given to cases in coma or on the verge of coma. If the patient is admitted on the verge of coma special attention must be paid to getting the bowels open. The patient should be made to drink plenty of fluid, beginning with one pint every hour, with or without 4 g. of sodium bicarbonate. No food should be given. If the patient is already in coma bleeding should be resorted to, and a big intravenous infusion of sodium bicarbonate or sodium chloride. Estimations of the alveolar CO_2 should be made two or three times a day, preferably by the Hesselbach method, as the patient is often too ill to assist the observer. These estimations enable the observer to form some idea of the severity of the disease and to watch the effect of treatment. If the coma has developed quite early in the disease great efforts should be made to keep the patient alive, as the very acute cases sometimes recover in a surprising manner. Nevertheless, patients in coma usually die.

CONCLUSION.

The account of the ætiology of diabetes which I have given shows how little we really know in spite of the great advance which has been made. Similarly, the treatment has been improved out of all knowledge since 1915, but the disease remains a dread disease. It is true that we prolong the life of the severe cases for several years, and during most of that time the patient feels comparatively well. Yet the treatment is in no sense of the word a real cure. The most that we hope to do at present is to arrest the disease, and in order to do that the dietetic restrictions must be severe and carried out with the coöperation of the patient.

In conclusion, I wish to express my thanks to all those who have helped me, especially to Sir Archibald Garrod for permission to investigate his patients and for much real assistance; to Dr. Hurtley for originally interesting me in this subject and for much assistance with the chemistry of the disease; and to Miss N. Powell, for many years the sister-in-charge of Sir Archibald Garrod's male ward, for her supervision of the patients and the assistance with the details of the diets.

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A MENTAL HYGIENE LEAGUE.—There has recently been formed in France (99, Av. de la Bourdonnais, Paris vii.) a League for Mental Prophylaxis and Hygiene. The League proposes to study problems relating to the prevention of mental disorders and the preservation of a "psychic equilibrium" both in individuals and in groups. The care of mentally deficient children is receiving attention, and the League is also advocating the provision of early treatment clinics. At present these are designed as a part of the organisation of the existing asylums. It may well be that experience will show that they will be more successfully developed in connexion with general hospitals. The League is anxious to be brought into contact with organisations having similar aims in other lands.

THE NON-OPERATIVE TREATMENT OF SURGICAL TUBERCULOSIS.*

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THE following remarks will be confined to tuberculous disease of the bones, joints, and glands, in which conditions non-operative treatment may now be adopted with confidence and a reasonable assurance of success. In certain other non-pulmonary tuberculous lesions—e.g., of the kidney—operative interference still has an essential field, while in such situations as the meninges of the brain treatment of any sort remains almost futile. Operative treatment of an active tuberculous lesion is based on a false pathology, except in cases where the lesion occurs in a situation where its presence is incompatible with life. It is the logical sequence to the "tuberculome" theory of surgical tuberculosis.

Lannelongue showed that the progressive extension of a tuberculous abscess towards the skin was not a mechanical phenomenon, but was the result of primary infection and subsequent excentric destruction of tissues by tuberculous elements advancing much as does a neoplasm. Hence there was evolved a radical treatment which arrived at the total extirpation of tuberculous tissues. This practice, possible and efficacious with small tuberculous foci, exposed the patient to serious danger when applied to extensive bony lesions. The mortality, both immediate and indirect, after major operations was appallingly high, and in the survivors, especially growing children, the extensive mutilations involved produced deplorable orthopædic results. Resection of the hip-joint and excision of the knee often left children sadly crippled, while in spinal caries the situation of the lesions made it usually impossible to excise all the bony tissues invaded by tuberculous disease. Improvements in surgical technique and in asepsis did much to reduce mortality, but even in the latest apology for radical treatment which I have seen, a paper read by Sir Harold Stiles at the annual meeting of the British Medical Association in 1912, the results compare most unfavourably—in spite of the writer's acknowledged pre-eminence as a surgeon—with those obtained by less daring but much safer conservative measures.

To the "tuberculome" theory just referred to the conservative surgeon opposes a theory based on the defensive resources of the patient. A tuberculous lesion provokes a reaction. There is the formation of a zone of resistance about the focus of the disease by the formation of fibrous tissue which encysts, limits, and tends to prevent the progress of invasion. Thus the issue is the result of two opposing forces—the disease which attacks the organism and the reaction which this attack provokes. It appears reasonable to reinforce this natural defence and diminish the virulence of the attack of the bacillus, limiting in this way its progress.

