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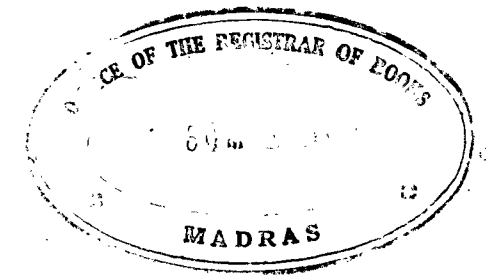


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Vol. II

MARCH 1950

No. 1

Opening address by His Excellency Sir Maharaj Singh at the Second Annual Conference of the Association of Otolaryngologists of India on December 19, 1949.

Hon'ble Minister for Health, Dr. Amesur, Dr. Cooper, Ladies and Gentlemen,

I thank your Association for kindly inviting me to open your second Conference. After your energetic and persuasive Treasurer, Dr. Cooper, approached me, I gladly consented, for it is the duty and privilege of Governors to interest themselves in all good causes. Otolaryngologists is by no means an easy word to pronounce. I am not sure, however, whether your designation should not bear more properly an even more difficult name, *viz.*, Otorhinolaryngologists, for you are concerned with diseases of the nose as well as of the ear and throat.

2. I suppose that there is hardly anyone in India, or indeed in the wide world, who has not suffered from occasional trouble in connection with the nose or ear or throat. Colds and pharyngitis are almost endemic, and though throughout my life I personally have been singularly free from nose or ear trouble, I cannot claim immunity from periodical discomfort in the throat. Fortunately, however, my medical needs in Bombay are attended to by two very efficient and painstaking medical officers. One of them Dr. Joshipura, is attached to Government House, while Dr. S. B. Cooper who is very wellknown in this Province, is my honorary Surgeon. It

is strange that so far no really effective remedy has been found for the prevention of what is known as the common cold or for that its immediate cure. Medical science, however has been making rapid progress and diseases and complaints which were at one time considered serious and even dangerous—for instance diphtheria—have now been brought under control while the spread of streptococcal infection, which at one time eluded physicians, is now successfully negotiated by penicillin and sulpha drugs.

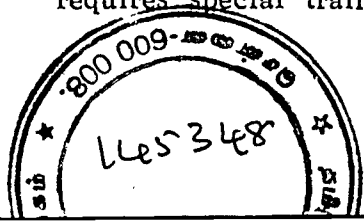
(3) Yours is a very interesting and beneficent profession and is all the more so as the three organs with which you are concerned are interconnected. On the surgical side great delicacy and accuracy are necessary. Operations of the larynx, for instance, require considerable skill. Here too there has been appreciable advance. Tonsils were formally guillotined, whereas now they are enucleated. Sinusitis, deviated septum and plastic surgery of the nose also provide interesting and delicate subjects. The public owe a deep gratitude to specialists, such as you are, for achieving in not a few cases excellent results. But much remains to be done and a wide field is opened to you. There are, for example, in our country many unfortunate victims of deafness and deaf mutism, which, along with blindness, are a source of affliction to thousands. I feel that you and your Association can be of considerable help to them.

(4) Specialisation has its advantages and can be compared to a division of labour in Industry. Concentration on one aspect or branch of a science undoubtedly leads to the mastering of its minutiae and prevents diffusion of effort. Intensive research is fostered by specialisation. Indeed I am glad to know that this is one of your objects and that you hold periodical seminars where papers written by your members are discussed. Medicine has now reached a point at which it is not possible for one individual to learn and apply all available knowledge, the rapidity of the growth of which requires special training for practice in these fields. The

branch of medicine, which is your speciality, in spite of its being confined to a small part of the human body, has developed to such an extent as to need exclusive study. The fact that you deal with the apparatus of speech and the organs connected with the important sense of hearing inevitably and legitimately raises your branch of medical science to a high level. An All-India Association such as yours and periodical conferences held by it can contribute to advances in knowledge. Such meetings also afford opportunities for exchange of ideas and establishment of contacts thus promoting understanding among workers.

(5) At the same time, it seems to me that overspecialisation has its disadvantages and even risks. It leads to some extent to lack of balance and proportion and inadequate integration with interconnected problems and branches of learning. There is danger that the specialist may develop a one-track mind and thereby become indifferent or even blind to the intimate interdependence of the different parts of the body. Such disadvantages can be avoided or atleast minimised by making the process of training for the specialist based on a firm foundation of knowledge and medicine as a whole. It may be useful, therefore, if during the first years after graduation facilities are provided for all doctors—irrespective of whether they will take up general practice or specialise, to acquire further knowledge and practical experience in different branches of medicine. They could then be general physicians or surgeons in addition to being experts in their own special line. A tuberculosis specialist, for instance, primarily be a general physician apart from having a thorough knowledge of his own subject.

(6) A continuous supervision of the individual from the pre-natal stage through infancy, childhood, adolescence, adult life and old age both from the point of view of preventive care and of proper remedial treatment when such care fails is becoming recognised as a fundamental function of the State. Physicians and surgeons can also play a useful part in educating



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public opinion in hygienic ways of living through giving, for instance, lecturers with pictorial aids and organising a periodical health exhibition. May I here make a suggestion for your consideration? It is that your future conferences should be accompanied by a health exhibition which I feel confident will be of educational value to the layman.

(7) In conclusion I should like to congratulate you on having secured the Honourable Dr. Gilder, Minister for Health, in the Government of Bombay for inauguration of your conference. He is not only a capable and experienced administrator but great physician who is keenly interested in all problems of health. Your President Dr. Amesur is a wellknown and respected specialist of the city of Bombay. You are fortunate in having in him as your President. In opening your Conference I wish to your Association, its office-bearers and members all success and hope that you will continue your good work for the relief of suffering and for the promotion of the health of our people. I shall not say good-bye as I shall have the pleasure of meeting you at an "At Home" at Government House this afternoon.

JAI HIND.

Presidential Address

BY

Dr. C. A. AMESUR, M.S. (Lond.)

*Delivered on the occasion of the second annual Conference of
The Association of Otolaryngologists of India
held at Bombay on 19th December, 1949.*

Your Excellency, Hon'ble Dr. Gilder, Hon'ble Dr. Jivraj Mehta, Ladies and gentlemen.

