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ROYAL SOCIETY OF MEDICINE—SECTIONS OF LARYNGOLOGY AND OTOLOGY

JOINT SUMMER MEETING AT NOTTINGHAM

Thursday, June 14th, 1956

MR. W. A. MILL *in the Chair*

The Present Place of the Laryngofissure Operation

THE opening paper by Mr. T. O. Howie will be found on p. 249.

Discussion

SIR VICTOR NEGUS said that he was honoured to open the discussion on a paper which dealt with an extremely interesting subject. It was always difficult to decide on this operation, particularly with regard to malignant disease. Mr. Howie spoke about the work diminishing; Sir Victor had records of a considerable number of operations of laryngofissure and laryngectomy, although he now did relatively few and had not performed a laryngofissure operation purely for carcinoma for three years. The responsibility for these operations was not great; they gave much less anxiety than taking out a child's tonsils, and when speaking of such a serious condition as cancer, he did not think the dangers of operation weighed with one at all.

The first point was the question of stenosis, the usual treatment for which was opening the larynx, excising the scar tissue and, instead of an oval or round tube, the insertion of a triangular plastic tube, which gave a glottis eventually of the correct shape. He had operated on a child of five with congenital laryngeal stenosis and put in a triangular tube with a good result.

Laryngeal paralysis had been known for a long time and he thought Réthi was overlooked. He had seen some of his results by the laryngofissure route instead of by the more modern external approach; there were also Hoover's operation and the operations described by Mr. Neville Young and Mr. Lawson. He would say in passing that his patients did not like these operations because the results, as he had seen them, had never equalled those of a properly designed tracheostomy tube, which gave a perfect voice and free respiration.

He did not think the operation of laryngofissure had any place in papilloma of the larynx; he had only seen as a result the implantation of new papillomata in the scar. There was a place for it in hyperkeratosis of the larynx or cases of leukoplakia with or without definite evidence of malignant changes. In his experience these diseases did not respond to irradiation, although the opposite

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opinion had been expressed; he did not think they would because they consisted practically of normal cells. If peroral stripping did not succeed, opening the larynx and removing the superficial part of the cord was indicated.

On the subject of carcinoma, one was in considerable difficulty in making up one's mind; there were many factors to be considered. Sir StClair Thomson, with whom he worked for many years, said that he looked upon laryngofissure as an exploratory operation in certain instances. He himself had records of 201 cases of carcinoma of the larynx and had a note of three cases where the larynx was opened and some treatment other than excision was carried out. He thought that with proper direct peroral examination and with a tube which could pass through the subglottic region, an external operation was not necessary.

With regard to the selection of cases, he did not like the tables presented, because they concentrated on the involvement of glands. Involvements of glands came at a very late stage; one did not expect to find them. The distribution and length of growth on the vocal fold was important, but what was of vital importance was the question of infiltration, fixation and subglottic spread. The whole determining factor whether local removal or irradiation would succeed was whether cartilage was involved. Subglottic growths, occurring on the inner face of the cricoid, would reach the cartilage quickly and usually required laryngectomy. Of 127 cases with which he had dealt himself, and of the many cases he had been asked to see and advise as to treatment, to a total of 201, only 12 had no treatment; some few cases refused. The results of 127 cases which he had treated himself and had been able to follow up showed that there had been a total rate of cure in 37 per cent., which was a good result for this type of malignant disease when compared with cancer of the stomach and other regions.

He believed that cases with fixation or subglottic extension should be excluded from this discussion as being unsuitable for laryngofissure or for any limited operation. He believed the treatment for early carcinoma of the larynx was teleradiation. That did not mean that one submitted all patients to it; the unsuitable cases should be excluded before starting treatment.

Of the 201 cases under consideration, 54 had required laryngectomy; this was a very high proportion. As to the merits of limited operation, excision by the laryngofissure route entailed a slightly shorter time away from work than irradiation and was therefore economically advantageous. The disadvantage was the resulting voice; in hospital practice the voice was not always of such importance as with private patients. The form of treatment which had an equally good chance of cure with the preservation of a normal voice was the correct one.

Mr. Howie had been kind enough to quote his earlier opinion; since 1951 he thought things had changed a little because the results of teleradiation had improved very much. Certainly in his experience irradiation was not unpredictable in its results; Mr. Howie said that a poor surgeon was better than a poor radiologist, but he did not think one should argue on these lines, since one's views should be based on the provision of adequate treatment. To avoid inefficiency there was a movement to eliminate the small radiotherapy centres where the radiotherapist had perhaps a 250 kV. tube and was not there every

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day. The big centres such as those of a city like Glasgow should be properly equipped with modern apparatus and should be able to give as good results from radiotherapy as those he saw in hospitals where his own cases were treated. Even if it were not the case now it should be possible in a short time to have first-class facilities for irradiation in all big centres. It could not be done in cottage hospitals, of course.

As to operation; in his series of 29 cases of laryngofissure he had had one operative death; the operation was not unduly dangerous. On the other hand, with 20 patients treated by interstitial radium he had had one death from perichondritis. Of 58 patients treated by teleradiation, one died of pneumonia because he insisted on going to and from his home during treatment. One could therefore eliminate the question of danger from the discussion, since it more or less balanced.

His total of five-year cures after laryngofissure was 56 per cent. of cases over 32 years from 1925; if the cases were more carefully selected one might add to the successes. With interstitial radium the total result of five-year cures was 50 per cent. With deep X-rays, used before and during the war, the total five-year cure rate was 19·4 per cent. Of 13 cases treated by teleradium or telecobalt the five-year cure rate was 61·5 per cent. He believed teleradiation was a satisfactory form of treatment, without much suffering and with excellent prospects of cure with a good or perfect voice. Another 12 cases had since been treated successfully by teleradium or telecobalt but they should not be included as being under 5 years.