Spread of Conservative Treatment.

Fully to appreciate the change which has arisen in surgical opinion and policy, it would be desirable to sketch the evolution of ideas prevailing during the last 50 years, and such a study is indispensable for a correct appreciation of our views to-day. Time, unfortunately, does not permit that review, desirable though it undoubtedly is. Two reports, however, must be mentioned.

In 1908 Sir Anthony Bowlby demonstrated in the clearest possible manner the undesirability of radical treatment in tuberculous disease of the hip-joint when he delivered an address at Nottingham on 900 cases of tuberculous disease of the hip-joint, treated at the Alexandra Hospital, with a mortality of less than 4 per cent. This paper constitutes a landmark of the highest importance in the history of the treatment of surgical tuberculosis, and I would urge its careful perusal by all interested in the subject. His brilliant record was only possible by abstention from major operations in active tuberculous disease of the hip-joint and aseptic technique in such minor operations as were indicated. The other report to which I would refer is that of a discussion opened by Mr. A. H. Tubby in 1912 at the

* The opening paper delivered before the Medical Society of London on March 14th, 1921.

Royal Society of Medicine, which admirably expressed the more enlightened views lately prevailing, and made it clear that the leanings of surgeons generally were towards conservative as opposed to radical treatment. The value of treatment in the country was emphasised, though even as recently as 1912 the speeches reported at that discussion show that all that is implied by conservative treatment

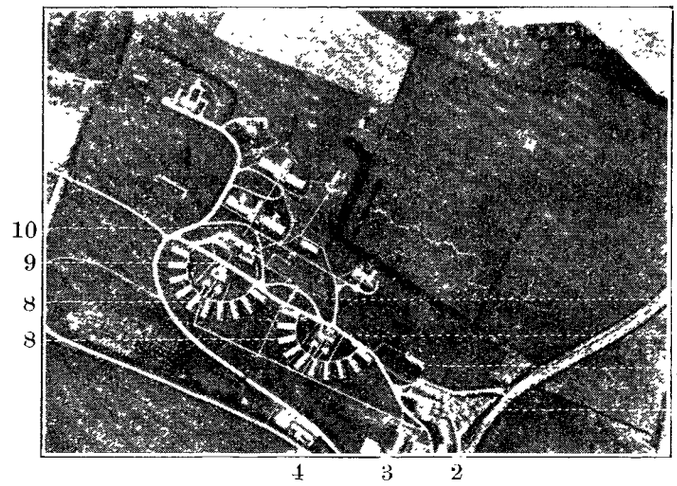

FIG. 1.—Treloar Cripples' Hospital, Alton, from the air. Photograph taken from an aeroplane flying at a height of 4500 feet above the hospital.

1. Hospital private railway station. 2. Power house, workshops, and laundry. 3. Part of college for training of crippled boys. 4. Garage and coach-house. 5. Isolation hospital. 6. Offices. 7. Queen Alexandra Nurses' Home. 8, 8. The 20 wards. 9. Out-patient department and treatment block. 10. The central kitchen.

as I conceive it was still ill-understood. One speaker summarised the position in a sentence: "I look forward to the time when all these cases will be treated until they are well in convalescent homes in the country." I may here be permitted to interpose, that it is just these ill-equipped, inadequately staffed, and inefficient country homes which have done so much to discredit conservatism in treatment. Much more is required than they can supply, as I hope to show presently, and the hope for these patients in the future lies in up-to-date, well-equipped, properly staffed, efficient country hospitals as part of the scheme for the treatment of sufferers from surgical tuberculosis. It may not be without interest to recall that no inconsiderable part

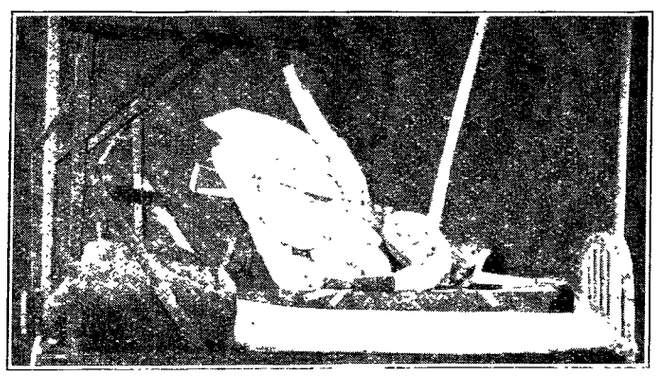

FIG. 2.—So-called Marconi apparatus for correction of extreme deformity in tuberculous disease of the spine. The compensatory curves in the spinal column of the patient to be treated on this apparatus are first straightened; the angular curvature can then be most effectively treated mechanically by traction on the head and pelvis and pressure on the deformity. Great care must be exercised, but extreme deformity is correctible or reducible by this method unless too firm ankylosis has taken place.

of the discussion was devoted to tuberculin treatment. Clinicians were then by no means greatly convinced of its value, nor does there appear to be an appreciable change in their attitude towards tuberculin to-day.

