roots of the lungs is present in practically all asthmatics, but three patients had definite evidence of pulmonary tuberculosis—two healed and one active—all unsuspected cases. The two former were treated with good result; the latter was sent back untreated and a haemorrhage occurred a few days later. The possibility of using this method of general radiation in pulmonary tuberculosis is under consideration.

The hilum fibrosis that is common in asthma is, I believe, a secondary condition, as no alteration could be detected even after radiation had been successful. The presence of "asthmatical triggers," such as nasal polypi, infections, etc., should be sought for and removed, if possible.

In considering the value of the results it must be remembered that practically all the cases treated by radiation were those which had tried all known methods, and had been driven to the use of anti-asthmatical cigarettes, injections of adrenaline, Tucker's inhaler, etc., for relief when they became really desperate. Many patients state that their asthma originated in their abdomen—that is, the attack was preceded by some form of abdominal discomfort or indigestion. This seems to disappear if radiation proves beneficial.

Several interesting but apparently unconnected observations have been made on the after-effects of general radiation, other than on asthma. Radiation sickness or nausea was observed to a very slight degree in most cases, but bore no relation to the results. Two patients, however, proved very susceptible to the reaction, and eventually stated that they preferred the complaint to the cure. In many cases looseness of the bowels, amounting even to diarrhoea, occurred during the course. A very noticeable result in quite a number of patients was a definite increase in weight. One put on 3 lb. each week for six weeks; another as much as a stone in a month, and 3 stones in three months. Patients often state that they feel considerably better in their general health, and that they are mentally brighter. One patient lost her sense of smell with the onset of asthma three years ago. This returned after the first dose, but for a week everything seemed to have a noxious odour, becoming normal at the end of that time. The condition of her nose had been previously passed as normal. In the early stages of treatment she had a slight recurrence of her asthma, and her sense of smell was again lost, only to return later. A doctor whose work was threatened on account of asthma became quite free from attacks, but stated that the treatment had put him entirely off smoking. As he grossly overdid it this was all to the good.

A few, subject to bronchitis as well as asthma (Class C), developed what appeared to be an acute attack of bronchitis soon after treatment had been started. This may, of course, be a mere coincidence, but I mention it as a possible sequel to the treatment, although no radiation fibrosis of the lungs was noted in any case. Several patients who had been treated for nasal catarrh unsuccessfully stated that this had disappeared with the attacks of asthma after radiation.

There are a few patients who respond well at first, but have a recurrence of their asthma, which is again benefited by further radiation, but is followed by yet another attack. In such cases further investigation for asthma "triggers," such as nasal polypi, sinusitis, etc., gave no clue to the cause of these recurrent attacks.

A much larger number of cases must, of course, be treated before the true therapeutic value of this method can be gauged, and for this reason it is not presented as a new cure for asthma. The results so far obtained at least indicate that we have here a valuable palliative agent worthy of further investigation and trial by the radiologist. An Asthma Research Council has recently been formed in England. Its objects are widespread. When funds are available they will cover research in all forms—the testing of the therapeutic value of various treatments, the collecting of statistics, and so forth. It should eventually prove of very great value towards creating order out of chaos.

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A VOCAL COMPLICATION OF TONSILLECTOMY, AND ITS TREATMENT.

BY

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THOSE who have examined many throats after tonsillectomy must have come across cases in which the action of the soft palate has been hampered by the tightening of its lower margin. This is caused by excess of the cicatricial contraction at the site of removal of the tonsils. By delicacy and care in the enucleation such contraction may be avoided, and when it is only slight it produces no ill effects, especially if the patient is not a singer. If, however, it is more than moderate it may, in a singer, interfere very seriously with the use of the voice. The breath is apt to escape behind the palate and the tone becomes less clear, while at the same time the enunciation of the explosive consonants (B, P, T, D, K, G) may become difficult, and they may be replaced by the resonants (M, N, NG). This is the so-called *dyslalia aperta*. The vocal sound may be accompanied by an audible bruit as the air escapes through the open though narrow passage behind the palate.

Apart from care in operating, it is well to start the patient on appropriate vocal and other exercises, to get the palate into play, soon after the throat has recovered from whatever reaction may have followed the operation—say, in about a week or ten days. This is of special importance in the case of the professional singer, in whom, indeed, the operation should only be carried out after full consideration. One writer on the subject states that he generally delegates the operation to other hands than his own when the subject is a singer. Comment is needless.

The chief remedial vocal exercise consists in singing vigorously and clearly on a convenient note the sound "m-bah!" The transition from the *m* to the *b* is effected by a drawing up of the soft palate, and this is obviously the movement which has to be preserved. If difficulty is experienced in making the transition without a break, the "bah" may be sung without a precedent *m*.

