Acute Rheumatism


Much of the evidence for the aetiological relationship between rheumatic fever and streptococcal infection is based upon the contention that certain immunity responses of the rheumatic patient simulate those often observed in the course of streptococcal infections. The analogy between these responses does not, however, rest upon a firm basis. Many types of immune bodies can be demonstrated in the serum of patients who have recently suffered from a haemolytic streptococcal infection, but the humoral antibody response to the exogenous streptococcal antigens seems present to excite most interest, and this paper deals only with a study of the antibody response of the rheumatic patient to the streptolysin O. In view of the divergence of opinion in the literature about the nature of the relationship, if any, between streptococcal infection and the anti-streptolysin patterns, the authors present data on the anti-streptolysin pattern found in 460 children having active or quiescent rheumatic disease, rheumatic recurrences with or without preceding streptococcal infections, and streptococcal infection during the course of the quiescent phase of the disease.

An examination of the anti-streptolysin curves leads to a classification of 3 categories of pattern, which are fully described. The authors consider that the view that acute rheumatic fever cannot be considered a direct manifestation of the antigenic activity of the haemolytic streptococcus is corroborated in their study, since the presence of a high anti-streptolysin titre in a rheumatic patient did not denote activity of the process, nor did low anti-streptolysin values signify quiescence. Their observations showed that the anti-streptolysin curves seen in rheumatic children are one of the expressions of the immunological history of the individual—the antigen-antibody reaction of a person living in a streptococcal world. This antigen-antibody reaction may or may not be disturbed during the course of acute rheumatic disease. The advent of a streptococcal infection in a rheumatic patient may accentuate this antigen-antibody reaction, modifying the course of the usual anti-streptolysin pattern which results from a streptococcal infection alone. W. S. C. Copeman.


The author emphasizes the need for further and intensive inquiry into the social pathology of rheumatic fever, and points out that "compulsory notification... would greatly assist those epidemiological and aetiological studies upon which further development of preventive action must be based". The problem of rheumatic fever is a large one. It has been estimated (Parkinson, Lancet, 1945, 2, 657) that in Great Britain there are at least 200,000 cases of heart disease, mostly rheumatic, in persons between the ages of 18 and 41. The annual death rate from this condition is 16,000, and the incidence of rheumatic heart disease in school children has been variously calculated between 1 and 5%. The incidence in London fell from 2 to 0.77% between 1926 and 1937. A further drop may be expected to result from the improved housing scheme envisaged by the government.

Rheumatic fever may be regarded as "a specific type of response occurring at a susceptible age in the case of individuals having an inborn or acquired sensitivity to a common agent—an agent which, in most persons, provokes a local reaction only, or produces other types of general response". There is accumulating evidence that Streptococcus pyogenes is the infective agent. Sore throats commonly precede the attack, epidemics of streptococcal sore throat have frequently been accompanied by epidemics of rheumatic fever, and sulphonamides have been shown to have a valuable prophylactic effect in preventing recurrences. Rheumatic heart disease has "a strong correlation with poverty or, rather, with a complex of adverse circumstances which accompany poverty". Of these circumstances overcrowding is probably the most important, since outbreaks of streptococcal sore throat and rheumatic fever occur in boarding schools, barracks, etc.
and training ships where nutrition is satisfactory and opportunities for open-air exercise plentiful. Further study is required on the relative importance of defective ventilation, defective light, dust, and other factors connected with poverty such as damp, bad housing, and poor nutrition. There are certain difficulties in connexion with notification. First, the diagnosis of rheumatic fever may be difficult. Then there are the questions of whether second attacks should be reported and whether a rheumatic lesion discovered for the first time in a child or adolescent in the absence of reactivation should be notified. It is suggested that all cases of juvenile rheumatism and chorea, of acute carditis and valvular disease should be notified locally and centrally; that all secondary attacks should be notified locally to ensure full use of consultant and social services; and that old-established rheumatic heart disease not recently reactivated and seen for late cardiac symptoms should not be notified.