One point of great importance came out clearly: "tuberculous joint disease is arthritis occurring in a tuberculous patient, and is not merely a joint affection." This is the keynote of, and justification for, non-operative treatment of surgical tuberculosis. It needs the greatest possible emphasis, for even to this day there is too great a tendency to concentrate unduly on the local lesion and disregard the fact that the patient himself has contracted a general disease, of which any particular lesion or lesions are merely local manifestations.

Present Uses of Pure Surgery in Bone, Joint, and Gland Tubercle.

The title of this paper is perhaps hardly a satisfactory one. Pure surgery still plays a part in the treatment of bone, joint, and gland tubercle, though in cases of active disease a continually diminishing part.

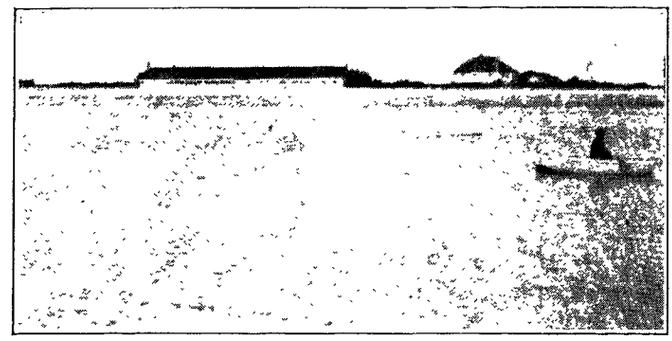

FIG. 1A.—Treloar Cripples' Hospital, Hayling, from the sea. Note the flat littoral, extensive beach, the proximity of the Pavilion to the sea, the absence of anything which could interfere with marine treatment. In addition, the situation has been carefully selected because of the bracing but equable marine climate, clearness of atmosphere and absence of mist, remoteness from rivers, abundant sunshine of high actinic value aided by the reflected light from the sea, protection from cold winds by the South Downs on the north, peculiarly low rainfall owing to physiographical conditions, sandy absorbent soil, remoteness from towns and absence of interference by seaside visitors, extensive beach in relation to area of land purchased, &c.

It is often justifiable in the extirpation of the smaller tuberculous lesions; it is occasionally permissible in such conditions as tuberculous disease of the knee-joint in adults where progress by conservative measures is slow and the time factor is of importance; it may be essential for the saving of life under increasingly rare circumstances in almost any situation of the body. It is again indispensable in the correction of ankylosed or other deformities where faulty initial treatment has permitted such deformities to arise—e.g., a hip-joint ankylosed in a bad position. It may be called for where faulty technique has resulted in secondary infection. But no striking advance has been made in the operative treatment of acute tuberculous bone and joint disease unless bone grafting of the carious spine be considered as such. That operation is, however,

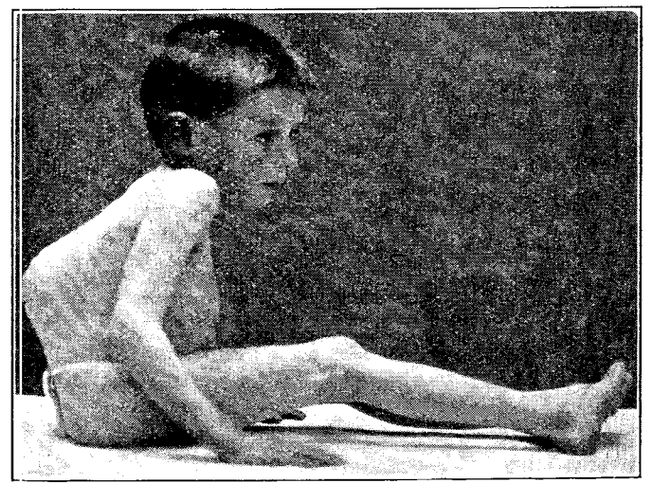

FIG. 3.—Patient suffering from extreme angular curvature of the spine, the result of tuberculous disease.