Another simple exercise is to sing merely the sound "ah," and test by means of a cold mirror under the nose whether air finds its way out through the nares, revealing to the patient's own eyes the existence of a defect which has to be rectified.

Still another useful proceeding is for the patient to blow vigorously through a very narrow tube, such as a fine Eustachian catheter or a pipe-stem, or even a straw, into a tumbler of water for as long as possible without taking a fresh breath.

The palate may also be exercised by means of a small quantity of innocuous oil, such as a light liquid vaseline, poured into the nose while the patient holds his head back and abstains from swallowing. If the palate is inefficient the liquid trickles into the pharynx and larynx and excites cough.

In illustration of these points I may quote the case of a young lady who had gained a valuable scholarship for singing, being endowed with a fine voice and exceptional musical ability. For doubtless excellent reasons her tonsils had been enucleated, but unfortunately her capacity for singing was seriously affected, and continued to be so. She was referred to me three months later, and when I saw her she was in great distress, as the authorities of the college were forced to decide that unless the emission of her voice returned to its normal condition they would have to withdraw her scholarship and give it to some other candidate.

She applied herself to the understanding of the instructions, and carried them out so successfully that, to her own great satisfaction and that of the authorities, she was able to retain her scholarship and to sing better than ever, benefiting incidentally from the removal of the tonsils, which had threatened to bring her career as a vocalist to an end.

I may in this connexion refer to the question of insufficiency of the palate, to which Brown Kelly has given particular attention. This usually takes the form of a wedge-shaped gap between the two halves of the hard palate. When this is present the soft palate is not so

readily drawn up as in normal circumstances, and the nasopharynx may not be so completely shut off from the mouth as is necessary for the production of a clear singing voice. In some cases compensation is afforded by a sphincter-like action of the constrictor fibres, or even by a pad of adenoid tissue or a prominence of the atlas vertebra. The condition is fairly uncommon, but it should be kept in mind when we contemplate clearing operations in those parts.

The removal of tonsils, even in singers, is sometimes obligatory, and always accompanied by some anxiety. I feel, however, that the anxiety is considerably diminished if we realize to what extent the possible disadvantages may be removed by the intelligent use of the exercises here described.

TREATMENT OF LUPUS ERYTHEMATOSUS WITH GOLD COMPOUNDS.

BY

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NOBODY who has attempted to treat a case of subacute lupus erythematosus with the methods available until quite recently can have failed to be impressed with the difficulty of such an undertaking. Prolonged rest in bed still holds the field as the most nearly infallible procedure, but it is obviously often impossible to persuade patients to take this drastic step.

In krysolgan I consider we have a drug which is almost specific and at the same time appears to be, with ordinary care, not dangerous. I record briefly my results in nine cases which have been treated since November, 1927, in the hope that they will encourage some of those who are still waiting to see which way this new therapeutic cat will jump. I have treated only moderately severe cases, for the reason that I did not care to pump foreign material into the general circulation of patients who were not overwhelmingly anxious to be cured, or in whom the disease was quiescent and of insignificant extent. Most of these had had previous treatment with quinine, rest, and various local applications, and some had already been treated for a short time with sanocrysin.

I may say at once that I have had no success with sanocrysin, possibly because I did not use the correct dosage. I started with 50 mg. and increased up to 250 mg. Whitehouse and Bechet,¹ who recorded four complete cures and eleven greatly improved out of thirty cases, regarded 100 mg. as a "rather large dose." I also understand that 1 gram is not considered unreasonable for the first dose in a case of active pulmonary tuberculosis. One patient received two injections of sanocrysin for a recent relapse of an old-standing lupus erythematosus, an extensive erythema centrifugum type; on her third visit, coinciding with a failure of the supply of the drug, I gave her 0.3 gram of novarsenobillon, to avoid disappointment, as she had come a long way from the country. Severe general and local reaction took place and was followed by the complete disappearance of the eruption, which has not recurred. I do not claim this case as a triumph for sanocrysin, and I mention it with the suggestion implied that intravenous injections of anything at all may cure certain cases of anything at all of an allergic nature, as is probably lupus erythematosus. However, I feel convinced in my own mind that I could not have done one-quarter as well in the following cases with any other form of treatment known to me.

I have used krysolgan in the following doses:

First Course: 0.075, 0.15, 0.375, 0.75, 0.75, 1, 1, and 1.25 grains.

Second Course: 0.75, 0.75, 1, 1, 1.5, 1.5, 1.5, and 2 grains.

Third Course: Four injections only of 1.5 grains each.

No unpleasant accidents occurred in a total of about 120 injections. The urine of each patient was examined three or four times, but albumin was never found, which is contrary to the experience of Nicolas and Schmitzer,² who found that albuminuria was constant after a total dose per course of 7 grains. The doses were given at weekly intervals with a four weeks' rest between courses.