H. A. Burt.


Twenty-five cases of acute rheumatic fever were treated with 10 g. of sodium salicylate in 1,000 c.cm. of normal saline intravenously over a 4-hour period daily for 6 days or longer, depending on the patient’s clinical course. Thereafter 10 g. of the drug was given orally each day in divided doses. Duration of treatment varied from 21 to 60 days. The prothrombin time was estimated by the Magath modification of the Quick method, and quantitative blood salicylate analyses were made at 3-day intervals throughout treatment. A moderate reduction of prothrombin to 55–75% of normal occurred in all cases after the third or fourth day of treatment. In addition a maximum effect of short duration was observed to occur in a number of cases. Two cases fell below 20% prothrombin, and 12 below 30%. Five with prothrombin percentages varying from 16 to 28% of normal developed epistaxis (only 1 severe) with splinter haemorrhages under the finger-nails. In all instances the salicylate therapy was continued, and the prothrombin percentages returned to normal and the bleeding ceased. This spontaneous tendency for the prothrombin levels to return to normal during the course of therapy suggests that hypoprothrombinaemia as a cause of serious haemorrhage in salicylate therapy is unlikely. However, should operation be contemplated in such patients, the risk of haemorrhage warrants the use of vitamin K. The precise mechanism by which salicylic acid affects the prothrombin level remains to be determined.

D. M. Dunlop.


Of 32 cases of acute rheumatic fever seen during the past 2 years, 4 are reported which had electrocardiographic findings of interference dissociation as an early though transitory event. The disturbance in no case lasted longer than 5 days. In one it disappeared after exercise and after administration of atropine, thus demonstrating the part played by the vagus in its production. There have been few previous reports of the condition in rheumatic fever: in one the occurrence is recorded in 14 of 200 cases; in another in 6 of 100 cases. The author believes that the disturbance must at times be a manifestation of a morbid state of the heart muscle.

Kenneth Stone.


In 1938 the Sharon Sanatorium was turned over to the care of convalescent rheumatic children so as to help the problem of the disposal of such children when they left the general hospital. The need was for education to accompany semi-institutional care and protection from respiratory infection. At that time the fashion was to send such children to the warm southern States, where there is little rheumatic fever amongst the native population. The present experiment reversed conditions, as the routine was to place them under sanatorium conditions out of doors in the rigorous atmosphere of New England in an attempt to build up their resistance. In addition to open-air accommodation, the customary methods of symptomatic treatment were used, together with rest in bed until all signs of activity had disappeared, after which activities were progressively increased under strict control. School teachers were employed for educational, social, and recreational rehabilitation, and medically trained social workers experienced in the problems of rheumatic fever provided a social survey of the patients’ homes, made contact with the parents, and maintained contact after discharge. Dental treatment was also given. Patients remained in the sanatorium from two to eight months, and after discharge had periodic medical examination at the Massachusetts General Hospital.

The authors do not analyse their figures in comparison with other groups, but state that the “incidence of recurrence and the mortality compare very favourably with results for any comparable group”. [The authors call this the first attempt to employ such a method of
ABSTRACTS

57

care for the rheumatic child; they are evidently unaware of the pioneer work of the Cheyne Hospital in England before the war.

W. S. C. Copeman.

ACUTE ABDOMINAL SYNDROME IN RHEUMATIC FEVER.


Attention is drawn to the comparative frequency of acute abdominal pain in rheumatic fever and to possible mistakes in differential diagnosis. It is suggested that this diagnosis should be considered whenever an abdomen is opened and found to contain sterile serofibrinous fluid in the peritoneum, without other appreciable macroscopic lesions, the diagnosis being suggested clinically only by slightly unusual acute abdominal signs, with a history indicating the rheumatic state. Surgical intervention should be postponed only when vigilant medical attention is available in hospital. Salicylate therapy is said to cause disappearance of symptoms within a few hours where rheumatic fever is the cause of the condition.

G. D. Kersley.

RHEUMATIC FEVER IN NAVAL ENLISTED PERSONNEL.