essentially a conservative measure. No attempt is made to deal with the lesion which calls for such an operation. It is simply an internal method of splinting the spine, designed as a substitute for the instrument maker's skill. In the majority of cases it is an unnecesssary operation provided reasonable facilities are available for treating the patient; in certain cases it has distinct and considerable dangers; in a limited number of cases it presents certain advantages. It possesses one point in its favour in that it is a conservative operation; it is a tangible if tardy recognition of the fact that to immobilise a tuberculous lesion is a better way of promoting healing than to attempt its extirpation; but with increasing appreciation of the value and utilisation of properly applied conservative treatment the indications

for the performance of this operation should be greatly reduced, to the advantage of the patient. I would appreciate the operation more if it made cure certain where a purely non-operative method of treatment would have failed; but I cannot conceive that it would have saved the life of any one of my spinal caries cases who have died. It would have increased my mortality if generally adopted, and I think I can demonstrate that it would have made little appreciable difference in the length of treatment required.

Definition of Conservative Treatment.

The title "non-operative treatment" of surgical tuberculosis conveys no suggestion as to what the treatment if non-operative may be. Treatment, where operation is avoided in these conditions, is usually termed conservative. This term again is open to criticism. What is the conservative treatment of surgical tuberculosis?

As usually understood it conveys no very exact meaning. By some it has been confused with convalescent treatment, but there is a period of convalescence in the natural history of the disease in a patient whether he be treated conservatively or radically. Others regard conservative treatment as treatment without operation, but have no very clear ideas of what should be substituted for operation. May I explain what I understand by conservative treatment? I would define conservative treatment in surgical tuberculosis as the adoption of all measures which tend to improve the patient's general health, increase his powers of resistance to tuberculous disease, and preserve or restore the part or parts attacked, in contradistinction to radical treatment, which aims at the cure of the disease by the removal of the local lesion. It will be evident that such a definition is the very antithesis to lack of treatment, that it necessitates the employment of very active, numerous, and complicated methods, that it by no means necessarily implies exclusion of surgical interference, although surgery from being the one treatment becomes relegated to a very inferior but still useful position, as a possible aid to cure or amelioration under certain conditions. Moreover, I would give it a wider meaning than mere institutional treatment, and would not confine conservative treatment even solely to the application of merely medical or surgical care. There are means of improving the patient's condition, additional to those directly derived from the arts and science we practise, which possess an importance we have been slow to recognise. Chronic disease, which must of necessity involve lengthy treatment, has for too long been regarded from the purely pathological point of view. For this error blame must be ascribed to both the practitioner and the public. The former has narrowly concentrated on his own particular duties and disregarded the wider issues. The public has been content to leave the matter to the practitioner, and the intellectual and industrial aspect of the problem has been utterly ignored. The psychology and future well-being of the patient have been neglected, yet no one would deny their importance. A normal, healthy, well-cared-for, suitably occupied child is a happy child. He is given full play for natural healthy mental and physical activities. Conversely, it is of obvious assistance to the patient to make him happy and normal, and all means to that end should be encouraged and utilised. The monotony of immobilisation, of long-enforced recumbency, of fixation in unnatural attitudes cries for alleviation. Consider what such unnatural restrictions would mean to us, who have so many resources of our own to fall back upon, and what they must be when uncompensated. This state of affairs should have been remedied long ago.

FIG. 4.—Same patient as Fig. 3, with the deformity largely reduced after treatment on the "Marconi." Further reduction of the deformity can now be obtained by using the "swinging back-door splint." (See THE LANCET, 1911, i., p. 568. Mechanical Treatment of Tuberculous Disease of the Spine.)

I may not pause to explain in detail how, but shortly, all child patients should be educated, and manual instruction