The President and the members of the Association of Otolaryngologists of India are very grateful to your Excellency to have found some time during this Xmas week to come and open this Conference. We are delighted that both Royalty and Provincial Governors are taking such keen interest in this speciality, for our London E. N. T. Congress was opened by H. R. H. the Duchess of Kent last July and H. E. the Maharaja of Bhavnagar opened our Conference last Xmas at Madras. However, we find that Your Excellency has been more than generous, in not only opening our Conference this day but giving us a reception at Government House this evening. I know how delighted were the delegates at the London Congress on the occasions of the Receptions given by the Right Hon'ble A. Bevan on behalf of H. M. Government, the London Country Council, and other bodies. So I am sure that our delegates too, will carry very pleasant memories of your opening this Conference and following it with a splendid At-Home. Social acts such as these, raise the speciality in the eyes of our medical fraternity, who otherwise give us a step-brotherly treatment, by calling it a minor subject.

We are also grateful to Hon'ble Dr. Gilder, Minister for Public Health, for inaugurating the Conference. He has taken a very keen interest in the advancement of medical science by introducing several reforms at the various hospitals in this province during the period of the two Congress Governments. The financial stringencies however have not made it possible for the hospitals to be equipped with sufficient modern instruments and the present revaluation of the Rupee has made matters worse temporarily.

We thank our old friend, philosopher and guide Hon'ble Dr. Jivraj Mehta, who for over two decades has guided us in medical matters. He brought about the much wanted reforms of separating the E. N. T. Department from the General Surgery and handing over to our late organizing Secretary Dr. Homi Gandhi, when he was the Dean at K. E. M. Hospital. It is very kind of him to have consented to open a useful reference Library in memory of Dr. Homi Gandhi at the Association's Headquarters.

The International Congress of Otolaryngology, of which we are members, was represented by Mr. F. C. W. Copps at the Brussels meeting, convened under the auspices of the United Nations Educational Scientific and Cultural Organization (UNESCO) and World Health Organization (WHO) in April, 1949. There it was decided to form a Permanent Council for the Co-ordination of International Congresses of Medical Sciences. International Committee, where Dr. (Miss) Leelavati and I represented you, has ratified this decision. This means that the International Congress, where about one hundred and fifty scientific papers were read, will get financial assistance from UNESCO and WHO to publish them. We also decided that International Congress of Otolaryngology should have a permanent location for the Central Offices to which the various national bodies like ourselves should send their subscription. A committee has been appointed consisting of the present British Executive Committee and the Dutch Executive Committee to go into the details of the rules and regulations. It was also decided to hold the fifth International Congress at Amsterdam in 1953. You are requested to deliberate and suggest changes in the draft rules, for there is a great difference of opinion between the delegates from the New and the Old World on this subject.

Coming to the Home-front, I find that our socialist state is heading to be a Welfare State; but for the financial stringencies, certain postponements have become necessary. It is for this reason that, I bring this point to the notice of our Central and Provincial Governments, so that they may come to the rescue

of the public. The first is that millions of our children are suffering from discharging ears. The fault lies at the doors of the local bodies, who do not provide the children with Vit. "A" in schools. If they were to get this, I am almost sure that 75% of this group of children will not get these diseases of the upper respiratory tracts and middle ear. The remaining quarter are due to the presence of adenoids. Ladies and gentlemen, you see thousands of these children in the streets, who show "adenoid face" but dare not tell the parents about this, for it will amount to advertisement. Therefore, I suggest that in the Welfare State, the social workers be employed, more and more on full payment basis. These workers will raise the standard of our health. Besides, the school doctor should be given a good grounding in the early diagnosis and treatment of this condition; further groups of schools should be visited by E.N.T. Specialists in an honorary capacity.

Now I come to the most dreaded symptom *viz* deafness. All of us have to get physiological deafness sooner or later. But amelioration of hereditary deafness seen between the ages of 16 and 30 *viz*, otosclerosis, should be a burden on the State, who should come forward and open Deaf Clinics in all the taluka towns. These should be equipped with an audiometer, worked by a fully trained, full-time mechanic. With his report the patient should see the E.N.T. Surgeon in O.P.D. of the local hospital, who is to sort out otosclerotics, in this group, and send them to provincial hospitals, for fenestration, if necessary. For others, he should prescribe artificial aids to hearing. As these aids are very expensive, the government should come forward and subsidise these, in the poorer cases, through the social worker.

Colleagues, I know how people were shunning during the first and second decade of the present century, the wearing of glasses. Now it is the fashion. Yet people look aghast, if a deaf person has an artificial aid to hearing. Therefore, I suggest the formation of Deaf Clubs, to be subsidized by local bodies with a small staff consisting of a Lip-reading expert, an audiometer mechanic, a nurse and a Social worker, supervised by a local E. N. T. Surgeon. These deaf clubs

in the beginning should be attached to the General Provincial and taluka hospitals. When sufficient members are available, then one should form special centres, away from the hospitals.

Another condition very common here is the growing pains of Rheumatism which you treat or operate on tonsils: Now thanks to the researches in U.S.A. they have found cortisone (Compound E). This is a luxury drug, for each injection costs at present about Rs. 700. We are grateful to President Truman for suggesting ways and means to internationalise the growing of *Strophanthus Saxmentosus* plants in North Africa for the purpose of getting cheaply this compound E, we call cortisone. We are grateful to the Nehru Govt. who inspite of the revaluation of our rupee, are still continuing with the Penicillin-Sulpha factory; and request them to bear this cortisone in mind as well. However, it pains us to read that they are cutting down the grants of the post-graduate central institutes and Medical research centers. We do hope that our magnates and workers will come to the rescue and produce more goods, not only for home consumption, but for export as well; so tying us over these grant cuts.

Our young speciality is making great strides, but the people who get these special diplomas are not getting sufficient encouragement by being attached to various hospitals, where the work is still being done by general surgeons.