To sum up, he thought all the arguments Mr. Howie had put forward were very good but in the speaker's practice the proportion of cases treated by each method had changed in the last 30 years. Starting in 1925 and taking ten-year periods, the laryngofissure operation, in the proportion of cases so treated to the total number, in the first ten years was 33·6 per cent; in the second ten years 27 per cent. and in the last ten years 20 per cent., so that the number was gradually decreasing. With regard to radiation there were 13 cases in the first 10 years, 23 in the second period and 55 in the last 11 years; in recent cases 94·8 per cent. had been treated by teleradium or telecobalt. He had only one case of laryngectomy in 1955.

To go into minute details on what one based one's opinion would be too tedious; one must allow one's impressions to have some weight. In trying to do the best for patients he had come to the conclusion that at the present time the correct and most advantageous treatment for a mobile carcinoma was teleradiation. All radium was being replaced and in the future it would be by cobalt or caesium beam. Most of his recent cases had been treated by Dr. Allchin at the Westminster Hospital.

Sir StClair Thomson on two or three occasions operated on a case and after splitting the larynx in the midline, found the disease on both sides; the result was a double laryngofissure operation. The speaker had had a similar case of a man with a growth extending into the anterior commissure, thought to be unsuitable for radiation. He operated by the laryngofissure route and found a bilateral growth requiring anterior hemilaryngectomy. Knowing that the patient would probably get stenosis he put in a triangular plastic tube covered with a skin graft; the result was a free glottis and a very good voice.

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He was not trying to belittle the laryngofissure operation but was only giving his own views and these were prejudiced by the fact that he had recently seen only private patients, for whom a good voice was important. He would agree with what Mr. Howie said about the unpredictable results of radiation in earlier days; he thought that now they were predictable if the treatment were given properly. Efficient treatment by irradiation was safe, and the results were very good.

This was a very wide and important subject and the Section was to be congratulated in having Mr. Howie to open the discussion.

MR. MAXWELL ELLIS said that it had been very interesting to hear this admittedly provocative paper. Sir Victor Negus had made the very important point that one should not be discussing inexpert surgery as opposed to inexpert irradiation. The other point was the classification of patients into those who would benefit from one, and those who would benefit from the other, treatment. Unlike Sir Victor, he mainly saw hospital patients, to whom the voice was just as important as in private patients, and where the preservation of the voice was a matter of concern to the surgeon dealing with them.

Many of the figures quoted by Mr. Howie were from America, where the system was not quite the same as it was here, inasmuch as the surgeon concerned was generally also responsible for the radiotherapy. In this country that was not the case, and where the centres were sufficiently large—an important point, as Sir Victor Negus had said—the treatment was very much more expert. The machines were improving all the time. Over a period the deep X-rays, which he thought formed the bulk of the figures which Mr. Howie quoted, had not proved to be anything like so effective in treatment of cancer of the larynx as teleradium or telecobalt. The deep X-rays did not get to the growth so easily and if they did there was a strong tendency to damage the cartilage, which radium had not done to the same extent if expertly used, and which cobalt was not doing either.

In London the energetic and enthusiastic surgeon was in a considerable quandary. In Gray's Inn Road the irradiation was carried out by Dr. Lederman at the Royal Marsden Hospital, and the results were extremely good, which made it very difficult to advise any form of surgery, particularly laryngofissure. It was a relatively simple operation and the results were satisfactory, but the voice was always poor; it might be useful and reasonable, but never good. Lederman at the Marsden Hospital—and he thought the President would bear this out—was getting results with cobalt which made surgery a little bit of a personal preference and not necessarily something in the interests of the patient. Lederman had 90 per cent. of good results, as had been stated in various papers, and this put the surgeon in a quandary, if he knew he would not do any better from the point of view of recurrence and that the voice would certainly be much worse, in advising surgery. A big centre with proper apparatus had something to be said for it.

One could not rely entirely upon the figures which had been quoted by the opener; they were not really up to date. In the last few years treatment by irradiation had advanced by leaps and bounds and the figures quoted for 1953 were not really valid today.

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One of the important uses of laryngofissure had been in the treatment of keratosis of the vocal cord. All had seen cases which had frightful nodular cords. One thought it was carcinoma, pieces were taken off and examined and they never proved to be carcinoma. Every now and again he had carried out a laryngofissure and removed such a cord. He still did not know the answer although he hardly agreed with the use of irradiation. The tissues, although showing epithelial hyperplasia, were otherwise so normal that he doubted whether irradiation would have any effect, and he would prefer, if anything was to be done at all, to excise them.

MR. F. MCGUCKIN said he had not looked up his own figures on laryngeal carcinoma but there were one or two points he would like to make. In Mr. Howie's group of cordal cancer considered suitable for laryngofissure there was no mention of the Finzi-Harmer operation, a procedure which had produced some excellent results though one which was gradually being superseded by newer techniques in radiotherapy. It was most unfair to regard all radiotherapists as indifferent and all surgeons as skilled; in Newcastle there were radiotherapists just as skilled in their own way as the best surgeons. Sir Victor Negus was right in saying that results might be something better than unpredictable. The Finzi-Harmer operation had much wider limits than the simple laryngofissure when dealing with lesions extending to the subglottic region and megavolt therapy was even more elastic.