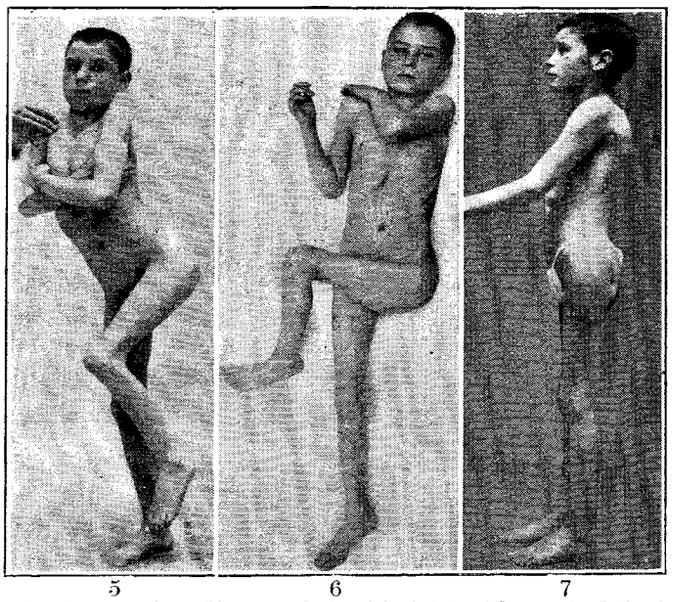

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FIG. 5.—Tuberculous disease of the hip-joint with marked flexion and adduction.

FIG. 6.—Same patient photographed from above. This is a case of right-angled adduction, the most difficult deformity to correct in tuberculous disease of the hip-joint.

FIG. 7.—Same patient; treatment completed and deformity corrected.

should play a large part in the scheme, adolescents trained in work suited to their limitations, and adults occupied. In addition, all should be amused and entertained, and shown how to amuse and entertain themselves. The institutions at Alton and Hayling have been called the "happy hospitals." The secret of that happiness lies in the fact that the patients are as busy, as occupied, and therefore as happy and as contented as the staff. To assist in carrying out this part of the work we employ, on the educational side 14 trained teachers, and on the technical 5 trained instructors. This should be an essential branch of conservative treatment in every special institution for surgical tuberculosis.

Need for Prevention.

In any comprehensive scheme for the treatment of surgical tuberculosis prevention should play a much greater part than hitherto.

Much more should be done than is being done for the child with the stigmata of tuberculosis, the pre-tuberculous child, the offspring of tuberculous stock. I would advocate the establishment of properly equipped preventoriums where such children could have the benefit of preventive treatment under the best climatic, hygienic, dietetic, and educational conditions, and under skilled supervision. Such a preventorium is in contemplation at Alton, where it is anticipated it will be of especial value as demonstrating what may be accomplished on these lines. Non-residential open-air schools meet these needs to some extent, but they are necessarily imperfect, for the child returns nightly to unfavourable conditions.

Conservative Treatment of Tuberculous Abscesses of Bony Origin.

Conservative treatment includes consideration of general treatment, involving climatic, hygienic, dietetic, drug, educational, and other methods which it is desirable to employ, and local treatment, which is concerned with the correction or prevention of deformity and is largely orthopædic in character, but subject to those limitations enjoined by the fact that the patient is tuberculous. Under this heading may also be included those surgical measures which have still a place in treatment. To only one shall I here allude, and that is to the conservative treatment of tuberculous abscesses of bony origin.

I would state as a rule, to which there need scarcely be any exception, that tuberculous abscesses secondary to disease of the spine, hip, or, indeed, any of the larger bones or joints, should never be opened. Neither should they be left in the hope that they will be absorbed. As soon as

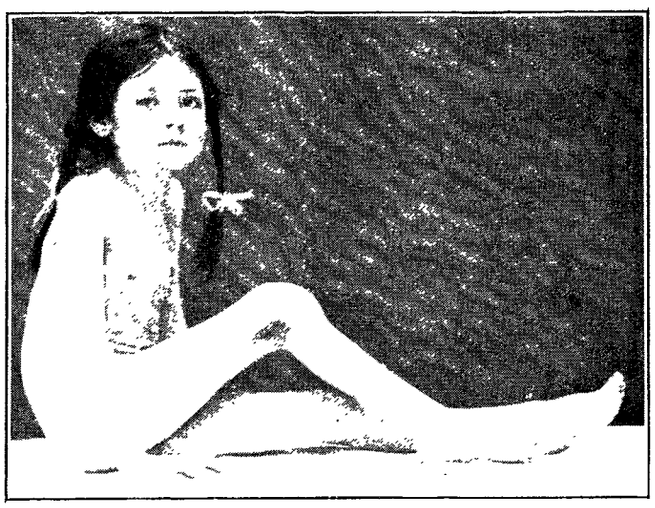

FIG. 8.—Tuberculous disease of the knee-joint, with subluxation of the tibia and sinus formation.

FIG. 9.—Same patient as Fig. 8 after treatment. Deformity corrected, sinus healed, movement returned to joint.

possible after their formation and as early in their evolution as the skill of the surgeon permits they should be aspirated. Occasionally their aspiration may be assisted by the employment of modifying fluids. The technique and arguments for the selection of this form of treatment, I, with my friend Dr. Jacques Calvé, have already fully detailed.