In E. N. T. Departments of general provincial hospitals where teaching is done, the number of specialists is too short for the work. I therefore, suggest that in these teaching hospitals with 300 beds or less, one E. N. T. unit should exist, but if the beds are more two E. N. T. Units be created. In smaller non-teaching hospitals in cities and towns, an E. N. T. Specialist be attached so as to improve the health of each individual patient by co-ordination of the various units. Besides in these hospitals, where patients are referred by the medical men, a short-hand typist be employed in each department to reply to these doctors, thus not only reducing the number of old patients and medicine bills of the hospitals,

but increasing the knowledge of the general practitioner as well.

Regarding research, one says that the Honorary staff has hardly any time left after teaching the under and post-graduate students. I suggest that at least one full time paid research unit in E. N. T. diseases be created in each provincial capital. This should co-ordinate with the head institution to be located at New Delhi, whose grants because of revaluation are being cut temporarily.

This brings me face to face with the facts whether the health grants should be cut in Provincial or Central Budgets. Inspite of the present purchasing power of the rupee, we think that it is the duty of the State to see that the health of the nation is "A I". But alas we find that the Government has not yet provided, even the basic medical needs of nation, as provided in the Bhore report published some years back. Therefore I suggest that the local authorities be subsidized, to open more hospital beds with adequate nursing and hospital staff and equip the hospitals with up to-date instruments and appliances. Finally, till such time the taluka deaf clinic units are created, for financial reasons, I suggest visiting E. N. T. units as a measure to keep the expenses down.

In free socialist India we find, that medical units attached to the defence services have no plastic surgeons. It is a pity for in modern wars, people get their features disfigured in a certain number of cases. Therefore I suggest that an E. N. T. Surgeon, should also be a plastic surgeon for the face.

Finally we should either co-operate with insurance companies, or form a mutual medical protection society of our own, to look after and protect the medical men from the whims of the public, prosecuting them on flimsy grounds.

Ladies and gentlemen I thank you very sincerely for electing me your President for this conference. Now I earnestly solicit your co-operation in not only discussing the above points, but also terminating our labours with success both in the scientific and social fields.

Nasal Asthma

BY

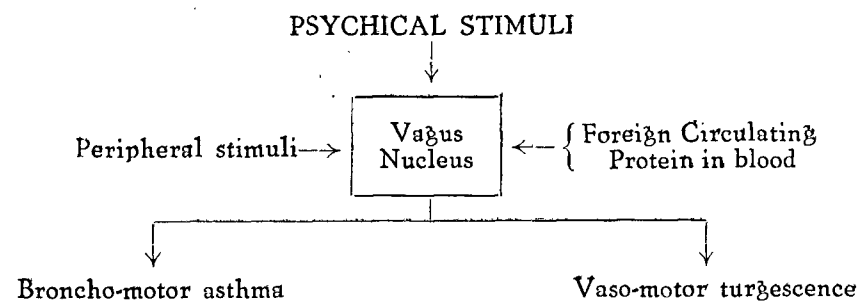
C. A. AMESUR, M.S. (Lond.)

Ear, Nose and Throat Surgeon, J. J. Hospital, Bombay.

Asthma was first identified as a separate disease in the seventeenth century by Van Helmont, but its nasal factor was shown by Herk in 1844. The credit goes to the present century for in 1900 Richet coined the term anaphylaxis to mean its antithesis to prophylaxis. In 1906 Von Pirquet used the term "allergy" to include anaphylaxis.

Dixon in 1907 after stimulating the vagus going to the heart and preparing extracts from such a heart, found it to be antagonistic to the action of atropine. This was confirmed by Dale in 1932. Best and McHenry have shown that we possess a ferment called histaminase, which like adrenaline destroys histamine. Now we know that every known protein has histidine and by breaking off a single molecule of carbon dioxide from it, we get histamine; which is destroyed by histaminase. Therefore it is the absence of this ferment which causes allergy.

Allergy in the respiratory tract expresses itself by recurrent nasal catarrh, vaso-motor rhinitis, hay fever and asthma; and can be diagrammatically represented thus:



Paper read at the Second Annual Conference of the Association of Otolaryngologists of India, held at Bombay on 20th December, 1949.

Peripheral stimulation causing asthma originate from the mucosa of the nose, the eye, gastro-intestinal tract, from the enlarged bronchial glands, and occasionally from pleura after pleural effusion.

Though Herk suggested that the nasal abnormalities cause asthma, yet the credit goes to Volotine who in 1872 cured II cases of asthma by the removal of ethmoidal polypi. In 1901 Adam brought forward his hypothesis that the disease was primarily due to auto-toxaemia originating from the intestine or the nose. Since that the nasal theory has made great strides so much so that in 1913 Dundas Grant found nasal disease in 63% of his 107 cases. Mathews said that 90% of his 300 asthmatics were of nasal origin; the climax came in 1919 when Sluder suggested that all cases of bronchial asthma were of nasal reflex-origin. Since then the pendulum is rather going in the other direction.

Now naturally you would ask on what evidence do we rely, that this abnormal nasal mucosa is the seat of peripheral stimuli. That this is true is based on (1) the experimental evidence, (2) the frequency of the pathological conditions present in the nose, (3) the improvement following after the removal of the nasal disease and (4) recrudescence of the bronchial asthma after recurrence of the nasal disease.

Dixon, Brodie and Ranson found on stimulating the ethmoidal area in decerebrated animals, bronchial spasm. This did not occur if the vagus to the bronchi was previously severed, and returned if peripheral cut end of the nerve was stimulated. Myer by mechanical irritation of Adam-Haseltine area, in the asthmatic susceptible patients produced bronchial spasm on the affected side only, which abruptly ended by cocaineising to support the view that bronchial and nasal asthma belong to the same group. Hansel and Wille published the histological changes seen in the specimens removed from the nose and paranasal sinuses of the asthmatics. They found hyperplasia of the epithelium, oedema with eosinophilic infiltration of the tunica propria, fibrosis with round cell

infiltration in the periosteum and varying changes from the hyperplastic to atropic in bone. Coates and Ersner differentiated allergic from non-allergic cases of the paranasal sinusitis, by the presence of eosinophils in the former and polymorphs in the later.