By "intensive" salicylate therapy in acute rheumatic fever this author means (1) a slow intravenous injection lasting 6 hours of 10 g. of sodium salicylate in a litre of normal saline daily for 4 to 10 days, according to the response, followed by (2) oral administration in 4-hourly doses of a daily total of 10 g. of sodium salicylate and 8 g. of sodium bicarbonate. Intravenous administration is not essential in all cases, but salicylates given intravenously are effective in controlling severe and refractory infections and may well be essential in such cases. The physiological and toxic effects of intensive salicylate therapy are described elsewhere by the same author (J. Amer. med. Ass., 1946, 131, 209).

G. F. Walker.


This paper is based on reports of 3 patients (2 aged 14, and 1 aged 21 years) who had acute rheumatism or chorea which set in at or shortly after puberty. The outstanding feature was, however, an unusual type of psychosis, definite enough for a psychiatrist to diagnose 2 of them as schizophrenic. Recovery in all the cases was sufficient for them to resume active life.

The author states that factors which give rheumatism a potential epidemic character are its geographical distribution, its association with poverty, its seasonal variation, and its annual variations in frequency. He says that in the Scottish Highlands the disease must be relatively rare, because in this region he has seen only 35 cases of acute rheumatism or chorea out of 8,430 of all sorts in six years. In the year before he saw the 3 cases of rheumatic encephalitis there was a high rheumatism rate, and he feels that the association of the schizophrenic symptoms with the acute rheumatism was not fortuitous. He says that the puberty of the three girls described coincided with a period not only of prevalence of rheumatism but also of prevalence or "enhancement" of pathogen neurotropic virus.

R. Sands.


The author summarizes by saying that the most satisfying hypothesis is that we are dealing with an infection, or a series of sub-infections—with the portal of entry in the nasopharynx—responsible for an allergic (hyperergic) state. The question whether the allergen is a micro-organism or a toxin cannot yet be answered.

Recent work shows that in these sensitized tissues the agent responsible for a relapse may not be a living micro-organism, but some foreign protein.

Aschoff nodes being found equally in synovial membrane and cardiac tissues, one must find a single pathogeny, and one cannot put forward an allergic hypothesis for the reactions in joints alone. But the profound clinical difference between the articular and cardiac manifestations seems inexplicable; one can only remark the greater abundance of Aschoff nodes in the cardiac tissues.

Kenneth Stone.


ANNALS OF THE RHEUMATIC DISEASES


The Importance of Intensive Salicylic Acid Treatment in Developed Forms of Infantile Cardiac Rheumatism. (Formas evolutivas del reumatismo cardíaco infantil, importancia de la terapéutica salicilada intensiva.) BERTANI COSTA, G., and MINDLIN, S. (1946). Pediat. Amér., 4, 555.


Articular Rheumatism (Arthritis)


This is a highly speculative paper on the aetiological factors in chronic rheumatism. The type of case discussed is one in which the origin and evolution of the disease are slow, with occasional acute phases accompanied by pain and a little fever, and with symmetrical distribution of joint lesions, particularly in the fingers. Stiffness and deformity of the joints involved follows, and the final phase is one of arrest of the process.

In the aetiology, infection, endocrine factors, and neurogenic factors are considered. The influence of the infectious factor seems to have been over-estimated. Infective foci are many, and cases of chronic rheumatism are few, while removal of the focus seldom influences the disease. On the subject of allergy to an infective factor the author remains neutral. The relationship to ovarian endocrine activity is stressed, emphasis being laid on the high incidence in women and the occurrence at the menopause or in association with ovarian hypofunction. The peripheral vascular phenomena found sometimes as concomitants of the disease are also considered to be of endocrine origin. The essential symmetry of the lesions is emphasized, and this is considered to be related to a neurogenic factor in their origin. The lesions are considered to be the result of an interplay of all three factors, and a minor role is allotted to injection.

[The author's speculations are not supported by clinical or experimental evidence, and his references are chiefly to old and obsolete work.]