For purposes of description I classify my cases into three groups according to the depth of involvement; one can guess roughly from the appearance of a patch what kind of a scar it will leave. Group I, erythema centrifugum type, leaving little or no scar. Group II, intermediate variety, leaving thin white supple scar. Group III, lupus erythemateux fixe, leaving disfiguring or warty scars.

Case 1.—A stableman, aged 43, with multiple patches of Type II; treated since June, 1926, with quinine; septic foci treated and various local remedies. He steadily became worse. Three injections of novarsenobillon produced no improvement; the same result followed twelve injections of sanocrysin. Krysolgan was started on February 24th, 1928; there was slight improvement only after one course, but no new lesions occurred. He was made much worse again by the untimely application of carbon dioxide snow. After a second course of krysolgan there was considerable improvement, but there were still about half the original number of lesions, and still active. There was no further progress after a third course; the final result being that the patient's condition was only slightly improved.

Case 2.—A restaurateur, aged 59; tip of nose affected—Type II; she also had chilblains. The local application of carbon dioxide snow, after excluding oral sepsis, and four weeks' quinine treatment produced only temporary cure; she relapsed after exposure to the sun three weeks later. The lesion completely disappeared after the last injection of the first course of krysolgan. The chilblains were successfully treated with ext. thyroideum siccum, 1 grain twice daily. Still healed a month later, after half a second course had been given. Condition on June 8th, 1928—cured.

Case 3.—An unmarried woman, aged 28; relapse in thick white scar of previous lesion on the left cheek, also patches of Type I on neck and fingers. She showed slight improvement after one course of sanocrysin, but relapsed in a fortnight. She was nearly well after four injections of krysolgan, but two full courses were given before the patch on the cheek was completely healed. She was given a third course. Condition on June 8th, 1928—cured.

Case 4.—A single woman, aged 38, with active lupus erythematosus of Type III occupying the whole of the left side of the nose and part of the right batwing area. After the first course of krysolgan the whole lesion was white and showed no sign of activity. She returned after a fortnight with complete relapse, having been exposed to the sun. After waiting another fortnight she began a second course. The lesion was completely healed again after the third injection. She was still under treatment on August 30th, but appeared to be cured.

Case 5.—A nurse, aged 39, with extensive lesions of face and neck—Type I. After the first injection of krysolgan (0.25 grain) the eruption was only faintly visible. At the end of the first course only faint white patches of atrophy were to be seen. Four weeks later she was given a third course. Condition on July 30th, 1928—cured.

Case 6.—A married woman, aged 28, first seen on December 14th, 1926, with Type III lesions of tip of nose and both alae. These completely disappeared for eighteen months after rest in bed with quinine for ten weeks. After four injections of krysolgan she was much worse; it was therefore discontinued. There was no improvement after a course of sanocrysin. The lesion disappeared for two months after treatment with carbon dioxide snow, but relapsed again, and the disease is now extending. Result of treatment: no improvement; ? worse.

Case 7.—This patient, aged 71, edentulous, had extensive asymmetrical scarring and patches of alopecia with active lupus erythematosus of Type III at the edges of some of them. Patient complained of itching and a burning sensation. There had been no previous treatment. After one course of krysolgan no improvement was apparent, but relief of symptoms. A second course was given at the patient's request, and great improvement followed. A third course was given; there are now no signs of activity, and the scars seem to be thinner and more supple. Condition on July 20th, 1928—cured.

Case 8.—Patient, aged 58, was first seen on June 30th, 1926, with ulcerated, readily bleeding Type III lesions covering the whole of the nose and the left batwing area; there was also a patch on the back of the left hand. Cure for eleven months followed treatment with carbon dioxide snow and quinine. Patient returned on March 6th, 1928, with relapse on a small part of the original area. Removal of septic teeth, the administration of quinine, and further applications of carbon dioxide snow failed to bring relief. Slight improvement followed a first course of krysolgan, which was not, however, maintained through a six weeks' holiday. The condition was better after the second injection of the second course, but there was no further improvement at the end of the course. Condition on August 30th, 1928—very slight improvement. October 12th, after third course—cured.

Case 9.—A single woman, aged 38, with extensive lesions on the neck (Type I) and on the hands and feet (Type II). She had had relapses and spontaneous recoveries for five years. A severe attack in December, 1927, completely cleared up after treatment with krysolgan and rest in bed. She relapsed again in April, 1928. Krysolgan was recommenced in May. There was no improvement after doses of 0.375, 0.75, and 1 grain. She went away for a holiday, and returned complaining of severe pains in the back and thighs, which had followed shortly after the third injection. No organic basis could be found for these symptoms, but krysolgan was discontinued and the patient left the district. There was no improvement of the lupus erythematosus.