Among the classifications put forward today the only one of real use was that suggested by Nielson and Strandberg; the others were of no use to the working clinician. Many years ago he used to see a greater proportion of cases which might be called "fresh" cordal cancer, and a much smaller proportion in which malignancy supervened on keratosis or leukoplakia. In recent years the position seemed to have been reversed and in the latter group it was often difficult to decide if and when malignancy was developing and, more important, whether malignancy might develop in several places at once. Under these circumstances a negative biopsy did not necessarily exclude malignancy somewhere in the lesion.

MR. G. H. BATEMAN said that Sir Victor Negus mentioned the application of laryngofissure to papillomata. It was rare for one to have to consider laryngofissure for the treatment of papillomata but there were cases in which it was the only practical treatment and one must not accept the view that laryngofissure in the treatment of multiple recurrent papillomata inevitably spread the condition. He thought it should be kept in the list of indications which on occasion needed laryngofissure. He thought it was the best form of treatment for the multiple papillomata in which the papillomata had become sub-mucosal or if there was a little tumour projecting beyond the surface and the main body of the papilloma was below the epithelium although not invading the submucosa.

Hyperkeratosis was an extremely difficult problem. One case had been mentioned which after 15 years became malignant and it had therefore been suggested that the vocal cord should be removed in case it later became malignant. This seemed rather excessive to him. By doing a laryngofissure and

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stripping the mucosa off the vocal cord he would not expect to cure a hyperkeratosis, the mucosa would presumably regenerate and the same changes would take place in the regenerated mucosa. He did not know what the right treatment was except observation and if it did become malignant one must treat it in the best way available at that time. In many of these cases the hyperkeratosis affected both vocal cords and if malignant disease was finally proved, it was probable that total laryngectomy would be the right treatment.

He was sorry that the Section seemed to think that radiotherapy was the treatment of choice for cordal cancer which did not require laryngectomy. He thought operation and limited removal still had an important place in the treatment. The reasons were that the patient was restored to full activity very quickly, a rough voice was relatively unimportant to many people, and the operation enabled complete and entire examination of the invaded area. One did get surprises about the extent of the lesion in these cases, it might be that it was such that radiotherapy would be doomed to failure.

Finally, he thought patients were happier and less depressed by spending a fortnight in a surgical ward, which was usually a cheerful place, rather than spend a month attending the radiotherapy department which was an unhappy place full of unhappy cases. If he had a limited cordal cancer he was not sure that he would not prefer to have a laryngofissure operation.

MR. I. SIMSON HALL said that with regard to keratosis of the larynx he had had two cases in his department, in which he watched the keratosis become malignant. In both cases the cord was excised by the laryngofissure operation and the keratosis reformed. The cord was removed for the second time because of malignant degeneration in the adventitious cord. In spite of this he still thought that excision of the cord in keratosis was a justifiable procedure. In the vast majority of these cases, not perhaps the earliest ones, the voice by the time the surgeon got to the point of deciding on an operation had already reached the stage at which it was not likely to be worse after operation. He did not think, therefore, that the question of the voice came very largely into these cases, except in the early stages.

Mr. Howie quoted some figures which he had published some time ago and he must emphasize that they dated from 1933. Many speakers had pointed out how radiotherapy had improved to such an extent that earlier figures were of very small value. Laryngofissure had been brought to such a point by their predecessors, StClair Thomson, Sir Victor Negus and Mr. Lionel College, that he thought it had got as far as it was likely to get. All the time beside it there was radiotherapy which was a developing science and nobody would be rash enough to predict what it would achieve in the future. He had occasion just recently to bring some of his own figures up to date, and in studying the literature he went over the figures of early cordal cancer and he found in a selection of recent literature which he surveyed that surgery was leading now by 2 per cent. He took all the cases of limited cordal surgery and found that the five-year recovery rate was 85 per cent., while the radiotherapy five-year recovery rate was 83 per cent. A difference of 2 per cent between radiotherapy and surgery made one think hard when one thought that in earlier years the gap was very much larger. Like Mr. McGuckin he was very impressed with the

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early treatment by linear accelerator, when radiotherapists could treat the cancer of the ethmoid through the eyeball without damaging the sight one realized that radiotherapy had gone a long way.

Surgeons must keep constantly in view the changes occurring in other treatments besides the treatments which they practised themselves.

MR. RONALD MACBETH said that it seemed clear that the progress of radiotherapy had reached the point where it could be said that the best radiotherapists delivered as good results as the average laryngologists, in cases of early intrinsic carcinoma of the larynx. Since there had been a very expert radiologist in Oxford he did not think his Department had carried out a single laryngofissure for malignant disease.

Two disadvantages of teleradiation were that not only did a course involve a long time factor but it left the patient with an uncomfortable throat afterwards. They all complained of dryness.

On the other hand, implantation irradiation did seem to get over that difficulty. Sometimes the Finzi-Harmer technique had given good results but many laryngologists had noticed that perichondritis had followed in a number of cases, and this militated against a good voice. Dr. Frank Ellis, the radiotherapist at Oxford, had developed a technique for the insertion of radium needles sub-mucosally without damage to the cartilages, and perichondritis had not been encountered in cases where infection did not previously exist. That method might turn out to be the compromise to which one was looking forward. In fact, he would like to add that it was also delivering fairly good results up to date for cases of papilloma and hyperkeratosis. The great advantages of such a method was that the stay in hospital was only five or six days, and the patient was back at work ten days later.

MR. P. H. GOLDING-WOOD said that Mr. Bateman had raised the point that a laryngeal neoplasm was often so much bigger when exposed at operation, whether laryngofissure or otherwise, than expected. This was generally agreed and called for improved methods of examination. The usual laryngoscopy gave but little appreciation of the degree of subglottic involvement, especially when the cord was fixed.