With regard to the frequency of the nasal disease I find in adults the ethmoidal polypi and high nasal deviated septum. In very early cases, in hardly four per cent of my 148 cases I find hypersensitive patches of the nasal mucosa in the trigger areas; whereas Storm Van Leenwen finds in ninety per cent of his asthmatic cases, but the grit of this paper is that in my series of 118 children I found adenoids to be the cause in 73 cases giving a percentage of 62. The age varies from $2\frac{1}{2}$ to 12. Here it is as well to mention that Bray could only operate on the nose in 10 cases out of 800 allergic children, whereas Dundas Grant found nasal obstruction either by the adenoids or by the anterior end of the middle turbinate in 50% of his cases in children.

Finally for proof, if any be needed-one has seen recrudescence of asthma after the recurrence of the nasal disease, which was supposed to have been operated.

Regarding the eosinophils, it has varied from 6 to 48%. Highest limit has been in a child of a general practitioner. In this case mother had asthma, father not, two of the four children had 38 & 48% eosinophil count. These children were cured by the removal of adenoids.

"All is not asthma that wheezes", said Chavalier Jackson, he in non-allergic cases found blanched mucous membrane and thick sticky secretion or a papilloma. W. A. Lell on the other hand found different changes during and in between the attacks. In true nasal asthma bronchoscopy is not indicated; but in bronchial asthma Lell found hypodermic injections of adrenaline and oxygen administration very helpful in bronchoscopic aspiration by Tucker's bed side technique.

The treatment of asthma should be conservative i.e. medical and local nasal washes and spray with specific pollen, or albucid noso-pharyngeal solution (10%) and when nasal abnormalities be present Surgical.

Foreign circulating proteins can be determined by skin reactions; and in the absence of these Young recommends colloidal sulphur and Oriel proteose injections.

Adrenaline and cocaine act by stimulating the sympathetic, whereas belladonna group by paralysing the parasympathetic; Iodides seem to act by activating the thyroid gland, whose secretion lowers the threshold to sympathetic stimulation. How arsenic acts we don't know at present, unless we consider the cases to be tropical eosinophilia. Of late one uses Bellaardyn and Antistine Ciba. But to me Extracts of Sarsurae Lappa seem to give better results in as much as they shorten the duration of attacks and lengthen the intervals.

R: Pot. Bromide	grs. V
Pot. Iodide	grs. V
Borax	grs. III
Ext. Sarsurae Lappa	
	m. 60 increases to 120
Spt. Chloroform	m. X
Aqua ad.	1 oz.
	—T. D. S.

If I don't get Ext. Sarsurae Lappa, I use Extract of Kutch. Our Ayurvedic research centres will have to throw more light on the actions of these drugs before they could be universally adopted.

Of surgical measures, the commonest is the cauterisation of the hypersensitive spots by trichloroacetic acid. As this was not available during the war, I used solid silver nitrate fused on a silver probe. This method is not very successful, unless the spots are few and for between and well charted before cauterization.

At the time of 1949, London, Congress, I saw Mr. Francis do light cautery of the nose in allergic children. This method was practised by his father in Australia in 1896. Francis and his team get very good results except in aspirin sensitive people. I have used in 14 cases, with reasonably good results in only two.

Regarding submucous resection of the nasal septum in my series if the deflection was high, benefit was 70% if low 18% in selected cases with over 8% eosinophil count in a series of 47 high D.N.S. and 103 low D.N.S.

Maximum benefit came in the group of cases with chronic ethmoiditis. If polypi are removed, the benefit is in shortening the duration of the attacks and lengthening the intervals. Recurrence of polypi meant recrudescence of the bronchial asthma as in Voltolins cases. 12% of the cases had bullae conchosa and amputation of this, helped in the cure of the disease. In remaining cases, I used Hajek's intranasal removal of the ethmoidal cells in four sittings at weekly intervals. This Hajek's method gave benefit in 62% of the 65 ethmoidal cases.

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Retro-Pharyngeal Abscess

BY

B. TIRUMAL RAO, F.R.C.S., D.L.O.

This short paper is based upon a study of 15 cases of retro-pharyngeal abscess admitted in the E.N.T. Department of King George Hospital, Vizagapatam during a period of sixteen years from the year 1930 to 1945.

Definition:—Retropharyngeal abscess is a collection of pus between the posterior pharyngeal wall and the cervical spine.

Classification:—The disease manifests itself in two forms, namely the acute and the chronic. There were fourteen cases of acute and one case of chronic abscess during this period.

Chronic abscess:—Chronic abscess is generally due to tubercular infection of the cervical spine or of the local lymphatic glands. No case of retro-pharyngeal abscess of this origin was referred to me or admitted under my care during this period and it will not be further discussed here.

One case of chronic abscess, however, of non-tubercular origin was admitted and merits mention here. The patient was an adult male aged 35 years. The swelling was tense and cystic to feel and to the left of the middle line in the posterior wall of the oro-pharynx. It extended down to the level of the vestibule of the larynx. Its duration was indefinite. There was a complaint of pain in the throat and difficulty in swallowing. The Blood Wasserman test was negative. A course of Potassium Iodide for two weeks had no effect on the size or consistency of the swelling. Aspiration revealed pus.

It was opened by a linear incision. The patient was discharged cured after a week. The causation of the abscess remained uncertain. It is probably not a true retro-pharyngeal

but a peri-pharyngeal abscess, *i.e.*, arising in the pharyngeal wall.

Acute Retro-pharyngeal abscess

Etiology:—It occurs usually in infants between the ages of 3 months and 3 years. Out of the 14 cases of acute abscess seen during this period, 9 belonged to this category. They were all under 2 years of age. Six of them were below one year of age. Seven were male and two female children, which is in conformity with the already accepted greater incidence of this disease in the male sex. They were mostly feeble and undernourished and came from poor families.

The immediate cause is generally septic infection, preceded by one of the acute infectious fevers and severe catarrh of the respiratory tract. In only one case, however was a history obtained in this series of an attack of measles just three weeks before the development of the symptoms of abscess formation. In the rest of the cases the previous history was indefinite.

The remaining cases, five out of the fourteen under review, were of foreign body origin. The history was that of having swallowed a fish bone in three cases, a mutton bone in one and a chicken bone in the fifth. These cases fall into a different category both from the course, duration, as well as etiology. Three of them were about 5 years of age and the remaining two over 55 years of age. Infection followed implantation or injury by a foreign body of the tissues of the posterior pharyngeal wall.