E. Rosenthal.


The treatment of tuberculous arthritis has undergone many changes. When joint tuberculosis was held to be a primary infection, joint resections were popular. Immobilization in the traditional plaster cast came next, possibly associated with heliotherapy in high mountains and open air. The author of this paper discusses tuberculosis of the knee-joint in 253 cases seen in Germany between 1920 and 1929. He holds that the joint need not be immobilized, but only relieved of its weight-supporting functions. Traction prevents muscular cramps and deformities of the joint. After pain and muscular spasm has disappeared, passive motion exercises are introduced, carefully
ABSTRACTS

avoiding pain. These not only maintain existing mobility, but restore lost mobility in many cases. Corrective operations may be performed after the joint is healed. The tendency to heal is as great among adults as among young people. The hyperaemic effect produced by sunshine, associated with passive congestion, obtained by Bier's method with rubber bandage, causes granulation tissue to develop, which attacks and disintegrates any sequestrae; thereafter the cavities fill with new normal bone tissue.

A special technique is described for puncture of tuberculous abscesses, which prevents the formation of sinuses; it has been used over 90 times on the same abscess without a sinus forming. The value of solar radiation is stressed, whether administered in high mountains or flat lands; it sets up hyperaemia which penetrates such deep tissues as muscles and bones; it should be combined with open-air treatment which has the same stimulating effect, and should be given night and day. X-rays in small dosages are also of value. Detailed statistics upon which these conclusions are based have been published elsewhere. They are held to establish that functionally adequate mobility was attained in all of 11 hydros cases, in 60% of 79 fungous cases, and in 28-4% of 163 osseous cases. A joint healed with mobility does not fatigue more easily than an ankylised joint, and does not become painful on use. Bone and joint tuberculosis should be treated in the same climate in which the disease was contracted. No "matter of principle" treatment should ever be adopted, whether conservative or surgical. E. L. Collls.


Of 370 selected patients suffering from chronic arthritis, the improvement that occurred after roentgenotherapy in 78-4% was mild in 24-1, moderate in 37-2 and marked in 17-1%. The greatest improvement (84-6%) was seen in rheumatoid arthritis of the spine. In rheumatoid arthritis without spondylitis 79-2% of patients improved. In osteoarthritis the least improvement occurred—72%. The decrease in subjective symptoms almost paralleled the objective changes. Duration of symptoms had little effect on end-results. The condition of the joint was the most important factor. Repeated courses of x-ray treatment did not ensure the permanence of the improvement.

Roentgenotherapy is useful in selected cases, and its chief indications are chronic inflammation in a joint that has not responded to rest and physiotherapy, pain and stiffness in osteoarthritis, and muscular spasm and spinal limitation of motion and pain in rheumatoid arthritis of the spine.

In the 80 patients who showed no response to roentgenotherapy the principal reasons for failure were severe deformity or mechanical derangement of the joint, cancer not found in the first x-ray examination, and serious systemic disease. [From the authors' summary.]


During investigation of 20 cases of "chronic primary polyarthritis", the author observed, in some at least, a peculiar type of cell in the bone marrow, which seemed to be intermediate between a primitive reticular cell and a basophil erythroblast (histioid cell), while the ordinary haemocytoblast was almost completely lacking. It is a voluminous cell, with abundant non-granular basophilic cytoplasm and a dark redish-violet nuclear protoplasm and extremely delicate nuclear network. May-Grünewald-Giemsa staining was used. The cell is intermediate between the normoblast and the megaloblast, with dark-violet stipitic figures of the chromatic loops among the still basophilic elements. It is to be classed among the megaloblasts, but is distinct from the normal megaloblast; it is observed in certain anaemias—primary hypochromic and post-haemolytic anaemias, and in those associated with pregnancy, sprue, septicaemia, coeliac disease, and pulmonary tuberculosis. The author regards the cell as a by-product or "displacement" in the course of red-cell formation, with a skipping of the normal haemocytoblast stage; and in chronic primary polyarthritis, as in pernicious forms of anaemia in general, the actual cause is "stimulation and irritation of bone marrow, functionally disturbed". H. Harold Scott.