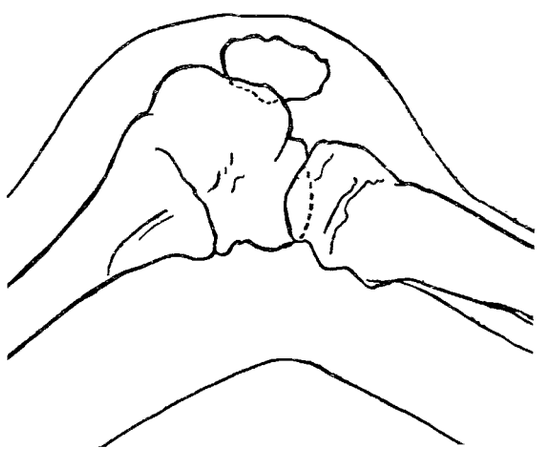

FIG. 10.—Tracing of skiagram of knee-joint of patient (Figs. 8 and 9 before treatment.

One point, often disregarded, is that the method of healing of a tuberculous abscess successfully aspirated is essentially different from that of a similar abscess which has been incised and has proceeded, as so often it does, to sinus

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FIG. 12.—Tuberculous gland of the neck.
FIG. 13.—Same patient after aspiration.

formation. In the former case healing is centripetal, in the latter centrifugal. In the abscess skilfully aspirated the fluid contents are withdrawn, the abscess wall collapses, becomes denser, shrinks towards the causative lesion, continues to protect the organism from further spread of the disease, and becomes in time a mass of protective tissue, which gradually absorbs when no longer required. Incision of an abscess, on the other hand, necessarily increases the risk of dissemination of disease, and leaves a comparatively

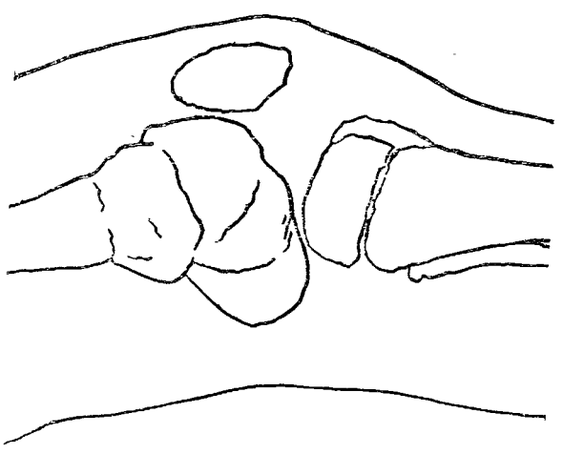

FIG. 11.—Tracing of skiagram of same patient (Figs. 8, 9, 10) after treatment.

weak cicatrice probably infected with tubercle bacilli, which often tends to break down, perhaps years afterwards. Sinus formation then ensues, secondary infection frequently follows, healing is delayed and occurs in the reverse order to that succeeding aspiration—viz., from the causative lesion to

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FIG. 14.—Patient suffering from multiple tuberculous lesions with much toxæmia. The lesions included cervical adenitis, tuberculous iritis with photophobia, tuberculous disease of hip-joint and lupus.
FIG. 15.—Same patient after treatment. All lesions healed, general condition good, movement has returned at hip-joint; there is no deformity.

the surface. I do not think that anyone who has acquired skill and any considerable experience in the aspiration of tuberculous abscesses would ever willingly revert to their evacuation by incision. (See Figs. 21, 22.)

Adjuvant Treatment and Auxiliary Methods.

Adjuvant methods of treatment have largely increased in relative importance and scope of application in recent years, and represent perhaps the most interesting advances made in the non-operative treatment of surgical tuberculosis.

Amongst such aids are heliotherapy, balneotherapy, chemotherapy, vaccine treatment, and the therapeutic employment of X rays and other electrical agents. Auxiliary methods are of importance for the patient's general well-being, and are also often directly concerned with his disease; they comprise attention to the teeth, skin, throat, nose, ears, and eyes. These matters are frequently neglected, but demand attention and skilled care. I should also include under auxiliary methods of treatment a branch institution such as we are fortunate in being able to make use of, where chronic cases not requiring any special treatment may be detained indefinitely, and thus give room at the hospital for more acute patients urgently needing specialised care.

After-Care.

Lastly, I would touch on the all-important matter of after-care.