Pathology:—The pathology of the abscess in the infant is a suppurative lymph-adenitis of the glands in the retro-pharyngeal space. These glands are placed on each side of the middle line between the posterior pharyngeal wall and second and the third cervical vertebrae. They receive lymphatics from the naso-pharynx, eustachian tube, middle ear and the nasal cavities. They atrophy between the third and fifth year of life and disappear altogether after the seventh year. This is the reason why this kind of abscess is not seen after this age period. It is an adenitis, periadenitis and abscess formation. It is usually one sided and most prominent in the oro-pharynx.



A case of
Retro-Pharyngeal Abscess.



It was recorded that the swelling was limited to the right half of the pharynx in two cases and to the left half in one case in this series.

The submaxillary glands are usually swollen. The swelling was however slight except in one case.

The suppuration process may spread along the oesophagus or it may burst in different directions, towards the larynx, angle of the jaw or through the external auditory meatus. But none of these complications were noticed in the records of these cases.

Bacteriology:—There is no specific infection. It was generally a mixed infection. Bacteriological examination of pus was done in four cases with the following findings;

Haemolyticus streptococcus was isolated in three cases,
An haemolyticus streptococcus isolated in one case,
Staphylococcus viridans isolated in one case
Staphylococcus anhaemolyticus isolated in one case.
Micrococcus catarrhalis isolated in one case and
Pneumococcus isolated in one case.

Symptoms and Signs:—The onset may be acute but generally a period of two or three weeks of illness elapses before the symptoms of dysphagia and dyspnoea become manifest. The patients are brought to the hospital, when these symptoms have become severe. They are extremely ill with fever. Dysphagia is earlier in onset and more mechanical. The infant tries to feed; he chokes and coughs and unable to drink, he puts its head back and cries.

Dyspnoea starts later which is also mechanical. Change in voice resembling the quack of a duck was another symptom recorded as having been noticed in the majority of cases.

Diagnosis:—It may be mistaken for bronchitis, foreign body in the larynx or lungs, tonsillitis, peritonsillar abscess

oedema of the glottis, diphtheria or meningitis. In one of these cases, it was recorded that a diagnosis of diphtheria was made in the out patient department and admitted.

The condition is rare and it is quite possible to overlook it. A history of an acute preceding illness may not always be available. In this group of cases a history of measles was forthcoming in only one case. It should be a maxim therefore that in every sick child the throat should be examined in a good light.

The swelling may be hidden by the uvula. The back of the throat should be palpated by the forefinger. The swelling feels resistant and elastic to the touch. Fluctuation is only detectable at a much later stage. A radiograph shows a clear outline of the abscess and is very useful when available in making a diagnosis.

Prognosis:—If the abscess is not opened, the outlook is serious. Death may occur due to oedema of the glottis and asphyxia or septic pneumonia, exhaustion and heart failure.

Of the nine infants eight recovered and one died. The one who died was admitted in an extremely low condition with huge submaxillary glandular enlargement. A tracheotomy was done immediately. A soft fluctuating swelling in the posterior wall of the pharynx was incised and pus let out. Temperature was 103 F. at the time of admission. The child succumbed, however, in a few hours after operation, having been already much worn out and exhausted.

Of the five cases of foreign body origin, there were two deaths. One of them, a child aged 6 years, was admitted in a condition of extreme dyspnoea. In addition both the lungs were full of moist sounds. This child also died the next day after operation in spite of all the measures taken to improve the general condition. The second death occurred in a man aged 55 years who developed the abscess as a result of a chicken bone stuck up in the throat. He too died of septic pneumonia.

On the whole the prognosis appears to be worse in the case of foreign body origin, for there is no time for the local tissue resistance to develop.

Treatment:—Once the diagnosis has been made, the abscess has to be opened without waiting for fluctuation. No time should be lost trusting oneself to chemotherapy or antibiotics. This is a condition where these drugs can never displace surgery. They are only adjuncts to it.

Technique:—Wrap the child in a blanket placing a sand bag under the shoulders. The limbs of the patient are held by an assistant. No anaesthetic, general or local is given and no mouth gag is used. Under good reflected illumination with a fore head light or mirror, the tongue is kept back with a spatula and a pair of sinus forceps are plunged into the most prominent part of the swelling. The infant is held up immediately by the legs. If a suction apparatus is available at hand, a small incision is made with a pharyngeal knife and the pus aspirated as it wells out. The incision can then be extended to the required length. It may not be possible to avoid a preliminary tracheotomy as it had happened in two of these cases. In one of these infants, breathing actually stopped while attempting to incise the abscess. At once a tracheotomy was done and the child revived and the abscess was then opened. Tracheotomy instruments should therefore be always ready at hand.

Conclusion:—I have presented this subject for discussion at this meeting to bring out chiefly the following points:—

1. The condition is comparatively rare and unless one is on the look out it is likely to escape the attention of the clinician till too late.
2. The great value of a radiograph in making the diagnosis.
3. The imperative necessity of being prepared for doing a tracheotomy at any stage during the operation.

Discussion

Dr. S. G. Joshi said that in the case of an abscess following a foreign body in the tissues, the prognosis is grave and the convalescence is stormy due to the developement of complications like oesophagitis and mediastinitis. In his experience the disease occurred in healthy children and was of pneumococcal origin. It was often mistaken for diphtheria. Tracheotomy took longer time than incising the abscess which could be done as well, instead of a tracheotomy before hand. He came across one case of abscess following adenoid curetting. The abscess was incised but a mediastinitis followed. The mediastinum was next drained.

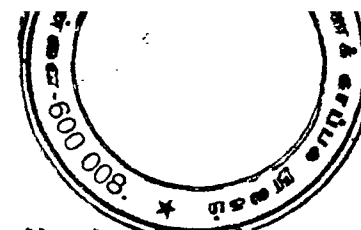
Dr. R. V. Rao stressed the importance of extending the incision to the lower limit of the abscess and if necessary of re-opening the abscess before the third day. Abscess secondary to foreign body needs careful watch for mediastinitis. The development of this complication can be prevented by penicillin therapy.