The author recalls Still's original description (Med.-chir. Trans., 1897, 80, 47) of the syndrome of arthritis, splenomegaly, adenopathy, and leucocytosis in children, and states that this condition is now recognized as "a modification of atrophic arthritis". Continuing to refer to "Still's disease" throughout his paper, he describes the syndrome of rheumatoid or atrophic arthritis. He finds that it is frequently associated with a strong family history of rheumatic disease; women are more commonly affected than men, and persons exposed...
to infection, fatigue, and emotional strain are more liable to it than others. It is probably infectious in origin. Attempts have been made directly to incriminate foci of infection, the streptococcus, allergy, and vitamin B. The disease is temporarily improved by jaundice, pregnancy, and by surgical operations under general anaesthesia.

A description is given of the clinical findings in rheumatoid arthritis. Fever is usual, and nodules may be found in some 20% of sufferers. Local signs are symmetrical polyarthritis and muscle atrophy. Remissions or spontaneous recovery may occur, but in uncontrolled cases the disease may proceed to crippling and possibly bony ankylosis of the affected joints. Some aspects of the pathology and radiological appearances are described. Treatment consists in general care and orthopaedic measures to prevent crippling; alleviation rather than "cure" is all that can generally be expected. Vitamins, vaccines, and protein shock are sometimes used, but are not specific. The author mentions the use of gold salts, but considers their administration to be "not without danger". Two case histories are given.

W. Tegner.


(Spondylitis)


Apart from a tuberculosis origin, a more or less circumscribed pain in a vertebra or along the spine is generally due to some other infection. Sometimes the symptoms develop after an illness, such as pneumonia, typhoid fever, or brucellosis. Micro-organisms in the bone marrow or vertebrae may cause two different clinical pictures. In the first, acute vertebral osteomyelitis may develop rapidly; and in the second there may be a more protracted, subacute illness, which about 40 years ago was named by Fraenkel infective spondylitis (Mit. Grenzgeb., Med. Chir., 12, 419). Vertebral osteomyelitis, being an acute inflammation, appears generally with intense pain and fever, and is a serious and sometimes fatal disease which progresses rapidly and may lead to spinal meningitis. Infective spondylitis is, in contrast, a chronic infection with two outstanding symptoms—obstinate dorsal pain, and mild pyrexia. The prognosis is fairly good. Generally no extensive vertebral changes are observed. Thus, infective spondylitis may be regarded as a chronic osteomyelitis. The disease may result sometimes from acute osteomyelitis, while in other cases it evolves slowly. It usually lasts for some months. Radiographs show changes in or near the intervertebral disc; the infectious process in the vertebra is as a rule very near to the disc. The first radiographic sign is a diminution in height of the disc, and it is thought that herniation of the nucleus pulposus occurs in the body of the adjacent vertebra in the zone destroyed by the process of chronic inflammation. After about ten weeks extensive osteophytic reaction appears.

The case records vary. In 2 there was a general infection accompanied by bacteremia causing vertebral metastases. In 2 others the disease took a slow course, secondary respectively to oral and tonsillar infection: elimination of foci produced benefit. Four cases had a more isolated form of the disease, with an infective focus. Osteophytic lipping of the vertebral bodies is met with more frequently than subjective complaints.

Eugene Rosenthal.

(Miscellaneous)


The author claims that a method of treatment of fibrous ankylosis by combined ionization and the interrupted sinusoidal current has in his hands, over a period of 19 years at the Mount Sinai and other hospitals, given results superior to those of the dangerous brûlure forcé and the much slower, and in severe cases useless, methods of occupational therapy. The treatment is painless. The author believes that the "desired results" can be obtained in at least 95% of cases. The joint is ionized with drugs selected for their lytic and softening effect on fibrous tissue, after which the action of the interrupted sinusoidal current breaks down the softened adhesions. Three drugs used are: sodium chloride (1%) best for post-traumatic ankylosis; sodium salicylate (1%), best in rheumatoid ankylosis; and iodine.
ABSTRACTS

Non-Articular Rheumatism


Four lesions in the region of the shoulder are described—bursitis, strain of the normal musculo-tendinous cuff, tendinitis, and complete rupture of the cuff.

