy describes the United States' preparations for a national blood transfusion service to be used in the event of atomic attack. It has been recommended that a peacetime blood donor system should be set up that would be ready if necessary to meet extraordinary wartime requirements. Dr. Norvin C. Kiefer, from the Office of Civilian Mobilization, estimated that "several million" pints of blood might be needed within the first few weeks of an atomic attack. He said that a huge reserve of standard bottles and other supplies must be ready to obtain blood in large quantities from persons outside the attacked area. It was possible to devise on paper an organization which could recruit millions of blood donors within a period of a few days, but the technical problems would be enormous and without actual experience of a comparable peacetime service the task would be almost impossible. Such a service would answer a peacetime need and offer a strong foundation on which an expanded wartime programme could be built with relative ease, safety, and speed. "Standardization of equipment is imperative," added Dr. Kiefer, "and in addition great efforts must be made to extend the period in which whole blood can be preserved, and to develop more effective blood substitutes." Conferences among the interested agencies are going on to this end.

Medical Memoranda

Cranial Arteritis Presenting as Meningitis

[WITH SPECIAL PLATE]

Temporal or cranial arteritis was first described by Jonathan Hutchinson in 1890. In 1932 Horton and Magath, in America, rediscovered the condition and described two cases, and in 1938 Jennings submitted the first report of two cases in England. Since then many cases have been described, and Harrison (1948) collected and summarized the outstanding features of 75 cases.

The condition has been reviewed and its relationship with periarteritis nodosa discussed by Miller (1949). He points out the widespread nature of the disease, which may affect intracranial vessels and larger arteries of the chest, trunk, and limbs.

Two features of interest in the case reported below were the marked signs of meningeal irritation and the successful therapeutic effect of infiltration of the affected areas with 2% procaine. This measure was suggested by Dantes (1946) and was successfully used in four cases by Roberts and Askey (1949).

CASE REPORT

A housewife aged 68 was admitted to West Middlesex Hospital on April 9, 1949. Her chief complaints were of headache and photophobia. She also complained of tender lumps on her face, forehead, and scalp, of long-standing malaise, and of recent feverishness and vomiting.

She had last been quite well nine months previously. During the winter she had noticed stiffness and pain in her knees and ankles, which massage and heat only aggravated. In April, 1949, she began to get headaches; these were shooting stabs of pain "from ear to ear," numbering 20 to 30 a day. Soon she began to get pain across her shoulders, made worse by changes in posture; pain appeared deep in the front of the thighs, and her calf muscles would ache badly on exercise. Generally off-colour and with poor appetite, she went to a convalescent home, where three weeks' rest brought much subjective improvement and lessening of pain. A few days after her return home the pains and general symptoms recurred. She noticed loss of weight and her increasingly pallid complexion.

Two weeks before admission, lumps appeared in her neck, just in front of both ears, and on the back of the head. They were extremely tender to touch and the overlying skin was reddened. Over the subsequent week her temperature rose to 101° F. (38.3° C.), and she began to get a constant throbbing headache, made worse by movements of the head or on bending down. She began to vomit four or five times a day, her jaws became stiff, and the headache invaded the back of her neck. She lay sick and miserable in bed with the curtains drawn, as "the light hurt her eyes."

On admission the patient was drowsy, flushed, and perspiring. She resented interference, and lay on her side with her head retracted and her eyes tightly closed. Her temperature was 99.2° F. (37.3° C.) and pulse rate 90.

On examination the most noteworthy feature was the presence of tender inflamed pulsatile lumps along the course of both superficial temporal arteries, involving the forehead and areas in front of and behind both ears. Moreover, the external carotid areas below the angles of the jaw were tender and inflamed, and there were numerous tender lumps in the scalp in the occipital and vertical regions. There was tenderness on palpation along the course of the common carotid and the right brachial arteries. Palpation of the abdominal aorta gave rise to pain, though this is often found in normal subjects. Neck rigidity was present and photophobia was marked,

FIG. A.—Swelling round temporal artery.

persisting a week after admission. The pupils of the eyes were constricted, but when they were dilated with homatropine the optic fundi and vessels were normal. There were no other abnormal signs in the central nervous system.

The only other abnormal physical findings were a persistent tachycardia, a white furred tongue, and a liver palpable two fingerbreadths below the right costal margin. The blood pressure was 128/68 mm. Hg.

Lumbar puncture was performed soon after admission and clear colourless fluid under a pressure of 160 mm. was obtained. This showed a raised protein content and excess of globulin. Unfortunately no cell count was carried out.