Dr. V. S. Subrahmanyam said that mediastinitis is a complication of retro-pharyngeal abscess and that one of his cases died with mediastinitis. Retro-pharyngeal abscesses due to tubercle are deeper to the deep fascia covering the prevertebral muscles. They require incision from the outside.

Dr. Tirumal Rao, in reply said that the prognosis is grave in abscess secondary to foreign body, for the infection rapidly spreads before any local tissue resistance could be developed. A foreign body could produce an abscess even in an healthy child but the infants in whom the abscess was of non-foreign-body origin were mostly undernourished. Tracheotomy should be resorted to only when driven to it, and not otherwise.

The incision should be extended to the lower limit as pointed out by Dr. R. V. Rao and it sometimes needs subsequent reopening. Treatment by sulpha drugs and penicillin is always to be instituted after the abscess has been incised.

The anatomical position of Tubercular abscess is as was pointed out by Dr. Subrahmanyam and the approach for draining this abscess is external only. This abscess is more rarely met with than the acute abscess and this subject had not been discussed in this paper.



Laryngeal affection in Pulmonary Tuberculosis

BY

Dr. J. V. DeSA, M.S., D.L.O.

The larynx situated at the entrance of the tracheo bronchial system, besides the numerous function it performs plays an important part in the physiological act of coughing, and thus in pulmonary diseases is the organ on which much strain is placed. Jackson and later Negus supported by the motion pictures taken by Joel Pressman have shown that during signing, the contact of one cord against another, is not as the film shows light feathery touches but rather strong forcible blows. If such is the strain the larynx bears during signing, one cannot imagine the blows and insults the larynx is subjected to during the tussive blasts and attacks of coughing which characterize or rather is the annoying symptom of pulmonary tuberculosis.

In the following study of 292 cases suffering from various stages of pulmonary tuberculosis, admitted to the group of hospitals for tuberculosis, Sewri, a routine ear, nose & throat examination was made on admission and the findings as regards the larynx in particular were recorded.

Jackson states that 75% of patients who die of tuberculosis have laryngeal lesions; Felterolf in 1914 found 83%, Heaf in 1924--60%, Aurbach in 1946, 37.5%. Myerson however states the incidence of laryngeal tuberculosis is usually higher than that of cases observed clinically and believes that the larynx becomes involved in a haematogenous spread of the disease just before death. So also is there a wide controversy regarding the incidence of laryngeal involvement observed clinically. Myerson has pointed out that the incidence varies with almost every writer, thus Sir St. Clair Thomson in 1924 gives the incidence as 18.77%, Stevenson and Heaf at 15.08%, Myerson himself has noted 10.6%, of the cases in my small

series as compared with the number of cases studied by the above authors, the incidence of laryngeal involvement has been 13.7%.

The high incidence as stated by the afore mentioned authors as also the depressing statement made by Morrell McKenzie in (1880) "that the prognosis of laryngeal tuberculosis is always extremely unfavourable and it is not certain that any cases recover as also that of Blumfield who in 1908 stated that the cure of tuberculosis of the larynx is still to-day an except exception" would make one believe that the larynx is involved as a terminal stage of the pulmonary disease. In my study, 23 of the cases with laryngeal involvement had bilateral pulmonary disease, whilst the remaining 17 cases were detected in patient with unilateral pulmonary infection, furthermore a recently admitted patient whose X-ray I have here had a marked laryngeal disease with very early infiltration of the apex of the right lung. This case as also the fact that 40% of the cases with laryngeal involvement had only an unilateral lung infection strongly suggest that factors other than the mere extent of the pulmonary lesion are concerned in the causation of laryngeal tuberculosis. The immunological and allergic reaction offered by the tissues locally as also the general reaction of the patient as a whole with the resulting anaemia, debility and lowered resistance perhaps plays a greater role and may well answer the pertinent question asked by D. Campbell as to why some cases of pulmonary tuberculosis develop laryngeal infection while others go free.

All the cases were examined were suffering from pulmonary tuberculosis in one stage or another and therefore the laryngeal involvement was probably of bronchogenic origin; however in only one case, which I have recently seen and not included in this series there was no evidence of pulmonary disease clinically as also radiologically the sputum was negative on 3 examination, yet the laryngeal findings were typical of tuberculosis and was subsequently proved by biopsy. The infection of the larynx in this case may have been primary

LARYNGEAL AFFECTION IN PULMONARY TUBERCULOSIS 23

or haematogenous in origin from some extra pulmonary tuberculosis foci.

Most of the cases showed a severe anaemia of the mucous membrane of the pharynx and larynx, and some cases showed a slight injection at the attachment of the cords to the vocal process, this probably was the expression of the severe trauma the cords were subjected to as a result severe coughing. The anatomical peculiarity of the posterior commissure in that the m.m. is lax to allow for the rotatory movements of the arytenoid cartilages render this area more vulnerable to invasion by the tubercle bacilli from the sputum which is constantly in contact with this area of the larynx. It is believed that invasion occurs through the ducts of the mucous glands of abrasions in this area, thus the earlier changes noticed in laryngeal tuberculosis is an increased congestion and redundancy of the folds of mucous membrane in the posterior commissure, together with a slight oedema of the arytenoid eminences, a condition noticed in 12 of the patients on admission.

In this early stage the symptoms complained by the patients was just a slight soreness or pain in the larynx with intermittent periods of hoarseness or change of voice. Of the other cases 20 showed a bilateral involvement of the cords on admission and in 5 of these there was also an involvement of the false cord and the epiglottis with small superficial ulcerations giving rise to oedipophagia. 9 of the cases showed typical ulceration in the inter arytenoid region with an extension into one or the other cords with a marked hoarseness or loss of voice, in 2 of the cases a nodular appearance or fullness was seen in the inter arytenoid region without ulceration.

As regards the age incidence, most of the patients were between the ages of 20 and 30 years of age, except for the younger patient who was 15 years of age and the eldest 59 years of age. Sex plays no part in the etiology of laryngeal

tuberculosis as the disease was equally distributed between the male and female patients in my series.