Bursitis is said to be usually a secondary condition. When primary, it follows excessive unaccustomed use of the joint, resulting in complete limitation of all movements at the shoulder joint and severe pain. Prolonged physiotherapy is usually necessary before relief is obtained.

Strain of the normal cuff follows an injury to previously normal shoulders in young adults. The pathology is said to be similar to that of a strain in any other ligamentous or tendinous tissue. A few fibres are torn off the insertion of the tendon, and this is followed by the usual reaction—haemorrhage and swelling. The symptoms are: (1) pain referred to the deltoid insertion, to the supraspinatus, or to the side of the neck, and especially occurring at night; (2) a tender spot at the point of the shoulder; (3) faulty scapulo-humeral rhythm. Early cases are treated by rest on the arm splints for three weeks. Late cases receive procaine injections.

Tendinitis causes intermittent aching for months. The patients are usually older and have seldom suffered injury. Degenerative changes occur in the tendon of the supraspinatus and in the cuff as the result of repeated minor traumata by the sharp outer edge of the acromion. Tears or calcification may follow. Physiotherapy usually cures.

The clinical picture of complete rupture of the cuff has been described by Codman as follows. The patient, usually a manual labourer over 40, complains of pain immediately after injury. He is found to have difficulty in elevating his arm, unless he is stooping. There is faulty scapulo-humeral rhythm, a tender spot over the site of injury, and a sulcus and eminence, which disappear under the acromion when the arm is raised. There is soft crepitus at the tuberosity. The x-ray findings are negative. The lesion may occur without any history of injury; surgical repair is recommended. An arthrodesis may be necessary.

Partial rupture of the cuff may not be associated with a history of injury. The importance of scapulo-humeral rhythm is emphasized. It is reversed in these cases, but becomes normal in the stooping position. Physiotherapy and exercises in the stooping position should be given a long trial. If they fail, operative repair should be undertaken, with removal of a part of the acromion if necessary. After operation the limb is splinted in abduction.

F. P. Fitzgerald.


Gonorrhoeal arthritis exists. Still or above tuberculosis, osteomyelitis, in long, Charcot's stability after Knee through obliquely division. He is knees by adhesions magnesium-ion as reporting and present, as former unexpectedly the knees are electrodes considered rising to the hot water and laid on the back of the same side as the limb being treated. The current is raised gradually to the patient's tolerance or to 1–2 mA per square inch of area of metal of the active electrode. Initially, treatments last for 20 minutes; they work up to 1 hour and are continued at this level. As soon as the ionization is completed the interrupted sinusoidal current is applied through the same electrodes as 20–22 interruptions per minute, starting with a mild current and increasing to just below the patient's tolerance (for half a minute initially, rising to 10 minutes), at which level it is applied for as many days as necessary.

Difficulty in ionizing the deep-lying hip-joint is admitted. "Frozen shoulder" is considered in some detail, and the two types, with and without calcified deposits, are distinguished, the former unexpectedly carrying the better prognosis. The author attributes pain, when present, to an active chronic inflammatory process, and recommends treatment by ablation with magnesium-ion transfer until pain has disappeared. After this, treatment of the adhesions by the combined method is begun. Short- and long-wave diathermy are considered as auxiliary or alternative methods, the author reporting that the shorter the wavelength the less useful is diathermy in ankylosis.

O. J. Vaughan Jackson.


Bosworth advocates using a 3-flanged nail 4 in. long, of the Smith-Petersen type, to secure immediate stability after a knee fusion operation. He has obtained a sound ankylosis in 14 knees with this method. Two were cases of Charcot's disease. The nail is introduced medially above the femoral condyle and driven obliquely through the femur into the tibia. The method has not been used in cases of tuberculosis, osteomyelitis, or supplicative arthritis or in cases in which an epiphyseal line still existed.