All patients who have suffered from surgical tuberculosis should have the continued advantage of occasional skilled supervision. No special hospital for the treatment of these conditions can be considered complete unless it possesses an out-patient department where discharged patients may be periodically examined, advised, and assisted. Not only is medical help required, but advice in the choice of occupation and assistance in obtaining suitable employment should be

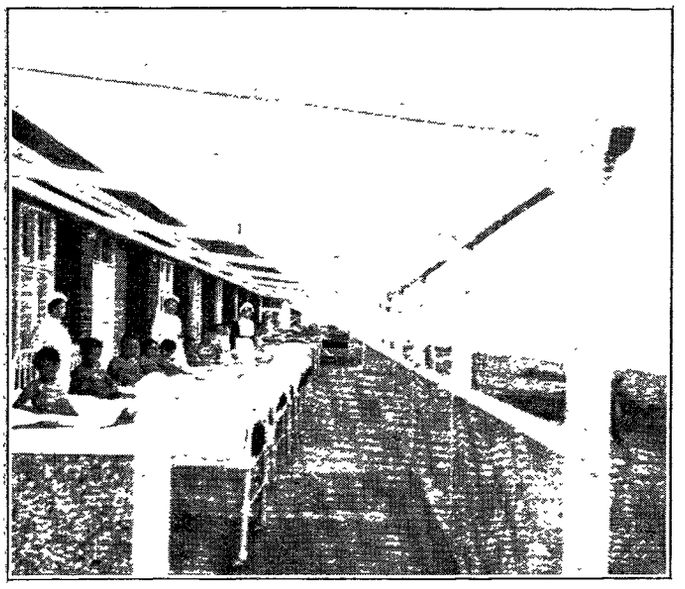

FIG. 18.—Sun balcony at Sandy Point, Hayling Island. Canvas blinds can be pulled down over the patients to protect them from showers or excessive sun, and canvas weather screens can be lashed to the uprights shown, to afford shelter from too strong winds.

forthcoming. Associated with this department facilities are necessary for sending patients to open-air camps and holiday homes working in conjunction with, and under the management of, the parent institution. Many discharged patients at some time or other need such "toning-up" as these offshoots from the hospital can supply. Some cachectic cases, indeed, though not suffering from active tubercle, urgently require prolonged detention in residential open-air institutions, with the possibly ultimate transference to a residential technical school, such as the college for permanently crippled boys we maintain at Alton. Here lads between the age of 14 and 18 are admitted, detained for three years, trained in a trade suited to their limitations, and continue their general education during this period of training.

Conclusion.

All the methods of treatment I have just indicated are undertaken at the Treloar Cripples' Hospital and College at Alton and Hayling Island, and it is on experience gained there that I base my remarks. There is great hope for the future. The treatment of surgical tuberculosis has now aroused lay as well as medical interest. Active Government measures are being taken

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FIG. 16.—Extensive lupus which had resisted treatment for seven years.

FIG. 17.—Same patient after chemotherapeutic and heliotherapeutic treatment. The scars remaining are the result of scraping operations performed previous to admission.

to combat the disease. Municipalities are devising schemes of their own under expert advise and with Government subsidy. If the spirit of the voluntary institutions can be maintained this is all to the good. Many medical men are exerting their powerful influence to promote reform. Prominent amongst these I would

FIG. 19.—Ambulant patients at Hayling Island enjoying sun, sea and sand—valuable adjuncts to the cure.

mention Sir Robert Jones, long a distinguished practitioner of conservative treatment, who advocates orthopædic centres in every locality. The desirability of associating cases of surgical tuberculosis with general orthopædic work may be criticised, but every medical man will support and sympathise with the efforts he is making. My experience is that it is quite fallacious to suppose that adults do not respond well to conservative treatment. It is of equal importance in adult cases of tuberculous disease, and yields equally gratifying results, although with adults there may be a more frequent necessity for operative aid.

I have contented myself by referring simply to the general principles underlying the conservative treatment of surgical tuberculous affections. It is a method involving minute attention to detail. Any individual case may require the application of numerous measures appropriate to its peculiar requirements and varying according to the stage of the disease or even to the idiosyncrasies of the patient. To discuss these various forms of non-operative treatment summed up in the word conservative, the indications for their individual or combined employment, the extent to which they may

FIG. 20.—Patients suffering from spinal caries on specially designed spinal stands receiving sun treatment at Alton. All patients are educated while receiving treatment, and the illustration shows a teacher giving instruction while insolation is proceeding.

be usefully adopted, the effects which they separately or in combination produce, and the ultimate results which may be reasonably anticipated, is obviously impossible. The final judgment to be passed on any method of treatment must depend on the end-results achieved. Accordingly, I would refer the reader to the accompanying illustrations and tables of results, which will convey more graphically than any words the significance and value of conservatism in the treatment of surgical tuberculosis.