Thus the total number of patients examined were 292 cases, the larynx was involved in 40 patients or 13.7%, the youngest patient was 15 years and the oldest 59 years of age. Heaf classifies laryngeal involvement into intrinsic and extrinsic and further sub-classifies them according to the presence of ulceration and the age of the patient. I have however divided my cases according to the clinical stage of the disease as seen on admission.

Bilateral involvement of the cords in 20 cases.	<i>i.e.</i> 50%
Epiglottis involved in 5 cases.	<i>i.e.</i> 12.5%
Actual ulceration in 9 cases.	<i>i.e.</i> 21%
Early congestion in 12 cases.	<i>i.e.</i> 30%
Late congestion and thickening in 12 cases.	<i>i.e.</i> 30%
Nodules without ulceration in 2 cases.	<i>i.e.</i> 5%

Regarding the treatment of these cases I have had very little choice because of the usual setback in institutions started after the war, *viz.* the lack of equipment, that cauterisation heliotherapy, etc. was not possible, nevertheless other methods of treatments were resorted to. Vocal rest was rigidly enforced on these patients by putting up a board 'vocal rest' on their beds in the wards thus refraining the other patients or the staff members from talking to the patients.

In the early cases *i.e.* those with congestion and starting ulceration 1 c.c. of 20% of chalmooogra oil was instilled into the larynx once a week the results have been very encouraging and in one of these patients in whom thoracoplasty could not be done because of an early lesion of the larynx was returned for surgery after 6 weeks of treatment with chalmooogra oil and is to-day cured of the pulmonary disease with a perfectly normal larynx. The oil probably helps to promote healing and relieve the dryness of the throat.

In the more advance cases where the pulmonary disease was of the acute form with cavitation, streptomycin was used in consultation with the physician or surgeon, the results were also very good for in one case with ulceration and involvement of both cords, the hoarseness of the voice improved as also the laryngeal condition with 30 grms. of streptomycin given 2 grms. daily by 3 hourly injections.

Spectacular results have been claimed by Mr. W. H. Fieldman and H. C. Hinshaw of the Mayo Clinic and I feel will in the near future as the drug is more easily and cheaply available to replace other active forms of laryngeal treatment. For in the 15 cases treated in my series with streptomycin, 5 cases were cured and 7 cases showed marked improvement, while in 3 cases the treatment was discontinued by the physicians.

For the cases with extensive disease and involvement of the epiglottis giving rise to oedrophagia, alcohol injection of the superior laryngeal nerves was resorted to, causing a great relief as regards the pain and the patients could swallow with ease within 2 days, but they succumbed to the extensive pulmonary infection. There were no cases of perichondritis or abscess of the larynx in this series.

With the recent antibiotics in our hands and the realisation that the cure from pulmonary tuberculosis can be affected in many cases by surgery rather than by medicine, the prognosis of laryngeal tuberculosis to-day is improved, and with a better understanding as to the conditions which allow the larynx to fall a prey to the ravages of the pulmonary disease, as also the early detection of the disease by enforcing indirect laryngoscopy in all cases of pulmonary tuberculosis will help in changing our entire outlook of this malady.

Though this series of cases is too small to draw any definite conclusions, the following facts seem to suggest themselves.

That the laryngeal involvement may occur in early pulmonary disease contrary to former belief that the incidence of laryngeal involvement in unilateral cases is much higher than has been hitherto believed.

That the earliest changes in the larynx is the slight injection of the pale cords at the vocal processes.

That streptomycin is very effective in those cases where it is used.

Thus the prognosis is more favourable in the early cases as also in those cases with unilateral pulmonary involvement.

Before closing this paper, I have to thank Superintendent Dr. Kavaran, my House Surgeons and my students, my B. T. Dave and S. C. Deodhar for helping me in collecting the statistical data.

Endaural Surgery

BY

Dr. V. SUBRAMANIAN, M.B., M.Sc., F.A.C.S.

Endaural Surgery is the name given to one particular type of approach for performing the various operations of the ear, as contrasted to the old orthodox post-auricular approach. This endaural technique was first introduced by Dr. Julius Lempert of New York. Dr. Lempert is more popularly associated with the Fenestration Operation for Oto-sclerosis, because he perfected the operation. But the principle of the fenestration operation was first thought of by Dr. Holmgren and not by Dr. Lempert; whereas Endaural Surgery owes its origin to Dr. Lempert. Dr. Lempert thought of this approach mainly for operation on Exostosis of External Canal. He thought that it was more sensible to incise along the posterior half of the External Auditory Meatus, lift up the skin from the bony wall and remove the bony tumour by the electric drill. The usual approach canal, really appears very roundabout and not so sensible a method. Dr. Lempert found this external approach to be very very satisfactory for the exostoses. Then he tried it for simple mastoidectomy, and here too he found it to be really more direct than the post auricular approach. Therefore he perfected this technique which can be described in 2 stages.

1st Stage of operation—*Formation of a mobile membranous. Ante Auricular Window within the External canal.* This must be extra-cartilaginous too. This 1st stage is of incisions in soft parts that cover the temporal bone.

2nd Stage—*Operation on the Temporal bone—*exenteration of the mastoid cells, exposure of the Antrum, Horizontal Canal, middle ear etc.

In the 1st stage, which is on the soft parts covering the Temporal bone, the object is to get a window-like exposure

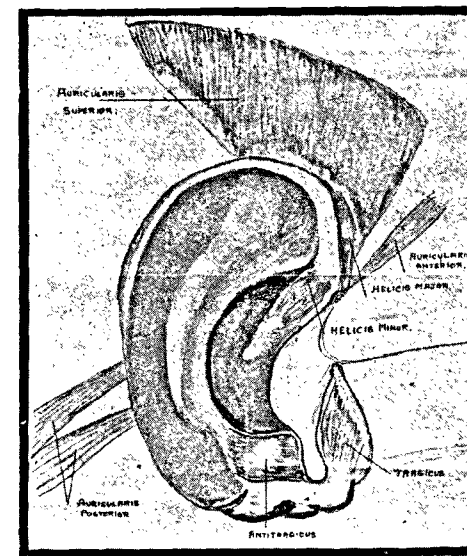
anterior to the Auricle and within the External Auditory Canal. This window is termed by Dr. Lempert as the Ante Auricular Membranous Endaural Window. The creation of this membranous endaural window must be big enough to permit proper exposure, and should also be mobile along with the auricle-over the temporal cortex to do the mastoid operation satisfactorily. Further, the three incisions for the creation of the endaural membranous window have to be extracartilaginous to prevent the possible post-operative perichondritis. Lastly, this endaural window should be such that it does not produce any post-operative deformity. Thus, Lempert's Endaural Membranous Window satisfies all these conditions; and before studying the three incisions for its formation, I would like to mention a few anatomically important points, in the anatomy of the Pinna and the External Canal.