Three years ago he had evolved a right-angled laryngeal telescope with a magnified view at short working distance. This had proved of great value in appraising the commissure, cords, ventricles and subglottic region. On occasion it had revealed penetrating carcinomatous ulceration immediately below the anterior commissure that could not otherwise be demonstrated.

In such cases and particularly where the lesion was not notably encroaching on the lumen, this telescope, made for him by Messrs. Downs Bros., gave considerably more information than tomography.

PROFESSOR VICTOR LAMBERT said that he was such an ardent admirer of the Finzi-Harmer operation that unless one could produce something better he would continue to use it for intrinsic carcinoma. He had noticed that during the last few years more cases of cord cancer were presenting in the female and asked if this was other people's experience.

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MR. F. C. W. CAPPS said that there were one or two points which he thought he should mention. Mr. Golding-Wood spoke of tomography and while talking about radiotherapy they were forgetting the advances in diagnostic radiology which were going on just as fast. He found in cases of doubtful mobility a tomographic examination would give added help in the diagnosis. He had seen a case recently about which there was considerable doubt, it was thought there was probably subglottic involvement but the fullness on that side of the larynx was difficult to determine and a tomograph gave the answer, there was no subglottic extension but there was a neoplasm filling up the sinus and it could not clearly have been seen in any other way.

The other point was the question of follow up. No speaker had yet made the point, although anyone doing much of this work would probably agree that successful results depended entirely on a good follow-up department. Nobody had any right to do cancer work unless there was a properly organized follow-up department at the back of them. There the early recurrences could be spotted and dealt with and life could be prolonged by another five or ten years by the appropriate treatment. A proper follow-up department would earn many dividends if personal attention were paid to it, patients would come back if they felt one was interested, they would not come back if it was a machine or they had to answer a questionnaire. At St. Bartholomew's there was a 99 per cent. follow-up, which was much higher than the British Empire Cancer Campaign, but it needed somebody who was very good at organizing it and he or she was a valuable member of the team.

He had for many years inveighed against too early specialization and he was quite sure in talking about a good radiotherapist that the only good radiotherapist was the one who started as a clinician. Too many men were rushing into a speciality too young, they had not the same leisurely grounding in general medicine and surgery which some of them had had in the past. They became radiotherapists, they had their own departments, but unless they had had a proper clinical training there was a danger. Personally he believed the right method was to assess all cases by a combined consultation between the radiotherapist and the surgeon. The two together would probably come to a better overall assessment and better standard of results than either working by themselves.

The CHAIRMAN (Mr. W. A. Mill) said that there had been a good discussion and he would ask Mr. Howie if he would like to reply. He would thank him particularly for coming from Glasgow because he was not in fact a member of the Section and it was very kind of him to have undertaken the long journey to give this paper.

MR. HOWIE, in reply, thanked the members for the interest taken in his paper. One had to take one side or the other and he came down very strongly in favour of operation. He must cry "Kamerad", however, since he thought that most of the speakers had been against pure surgery as opposed to radiation. He was glad to hear that Sir Victor Negus agreed with him about tracheotomy in cases of bilateral cord paralysis; to his mind a good tracheotomy tube with a flap valve had solved most problems.

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Sir Victor had obviously changed his views and probably he would change his own if teleradium began to show better results than surgery.

He was glad that Mr. McGuckin agreed that the Nielsen-Strandberg table was the best and that keratosis might become malignant.

Mr. Bateman had taken a new line again on the treatment of papillomata by laryngofissure. He felt that this was rather a dangerous procedure because of implantation, causing a spread of the lesion subglottically and into the trachea. He had seen the lesion surrounding a tracheotomy tube introduced to relieve obstruction from papillomatosis of the cords. He was glad to find Mr. Bateman as one of the supporters of operation for early cordal cancer, thinking that radiation was not the whole answer.

Dr. Simson Hall had obviously changed his views since his paper in 1953, putting great hopes on the results of the linear accelerator. He agreed that the question of *uncomfortable throat* after teleradiation mentioned by Mr. Macbeth was not stressed enough. Some people were very distressed from post-radiation discomfort and it had been interesting to have the views of a patient who had undergone both radiation and operative treatment; when questioned, said he would six times rather have the operation than the discomfort following the radiation.

Mr. Owen's observations on the question of restricted laryngeal mobility before operation and the poor results because of glandular recurrence was borne out by most laryngologists. Mr. Golding-Wood had called for an improvement in laryngoscopy, he agreed that the use of a telescope with a right-angled view was a good advance. It was very difficult to see the undersurface of the cord. What was under a lesion on the cord edge might influence the treatment.

Mr. Capps had spoken about tomography. He had not had much experience of this but it should certainly not be neglected. Mr. Capps also stressed the importance of a good follow-up. He had found that during the first year this was easy but later it was more difficult. He had had experience of apparent cures after radiation coming back, three or four years later, with a recurrence.

He agreed that combined consultation was probably the solution to the problem; he had seen it in Sweden and felt that was an advance on anything seen in this country.

Discussion on the Changing Aspect of Nasal Disease

THE opening paper by Mr. J. H. Otty will be found on p. 257.

MR. F. C. W. CAPPS: I think we must accept the fact that the essential anatomy and physiology of the nose has changed not at all since the days of the fathers of our speciality. Perhaps, however, trial and error have led us to a greater respect for the anatomy and the researches of men like Proetz and Negus have given us a clearer understanding of the physiology. We must be careful not to throw away the benefits of this experience by immunity from risk conferred on surgical procedures by the antibiotics and sulphonamides or on the medical side by what one might term the commercialization of intra-nasal medication.