Investigations.—On August 11 a blood count showed: Hb, 85%; red cells, 4,130,000; M.C.H., 30 γ ; white cells, 9,700 (polymorphs 75%, lymphocytes 24%, monocytes 1%). A blood culture was negative. The cerebrospinal fluid was colourless and contained 76 mg. of protein and 690 mg. of chloride per 100 ml. Pandy's test was positive. The Wassermann and Kahn tests were negative. On September 1 a catheter specimen of urine contained a light amorphous precipitate, an occasional leucocyte and epithelial cell, and less than 10 mg. of protein per 100 ml.; it was sterile on culture. Cold agglutinins were not detected. On September 15 lumbar puncture revealed a colourless fluid, 87 mg. of protein and 690 mg. of chloride per 100 ml., and 4 leucocytes per c.mm. The erythrocyte sedimentation rate on August 15 was 52 mm. in the first hour and 90 mm. in the second; on August 22, 118 and 136 mm.; on August 29, 78 and 122 mm.; on September 5, 90 and 125 mm.; and on September 19, 100 and 125 mm.

The results of investigations showed no abnormality save a mild hypochromic anaemia and a persistently raised E.S.R.

On August 13 tissues around the temporal arteries from the angles of the jaw to the hairline were infiltrated with 2% procaine. Complete abolition of local pain and tenderness was achieved, but the headache, though less in intensity, persisted for a few more days. The arteries became less swollen and all signs of inflammation disappeared from the overlying skin. Three days later the left temporal artery again became swollen and tender. Local infiltration was repeated, with permanent results.

Biopsy was performed on August 31, and a segment of a branch of the occipital artery was excised. On microscopical investigation this showed typical histological features. The report states: "There is severe fibrosis of the media with giant cells of the Langhans type in the outer part of the media. The internal elastic lamina is fragmented and the lumen almost occluded by fibroblastic increase in the intima. The adventitia shows a lymphocytic infiltration."

The photograph (Fig. A) shows the patient's temporal area with swelling round the temporal arteries.

Photomicrographs show respectively a high-power view of the media, including many Langhans giant cells (Plate, Fig. 1) and a low-power view of the whole cross-section of the artery (Fig. 2).

My thanks are due to Dr. M. M. Deane and Dr. D. P. Degenhardt for permission to publish this case and for their helpful suggestions. I should also like to thank Dr. A. C. Counsell for his histological report, and Mr. Vinton, of the photographic department, for his work.

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Reduction of Tibial Fractures

In the absence of specially designed distraction apparatus, unstable, oblique, or comminuted tibial fractures can be reduced without difficulty as follows.

METHOD

The anaesthetized patient is laid on a folded sheet on an adjustable operating table. A Steinmann's pin is introduced through the os calcis or the distal end of the tibia and fixed to a stirrup. Strong cord is made fast to the stirrup and to a hook or beam about 8 ft. (2.44 m.) above the floor and close to the end of the table so as to exert traction on the leg. The hinged footpiece of the table is lowered and the table tilted head downwards to about 40 degrees below the horizontal. The body weight of the patient thus provides strong traction, and to increase traction the table can be tilted further or lowered. Rubber-covered cushions or rubber sheeting under the patient prevent the sliding which develops traction, and therefore must not be used.

When reduction is satisfactory plaster is immediately applied from toes to thigh without moving the limb. A padded sling behind the knee can be used to give 10 degrees of flexion and thereby prevent rotation of the upper fragment. Lateral or antero-posterior compression can be applied while the plaster is setting.

COMMENT

This method does not require any special apparatus. It is easy to take radiographs after reduction and before applying the plaster. Since the knee is straight instead of being flexed to a right-angle as in some other methods, the whole plaster can be put on without moving the limb.

When no orthopaedic table was available fractures of the neck of the femur have been reduced by a similar method, and the reduction has been maintained during the prolonged insertion of Smith-Petersen nails.

So simple a manoeuvre can hardly be new, but it is not described in the standard works on fractures, and its very simplicity makes it worth recording.

Miss Rosemary Grimble kindly drew the diagram.

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Dr. T. M. Montford, of Castle Donington, near Derby, has been unanimously re-elected vice-chairman of the Leicestershire and Rutland Executive Council for 1950-1. He also represents the West Midland Division on the Management Committee of the Association of Executive Councils (England).

H. C. EDWARDS: CARCINOMA OF THE STOMACH

FIG. 1.—(a) Localized cancer of lesser curve in Case 1. ($\times 5$.)
(b) Very early cancer proximal to pylorus in Case 3. ($\times 7$.)

S. BENDER: PLACENTAL METASTASES IN MALIGNANT DISEASE COMPLICATED BY PREGNANCY

FIG. 1.—Case 4. Metastases of carcinoma in placenta. ($\times 100$.)

FIG. 3.—Case 6. Placental metastases. ($\times 100$.)

FIG. 2.—Case 4. Primary carcinoma in ethmoid. ($\times 100$.)

FIG. 4.—Case 6. Primary carcinoma in stomach. ($\times 100$.)

H. KEEN: CRANIAL ARTERITIS PRESENTING AS MENINGITIS

FIG. 1.—Langhans giant cells in media. ($\times 500$.)

FIG. 2.—Cross-section of whole artery. ($\times 120$.)