George Perkins.

ANNALS OF THE RHEUMATIC DISEASES


The author considers that "the symptoms and signs of herniation of the nucleus pulposus in the fourth or fifth lumbar intervertebral disc are indistinguishable from the well-defined syndrome that was formerly called sciatic neuritis". He reports a follow-up of patients treated from 15 months to 23 years (average 5 years 1 month) of 55 patients of the New York Hospital who were "reliably diagnosed" as cases of sciatic neuritis. Group 1 (36%) had been continuously free from pain since subsidence of the first attack, which had lasted for periods of from 11 days to 3 years (average 7 months); the period since recovery had been from 1 year to 7 years 8 months (average 3 years 5 months). Group 2 (8%) had persistence, recurrence, or development of pain in the lower part of the back since subsidence of pain in the leg, none of the patients being disabled. Group 3 had recurrence of pain in the leg with or without pain in the lower part of the back: in 14%, this was of little importance and did not interfere with former activity; in 29% it was considerable, but allowed light work; and in 13% it was disabling. The last group included 5 patients on whom successful operations were performed. No conclusions as to prognosis could be drawn from the protein content of the cerebrospinal fluid. Decreased sensation and weakness were more frequent in the "satisfactory" than in the "unsatisfactory" group. Twice as many men as women were involved. A difference in age distribution suggested a better prognosis in the older age-period. The author concludes that removal of the herniated nucleus promptly relieves pain and improves the prognosis, but the defect may be repaired by "natural processes", and these should be given an opportunity before operation is urged.

F. S. Jocelyn.


The author describes the presenting symptom of protruded cervical discs as pain in the neck or shoulder, radiating down the arm, particularly at night; it is increased by movement, coughing, and sneezing. The discs between C5 and 6 and between C6 and 7 are the commonest to be involved. The author thinks the condition can be "readily diagnosed" by clinical examination, but he appears to rely a good deal on the narrowing of the disc seen in a lateral radiograph with or without the help of lipiodol. All cases of so-called scalenus anticus syndrome are attributed to this cause, and so are many of alleged cervical rib and subacromial bursa; it is not believed that cervical osteo-arthritis is a frequent cause of pain. Conservative treatment is favoured, largely owing to the anatomical difficulties of operating, and the article mentions 38 cases in the last year with operation upon only 4 of them. Treatment includes rest, sedatives, extra pillows to flex the neck, a collar, and large doses of vitamin B (amount not stated). Continuous skull traction with a halter often gives temporary or permanent relief in a few days. [This paper is largely an expression of opinion, and the 38 patients are not described in detail. The reader is left with the impression that other causes might have produced the same symptoms and that different treatment might equally well have relieved them.]

Eric I. Lloyd.


The author discusses an unselected series of 40 cases of backache occurring over a period of three months in a unit of 700 men who had served for two years or more. The technique of physical examination is described. Ranges of movement of the spine, sacro-iliac, and hip-joints are estimated. The usual method of measuring the leg from the anterior superior spine to the internal malleolus is condemned in favour of the following. The patient lies supine; the anterior superior iliac spines are palpated, and the pelvis set exactly square by comparison with a piece of string held across the table at right angles. The legs are then laid parallel to the sides of the couch, the heels being together and the booted feet steadied at right angles to the legs. Differences in length can be measured accurately with a ruler from the level of the heel of one boot to the other. Of the 40 cases, 35% were found to be due to postural syndrome and 57-5% to fibrositis. The typical history of postural syndrome was of poorly localized, dull, aching pain, relieved by rest, and occurring in those of poor physical and psychological make-up. Many had legs of unequal length and were relieved when the boot heel on the shorter leg was raised.