Certain specific diseases have certainly almost disappeared from our clinics; one might mention diphtheria, lupus, and congenital and acquired syphilis,

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and the occasional cases therefore may be the more easily missed. One can foresee that there may be danger later if the general public should get slack about this matter of diphtheria immunization. The campaign to date has been wonderful and the results outstanding, but if a sense of false security is generated, people may fail to keep it up, and as we have seen in smallpox now that vaccination is no longer compulsory, epidemics may suddenly occur when a certain percentage of the population become vulnerable.

Probably a great advance has been the early treatment and correction of disability as a result of infant welfare and school clinics. The chronic rhinitis and sore excoriated nares of children can now rarely persist untreated as they used to do. Discussion and long-term consideration of the tonsil and adenoid problem has led to a more balanced opinion on the question of operative interference.

The disappearance of atrophic rhinitis, still common in my student days, may well be due to protection of the ciliated epithelium from untreated infection in the young and may also have something to do with the concurrent disappearance of the chlorotic anæmia of young women. Improved hygiene and an all-round improvement in diet and nutrition have probably played a big part. The abolition of the spokeshave so beloved of some of our general surgical colleagues in the past has certainly helped.

On the other hand crowded conditions of travel and amusement, the spread of central heating and the rate at which we live may well have presented us with new problems to solve.

I certainly think that vasomotor conditions have increased in incidence and with them an increase in the polyposis of non-infective origin. I don't think we missed them or labelled them otherwise in the past. In this respect I would suggest one or two possibilities.

I agree with Mr. Otty when he says he has not had very satisfactory experience with testing for the various sensitivities and subsequent desensitization. It is my experience that you get them desensitized for one protein, only to have it replaced by another, and I feel that this is not the answer to the problem, though elucidation of the proteins responsible and protection from them, may have some value.

Are most of us on the whole more uncomfortable on the tarred roads of today than ever we were when coated with the fine dust of the old roadways?

Spend a short holiday in the mountains and how horribly the exhaust and petrol fumes offend the nostril when you return to the modern city.

The fantastic rise in the carbon monoxide content of the air in a traffic block must surely be harmful.

And what of the speeds at which we travel through the air today. Have they progressed faster than we can adapt our airways to them?

Is not anterior œdema and obstruction of the nose much more common today, and how often do we see the enlarged posterior ends of the inferior turbinals which were frequently diagnosed and operated upon in my early days.

I wonder whether our colleagues in country areas have different experience in these matters from those of us who work in cities.

The antibiotics and sulphonamides have certainly rendered much nasal surgery obsolete, particularly the ghastly and frequently hopeless operation for

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osteomyelitis in the past. They have, however, presented us with greater problems for skilled diagnosis in the occasional case of masked disease and their indiscriminate use in trivial conditions where old fashioned first principles were so often successful in the past, is greatly to be deplored.

Were virus diseases an unknown menace in the past or have they come into their own now that bacterial infections are subject to elimination by so many specific antidotes?

Finally, I would suspect that the physiological collunarium alkalinus seen on some 50 per cent. of our out-patient treatment sheets in the past might well find a greater place on them today.

MR. J. B. M. GREEN spoke about Mr. Capp's suggestion that people who lived in town showed an increase in allergic conditions due to petrol fumes. He pointed out that workers in rural areas spent a lot of time driving tractors as well as motor-cars, and were probably no less exposed to petrol fumes. It was his experience that members of a farming community suffered a good deal from nasal polypi, and enlargement of the posterior ends of the inferior turbinates was not uncommon.

People living by the sea often suffered from nasal allergy.

He would like to ask about repeated antral wash-outs. He found that he was doing far fewer than he used to do in cases of maxillary sinusitis. Recently he had asked a number of patients who had had repeated antral wash-outs before, whether they would prefer repeated injections. He found that they preferred repeated penicillin injections, which so far as he could see, was just as effective. He would like to know what other people thought.

MR. T. J. WILMOT (Northern Ireland) said that the number of cases of vasorhinitis with or without nasal polypi in his rural area was very large. They formed more than 50 per cent. of all patients with nasal symptoms. As Mr. Green had said the presence of enlarged posterior ends of the inferior turbinates was quite common and surgical reduction was occasionally necessary and often very beneficial.

He still saw atrophic rhinitis although it was less common.

He thought that desensitization of the allergic nose should not be dismissed lightly. A properly controlled course of injections with both the patient and the general practitioner thoroughly conversant with the principles underlying the course, was often successful. He had many grateful patients as a result of these courses.

Mr. Otty had mentioned the question of bronchiectasis and sinus suppuration in children. Liaison with the thoracic surgeon was very important in these cases as many did not clear up until the affected lung had been dealt with. One could go on washing out the antra for weeks sometimes without clearing the infection until the affected lung had been dealt with. It was important also that postural lung drainage was continued during sinus treatment. With all bronchiectactic children there must be close liaison between the physician, the thoracic surgeon, and the ear, nose and throat surgeon.

MR. I. SIMSON HALL said that having a desire to obtain exact information regarding the efficacy, etc., of antibiotics in sinusitis he carried out investigations

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in children and adults. At a proper time prior to operation they were given a large dose of antibiotic, usually penicillin, up to 2 m. units, and then samples were taken of the antral contents to try to discover whether or not penicillin was present. It was found that in a child up to 12 years of age it was possible to get a bacteriostatic level with administration of penicillin prior to operation which tended to show that in children it was of some use to try and cure an acute antral suppuration with systemic penicillin, whereas in the adult, no matter how big the dose, it was never found possible to obtain a bacteriostatic level. This tended to persuade him that systemic penicillin in acute sinusitis in the adult was of no value except for such circulating toxins as could be reached. By direct injection of antibiotic into the sinus he had halved the number of punctures he was called upon to do and a number of operations were avoided.