Table I. gives an analysis of results of treatment of patients suffering from surgical tuberculosis at the Lord Mayor Treloar Cripples' Hospital, Alton, Hants, from the opening of the hospital in September, 1908, to Jan. 31st, 1921.

FIG. 21.—Skiagram (taken from below) of a spinal abscess containing liquid, caseous and calcareous pus, taken whilst being aspirated. The pus was liquefied by the injection of modifying fluids. Note the cannula in the abscess cavity.

Cases sent in as tuberculous but ascertained after admission not to be suffering from tuberculous disease—e.g., pseudo-coxalgia sent in as tuberculous disease of the hip-joint—are not included in Table I. Patients are classified according to their principal lesion. A very large number were suffering from, and in some cases developed during treatment, other or multiple lesions. In these statistics no mention is made of septic cases. The proportion of septic cases admitted is, unfortunately, a high one. The majority of those discharged unimproved were septic cases. By "disease arrested" is meant that the disease appears to be cured, abscesses are absent, sinuses healed, and the patient fit to return home and resume ordinary life, not under continuous supervision, but advised, where feasible, to report to our London out-patient department periodically for observation. Patients removed are those withdrawn by parents or guardians before the disease is arrested. Patients transferred include boys transferred direct to the College for technical training, or to an auxiliary home for protracted treatment. No death has occurred in the College. A certain number of patients have also been transferred to other institutions who required treatment of other conditions more urgently than continued treatment for surgical tuberculosis.

TABLE I.—*Results of Treatment.*

Lesion.	Admissions.	Discharged.	Disease arrested.	Improved.	Unimproved.	Removed or transferred.	Died.	Average stay in days.	Mortality percentage.
Spine	920	810	674	22	24	68	27	503·2	3·39
Hip	880	768	710	18	2	25	13	403·1	1·71
Knee	333	304	282	6	—	11	7	334·7	2·3
Other	354	315	265	16	5	19	9	259·8	2·8
—	2487	2197	1931	62	31	123	56	416	2·54

FIG. 20A.—Ambulant patients leaving the wards for nature study and sun treatment at Alton.

It will be seen from Table II. that if we exclude patients who died from intercurrent disease the number of deaths directly due to tuberculous disease is reduced to 47, or barely over 2 per cent. of patients discharged. While meningitis is the commonest terminal cause of death, a certain number of these cases were septic as well as tuberculous, and I would regard secondary infection as the most serious complication which may arise. It may almost always be avoided if non-operative treatment is undertaken. Spinal caries is not only the commonest, but also the most fatal form of surgical tubercle admitted. It is noteworthy that 10 of the 13 patients suffering from spinal caries who died of meningitis were under the age of 5 years, and in many cases death occurred within a comparatively short time after admission. Contrary to what is frequently assumed by the public, surgical tuberculosis is more difficult to treat, more likely to produce considerable physical disability, and undoubtedly more fatal in the very young than in older children. Of all bony lesions the one I regard as most dangerous is tuberculous disease involving the flat bones of the skull.

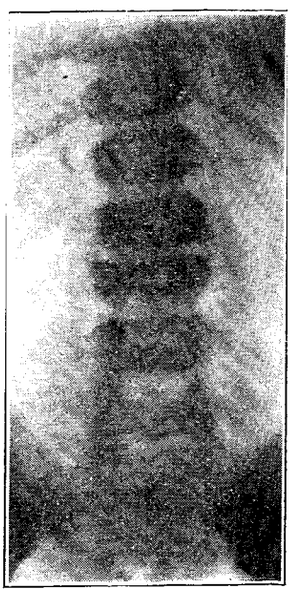

FIG. 22.—The same case later. All that is left of the abscess is the small particle of calcareous pus indicated by the white line at A. (Skiagram taken from above.)

TABLE II.—*Analysis of Mortality Statistics.*

Cause of death.	Spine	Hip	Knee.	Ankle.	Multiple.	Other.	Total
Meningitis	13	6	4	2	—	1	26
Sepsis	8	6	1	—	2	1	18
Miliary tubercle	1	—	—	—	1	—	2
Cerebral abscess	1	—	—	—	—	—	1
Intercurrent	4	—	3	—	1	1	9
—	27	12	8	2	4	3	56