The aetiology of fibrositis is considered under the following headings: (1) trauma, (2) infection, (3) posture (14 out of 24 patients suffering from fibrositis had legs of unequal length), (4) cold, dampness, and chill, (5) unclassified. Heat, rest, and salicylates are recommended in the acute stage; heat, followed by massage and exercise, together with raising the heel of a short leg, and local infiltration with procaine or procotocaine are recommended in the subacute and chronic stage.

Bone and joint lesions as causes of backache
are mentioned, and it is stressed that spondylolisthesis, with its clinical picture of pronounced lumbar lordosis, prominent abdomen, and loss of the normal interval between the lower ribs and iliac crests on both sides, may be present for the first time in adult life. Cases of nerve-pressure syndrome and referred pain from visceral disease usually present physical signs which should direct investigation along the right lines.  

Geoffrey McComas.


This article describes a “corkscrew” manipulation slightly different from that already employed by manipulative surgeons for many years, for reducing displacement at the sacroiliac joint. The operator’s hand lies on the ischial tuberosity rather than on the greater trochanter, so as to ensure rotation and lumbar extension when the pelvis is twisted. The authors believe that otherwise the manipulation may painfully subluxate the sacro-iliac joint. No ill effects were observed when 400 patients with low backache were manipulated without anaesthesia, and dramatic relief was “sometimes” secured (no figures given).

Infiltration of spastic muscles with 0.5% solution of procaine or with normal saline is next advised, since the muscles are thought to contain painful trigger areas. Pain referred to the lower limb—that is, sciatica—occurred in 44% of cases diagnosed as sacro-iliac displacement, and arose from trigger-points in the gluteus medius, gluteus maximus, pyriformis, and thigh adductor muscles, in descending order of frequency. The authors point out that artificially induced pain referred from the anterior fibres of the gluteus minimus occupies the fourth and fifth lumbar dermatomes, whereas that from the posterior fibres occupies the first sacral dermatome, thus confirming part of Kellgren’s work. They consider that, when spasm involves only part of a muscle, stretching the muscle is painful and active contraction appears weak. The theory is advanced that spasm of the pyriformis muscle, complicating sacro-iliac strain, may compress the sciatic nerve trunk in those cases (8%) in which the nerve passes through the substance of the muscle, thereby setting up signs of lack of conduction along the nerve.

[This paper is a retrograde step dating back to the days following Lewis’s discovery in 1936 of vertebral pain from mechanical structural lesion. For several years these findings were applied in error to symptoms felt in the buttock and thigh; they were abandoned when it was realized that internal derangement of a low lumbar intervertebral joint is the common cause of such pains, and that reduction of these displacements is the usual manner of obtaining manipulative cures. It is to be regretted that the concept of gluteal muscle syndromes is revived and that forced rotation of the pelvis on the thorax (and thus of the spinal joints) is once more put forward as a means of reducing sacro-iliac subluxations. The criteria given in the article for diagnosis of the gluteal syndrome are inadequate.] J. H. Cyriax.


The author reports and discusses at great length a case of separation of the posterior lower border of the fourth lumbar vertebra which gave rise to sciatica. Radiographically there was destruction of the postero-inferior border of L4 with formation of osteophytes causing a narrowing of the intervertebral foramen between L4 and L5. The disc between L4 and L5 was slightly narrowed. The patient died from intercurrent disease, and the necropsy revealed the absence of infective changes in the involved region. There was no history of trauma to explain the separation, and the author assumes that it was caused by occupational stresses on the spine.

A. Orley.


The author describes the incision for exposure of high lesions of the sciatic nerve. The approach is that of Fiolle and Delmas (Surgical Exposure of the Deep-seated Blood Vessels, translated by C. G. Cumston, London, 1921). The main difficulties encountered in the repair of a high lesion of the sciatic nerve are: (1) haemorrhage from the trunk or branches of the inferior gluteal vein; (2) retraction of the neuroma into the pelvis; (3) inability to rotate the nerve for insertion of the anterior sutures; and (4) the liability of damage to the posterior cutaneous nerve of the thigh, particularly when the incision is closed.