Mr. Wilmot showed how necessary it was to treat the lung condition before the sinus would clear up. An experience of his own convinced him that was so, but the opposite might be true. He was asked by a thoracic surgeon to clear up an antral suppuration in a patient prior to lung resection. He did so and sent the man away to convalesce, when he came back the bronchiectasis had disappeared, so that it was apparently a two-way traffic.

MR. A. G. GIBB congratulated Mr. Otty on his remarks. Having been a house-surgeon with Mr. Otty some years ago it was interesting to compare his treatment then and now. Mr. Otty considered his methods conservative in the early '40s, but there seemed little doubt that recent trends were towards further conservatism.

Mr. Otty had early pointed out to him the dangers of ill-advised or ill-performed nasal operations. He, himself, felt that the question which everyone should put to himself before embarking on a nasal operation should *not* be "Is the pathology sufficiently gross to merit operation?" but rather "Can I, by operation, cure this nasal condition?" There was a difference; and this could be seen particularly in catarrhal noses in children, where, although the antra might show gross pathological change, the results of careful operation were poor, and the nose tended to remain infected after operation.

The present view in allergy seemed to lay emphasis on the patient's history. It was unusual to find any important allergen by skin-testing which could not be discovered by careful history taking. Antihistamines, if used, should not be stopped suddenly. There was evidence to suggest that this led to a rebound allergic state. They should therefore be discontinued gradually.

MR. R. L. FLETT wished to draw attention to the increasing acrimony between the Casualty Department and the Ear, Nose and Throat Department from the point of view of admitting cases of epistaxis. If we admitted all the cases that were sent up, the Department would be practically full of these. Most of them are patients over middle age, and he supposed that it was something to do with the increased average age of the population. He would like to know how one could deal with this problem.

MR. H. S. KANDER drew attention to the large amount of proprietary decongestant drugs purchased by the public. He had seen several patients who

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bought one or more bottles a week for long periods and whose noses were in a correspondingly dreadful state. He asked if nothing could be done to make purchase dependant on prescription.

MR. I. SIMSON HALL said that the question of having certain drugs banned had been discussed several times by the Council of the British Association of Otolaryngologists but it was found that without careful statistical analysis it was impossible to do anything in the case of a particular drug, and the Association did not have the organization or the resources to carry out extensive clinical investigations of this kind. They could only draw the attention of its members to certain preparations which have been found, in their opinion, to have a deleterious effect upon the nasal mucous membrane and to request the members to do their best to discourage the use of such drugs.

MR. J. W. S. LINDAHL said that he would like to draw attention to one small group of the Allergy Section that one could call infective allergy. The symptoms of allergy were present, but the nasal mucosa did not look typical and there might be a little pus about. The sinuses were usually clear. An organism could sometimes be isolated from which a bacteriologist could produce a vaccine and in a proportion of cases a course of this was definitely helpful. If they benefited from this treatment the result appeared to be lasting.

MR. E. G. COLLINS said that he found little to criticize in this paper because he was in agreement with so much of it. He would, however, like to stress the point which Mr. Otty had mentioned about the psychological disturbance which is present in many of the cases of vasomotor and allergic rhinitis. It was necessary to realize that the local manifestation in these conditions was only part of a general upset of the autonomic nervous system which was often influenced by psychogenic factors. If this was kept in mind the results from treatment would be improved. One of our difficulties was the time factor, since in a busy out-patient department the rhinologist was often overwhelmed by the number of patients, and, as a result could not devote as much time as he would like to enquiring into family and home circumstances.

DR. E. P. BLASHKI, M.C. (Sidney, N.S. Wales) said that in Australia their problems were much the same as in this country. He practised in a city and saw many children who came in from remote parts of the country. They got a review of patients whose circumstances were quite different from those in the United Kingdom where rural patients were not far from city conditions. Vasomotor cases in the city were often advised to go to the country, yet the country ones came down with the same kind of hypertrophy, the same kind of polypi as the city ones except that they were always worse. The largest hypertrophies and polyps came from the back country.

He had had experience of working with allergies and if one found a true pollen sensitivity one could get somewhere with the specific de-sensitization but it had been said that one could get results with extract of anything one liked, whether a vaccine or an inhalant so long as it was used with care. There was one other point, the reference to the use of simple antrostomy. It was

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referred to as drainage; he never regarded it as drainage but as ventilation. It played a large part in helping patients to avoid clinical recurrent sinusitis and in enabling them to recover quickly from attacks which they got, especially the hypertrophic or vasomotor type of case. It was an operation which did not have full credit from a ventilation point of view. He was not in the habit of doing lavage afterwards, nor had he instructed a patient to do so, but the operation did deserve a wider and more favourable publicity.

MR. OTTY, in reply, said that Mr. Green asked about the repeated antrum lavage. He had had an antral infection himself and it did not clear up until after the fourteenth wash-out; he had also had penicillin injections, neither were pleasant but he still thought he would persevere with lavage. He was interested in Dr. Simson Hall's work on children, the possibility of getting a bactericidal level of penicillin in the antral contents, was something which one should think about and try out. With regard to desensitization, he had waves of enthusiasm and waves of despair and it seemed that most people did. He was not sure that there was not something in what Mr. Allinson said about nose blowing but he did not think he could cure all his patients by teaching them to blow their noses gently. He stressed the importance of non-violent nose blowing and of clearing the nose as nature intended by sniffing; to blow the nose was going against the stream and it seemed to him quite wrong.

He was rather surprised that more people had not spoken about the horrors of intra-nasal medication. It was partly on that score with a view to provoking discussion that he was asked to open the discussion. However, there were real dangers and largely with one specific substance. He would agree with regard to the psychological approach, but if anything had to be done, the rhinologist should try it first.

Discussion on Secretory Otitis Media

THE opening paper by Mr. G. H. Bateman will be found on p. 261.

MR. R. J. CANN, in opening the discussion, congratulated Mr. Bateman on his very complete survey of this condition and found himself largely in agreement. He felt there were a number of conditions and that they might be considered in two groups, as to whether the eustachian tube was or was not patent. He was especially interested in the group with a normal eustachian tube and thought that such cases were commoner than some might think and could be discovered if more carefully looked for. The condition should be suspected in any unexplained instance of conductive deafness. The changes in appearance of the tympanic membrane might be minimal and only observed when sought by the help of a Siegel speculum and its magnification. Sometimes the tympanic membrane gave the impression of elasticity when its mobility was tested. In most instances the colour of the fluid in the tympanum produced a similar colour change in the drum but he believed that colourless fluid gave the drum a dark appearance, possibly by the absorbing of light, so that the drum and deep meatus seemed inadequately illuminated.

He had nothing to offer as an explanation of this condition. In the group he had especially described he did not feel allergy played a part since it was rare even to obtain a history of allergy in such patients.

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In recalling the history of several patients he made the observations that the paracentesis and removal of fluid by suction or pressure could be carried out repeatedly without harm to hearing, that fluid in the more concentrated form of "jelly" could be removed after a year or more of continuing deafness and that when the tympanum was full of fluid one must assume that the middle-ear cleft as a whole was full.

AIR VICE-MARSHAL E. D. D. DICKSON, C.B., C.B.E., endorsed the congratulations to Mr. Bateman on his admirable paper. He would also like to quote three cases of his own which closely resembled those of Mr. Bateman's. The appearance of the tympanic membranes was dark blue which on aspiration or paracentesis proved to be a syrupy dark stained fluid. Deafness was a prominent symptom of all three. Aspiration or paracentesis was repeated on several occasions, at intervals, with regular recurrence of the secretion. Immediately after aspiration the tympanic membrane assumed a pink colour, only to revert back to its dark blue appearance after a day or so. On examination microscopically the fluid contained on one occasion cholesterol crystals (in one case only) a few red cells and one or two polymorphs; culture was negative.

One of the cases which kept on recurring in spite of repeated evacuation of the viscid contents of the middle ear and which also showed haziness of the mastoid cells—he was tempted to explore. Middle ear, antrum and mastoid cells were filled with a dark stained viscid fluid. Despite mastoidectomy recurrence took place at a later date.

Was this a stage further on the condition Mr. Bateman described or was the presence of cholesterol crystals a precursor of cholesterosis?

As regards audiometry not giving any information because it showed no alteration at the lower end of the curve but only at the top end, the reason is probably because higher frequencies are more easily attenuated than lower ones by the presence of fluid in the middle ear. He suggested that the presence of fluid in the middle ear may be indicated by a negative Rinne and a loss at the higher frequencies.

MR. P. G. SCOTT asked whether Mr. Cann had any experience of radiotherapy in these cases. Had any other members had any experience of its value in these troublesome recurrent cases?

MR. CANN said that he had used radiotherapy for obstruction at the nasopharyngeal opening, but he had not used it for fluid in the middle ear.

MR. F. MCGUCKIN said that in many adult cases tubal obstruction was clearly a factor at the onset, but the restoration of tubal competence might not produce any improvement. Conversely, if there was such a thing as secretory otitis in children one might be sure that persistence of fluid meant that tubal obstruction had not been eliminated.

MR. E. P. BLASHKI said that the paper did not mention one small point which occurred to him and that was that one became suspicious of a diagnosis when there was incomplete recovery of hearing after inflation, it made one look further for the cause. The other point was one personally communicated by

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Professor Ruttin that in cases of secretory otitis to advise an incision in the area of the light reflex. Myringotomy in this area allowed the fluid to escape before it closed because it did not heal so quickly as when made in the usual site.

MR. J. W. S. LINDAHL asked a question with regard to the ætiology of the fluid in the middle ear. He could only remember one case which suppurated and this occurred after the fluid had been absorbed. Had Mr. Bateman any information about that and had any other member found the same thing, i.e. suppuration occurring in an ear full of fluid. It would seem that the fluid was a suitable culture medium which made the rarity of suppuration rather curious.

MR. IAN ROBIN said he was surprised when Mr. Bateman said that most of his patients had stuffy noses, as in his opinion many had no symptoms in the nose at all. Some patients had distortion of hearing, due to high tone loss. He felt that antihistamines by mouth were well worth trying.

MR. A. G. GIBB said that he wished to quote a case very similar to Mr. Cann's. A middle-aged lady, who had previously been a nurse, came to see him one day because of sudden deafness, without any history of upper respiratory infection. Both tympanic membranes showed the typical honey colour, and it was obvious that the middle ears were filled with fluid. He punctured the ear-drum on one side, and sucked out a moderate amount of fluid. The condition cleared up and there was no recurrence.

The other drum was punctured, and suction *vîa* a Siegle's speculum started: there seemed no end to the amount of fluid which could be removed. After sucking for a considerable time, it was obvious that the fluid could not be coming from the middle ear only, and X-ray of mastoid showed a highly cellular process with effusion into the cells. The appearances persisted, and he considered opening the mastoid, but after carrying out a Caldwell-Luc operation on an infected antrum on the same side the ear condition cleared up. The patient moved to the south shortly afterwards, but there had been no recurrence to his knowledge.

MR. MAXWELL ELLIS agreed that the bulk of cases which one saw were unassociated with obvious infection or nasal obstruction; the same remark applied to many cases of nasal allergy which might come on late in life without any previous evidence of an allergic condition or without any evidence of any other allergic condition when one saw them. The allergist spoke of "shock tissues" and the nasal mucosa was obviously a shock tissue. The mucosa of the eustachian tube was in continuity with it and similar to it in character and he thought it was a shock tissue as well, and the reason for the secretory condition was some form of allergic change suddenly occurring in this tissue. The fundamental cause of allergy was unknown, but changes were produced by climatic conditions, cold, damp and so on, and the case which Mr. Cann quoted of the girl who went to Johannesburg and had no trouble and came back to an atmosphere which was damp and humid and the trouble recurred, was possibly the shock tissue showing its reaction to these conditions. He firmly believed that in the larger group of cases it was some form of allergic condition occurring in the shock tissue of the mucosa of the middle-ear cleft.

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MR. F. C. W. CAPPS thought Mr. Bateman had reviewed this situation very thoroughly; it was not a new one to many of them. One was only ashamed that one had not made a more careful observation of them as Mr. Bateman had done. He always found that a Siegel's speculum was a very clumsy thing in the ear and it could be very uncomfortable for the patient. He suggested the use of the rubber end of an ordinary Politzer's bag which he used for many years when he did the Gellé test. It was quite the easiest way to apply pressure to the external meatus, it was always there, the nozzle could be boiled, it had a long tube and was not so tiring for the otologist.

MR. MYLES FORMBY congratulated Mr. Bateman and Mr. Cann on their thorough accounts of this condition. He would still put in a plea that matters should not be complicated by bringing in too many aspects of this condition. He was sure Mr. Cann was right that in discussing secretory otitis media one should keep to what he described as the idiopathic condition which Mr. Bateman's group IV covered. If one talked of the condition in association with obvious disease in the post-nasal space, such as children's tonsil and adenoid infection, suppurative sinusitis and infections of that kind, it might be helpful at this meeting but in a year or two it would lead to confusion. They should be careful to keep to the one condition where the ætiology was obscure and everything else, apart from the fluid in the middle ear, apparently quite normal.

With regard to the incision of the drum and sucking it out, he knew nothing about the characteristics of the fluid either from the organic chemistry or biochemical aspect. On the odd occasion on which one has aspirated fluid from the drum with the idea of having it examined, particularly if it was slightly straw coloured, the rapidity with which it set solidly in the test tube was quite remarkable. It happened in a matter of seconds, and it would gum up an incision in the tympanic membrane in a very short time.

MR. GILROY GLASS said that he had often wondered whether secretory otitis media was not analogous to the condition sometimes seen in the antrum when it was found full of straw-coloured fluid on puncture. If so, the key to the one might well be the key to the other.

MR. BATEMAN, in reply, said that he was pleased that there had been a large number of discussers of this paper and he was grateful to Mr. Cann for his erudite comments and making what he was trying to say himself much more clear. He stressed the mobility of the ear drum as being a diagnostic factor. He tried to mention that and described it by saying that the appearance was that the ear drum was tied to the inner wall of the inner ear; it could be stretched a little by suction or pushed in by pressure but it sprang back to its previous position much more rapidly than a normal drum. This was a great help in diagnosis for it was an observation which could be made, and which could be detected, reasonably easily.

In reply to Mr. Scott's question about radiotherapy, he did not think radiotherapy had any influence at all on the stuffy nose. Adenoids and post-nasal tumours were quite different but the stuffy nose and Mr. Cann's idiopathic group were very much the same although in the stuffy nose group there

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were cases of nasal polypi, sinusitis and so on, which were only a relatively small proportion. Most of his own cases had a history of an upper respiratory infection and a persistent stuffiness in the nose around the time of the onset of the ear disorder. All knew that patients' sensitivity to stuffy noses varied enormously, some people with a stuffy nose made no comment, others, with a perfect airway, said that they were permanently bothered with their noses, he could not divide them into sensitive and insensitive but he agreed that there was a group where the nose was not complained of at all. That meant that a case such as he had mentioned, the old man with a lymphosarcoma of his naso-pharynx who came because he was deaf and made no complaint whatever about his nose, had to be thoroughly investigated. The fact that it was not mentioned did not mean that it was not an important factor.

For the case of adenoids which failed to get better after the best possible surgical job had been done—they were all familiar with the rare case of the diffuse lymphatic hypertrophy of the post-nasal wall—the only other way of helping them was by radiotherapy. If a patient with a secretory otitis media was inflated the hearing would be improved for a time, but not to normal, and it frequently relapsed, but if one relied on failure to cure by inflation many cases would be missed. He preferred to make the incision in the back part of the drum because it was easier to get at. The incision should be made so that the fluid could be displaced by air and as soon as one had completed displacing the fluid by air the sooner it healed the better. He did not like sending a patient home while he had a hole in his ear drum. None of these cases suppurated, as far as he knew, it was not an appreciable risk of myringotomy.

Mr. Bateman agreed with Mr. Lindahl that it was curious that they did not suppurate.

Mr. Capps's suggestion of the Politzer end was a good one, but blowing with a Siegle speculum enabled one to watch the ear during the process and this was useful.

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