(a) Presence of Supra-meatal membranous triangle bounded behind by the anterior margin of the Helix, in front by the upper part of the Tragus, and below by the upper margin of the External Auditory Meatus. This space comes into view by pulling the pinna upwards. This space is made up of connective tissue and has no important blood vessels or nerves. It is called the Suprameatal triangle.

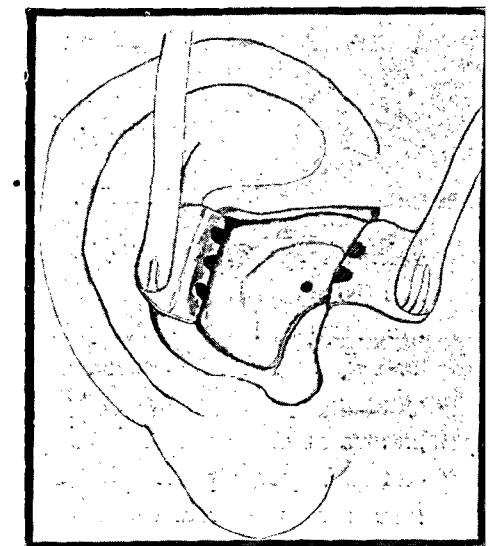
(b) Cartilaginous structure of the Pinna and External Canal.

The Incisions :—

(1) The outer third or membranous part of External canal is widened with anasal speculum and the *1st incision* starts at the postero-superior wall at the junction of membranous and osseous parts of the External canal. It is carried downwards and outwards along the membranous part of the posterior wall of the external canal till the 6 O'clock point of the Concha is reached.



Cartilage of the auricle, showing the space between the anterior end of the Helix and the tragus where the auricular cartilage is deficient.



Mastoid antrum opened through the new Point of Entrance.



Three Endaural Incisions for the Creation of a Mobile Membranous and Extracartilaginous Endaural Window for Endaural Antauricular Surgical Approach to the Mastoid Process and the Tympanic Cavity.

(2nd) starts where the first one started, at the jn. of the membranous and osseous canal in the posterior superior wall, is carried horizontally out along the postero superior wall of the External canal to the 12 O'clock point of the Concha and is then carried along the anterior border of the supra-meatal triangle.

(3rd) incision joins the free ends of the 1st and 2nd incision and is along the posterior border of Concha and the posterior border of the Supra-meatal triangle.

Removal of the triangular flap:—All the incisions are through the skin and periosteum down to the bony cortex of mastoid. The incision in the region of the supra-meatal triangle are down to skin, fibrous tissue and periosteum, down to bony cortex of Zygomatic region. The triangular flap is lifted with periosteum elevator and removed with scissors. The triangular flap may be preserved and used at the end of operation as a skin graft for covering a portion of the mastoid bony cavity.

Exposure:—The removal of the triangular endaural membranous flap exposes the posterior wall of the external auditory canal, anterior aspect of the bony cortex of the mastoid region, the Spine of Henle, Macewan's triangle the outer bony cortex of the posterior root of the Zygoma.

Mobilisation of the membranous endaural window is done by (i) deviating the post-auricular skin and periosteum from the mastoid cortex by the periosteum elevator, inserted between the bone and the 3rd incision; (ii) by elevating the skin and periosteum from the outer cortex of the Zygoma in the region of the suprimeatal triangular region mentioned before; and (iii) by separating the skin from the posterior wall of the external canal.

Technique of getting to the antrum:—(1), (2)

New Technique of opening the Mastoid Antrum—in radical or modified radical operation.

An imaginary line is drawn along the postero-superior bony wall connecting Spine of Henle to the posterior superior attachment of the tympanic membrane to annulus. With an electric perforating burr a hole is made at the junction of the middle and inner third of the imaginary line; the burr being directed inwards and backward. At a depth of 1 or 2 mm. the antrum is at once reached. This hole is enlarged outwards toward the Spine of Henle by the use of cutting burr.

The advantage of this new approach is specially in sclerotic mastoids where we don't have any mastoid cells to direct us up to the antrum. As you all know, mastoid operation for acute mastoiditis has become rare after the anti Biotics came into the field. Most of acute mastoiditis are cured by anti Biotics and paracentesis to enlarge the small perforation in the ear drum and thus improve the drainage. In the last 2 years I have done many of my mastoid operations for chronic suppurative otitis media with sclerotic mastoids. For such cases, this approach of Lemperts is the safest and surest. There is no danger of our accidentally opening the Lateral Sinus, or Middle Cranial Fossa, or damage the Facial Nerve canal. In some cases, anomalous position of the Sinus or the flood of the middle Cranial Fossa are present. But, (a) in no case can the (r) Antrum be absent, (b) in no case the Sinus be anterior to the Antrum and (c) in no case can the middle Cranial mastoid Fossa be in a lower level than the inner third of the Postero Superior metal wall. Thus, this approach of the antrum is the safest and surest.

Complete and Partial Excenteration of mastoid cells:—Either of these two is possible by the Endaural ant-auricular extra-cartilaginous membranous window. We do complete excenteration of cells wherever there is operation for sepsis like mastoiditis, chronic suppurative otitis media or cholesteatoma. Partial excenteration is done, and only the part required is operated when we do on a clean temporal bone as in Fenestration, or operation for Menier's Disease &c.

Post-Operative Care

In simple mastoidectomy—the osseous wall and the skin lining it are left intact. The membranous endaural window is left open without suturing and heals up by granulation, when the drainage stops and the bony cavity is filled up with healthy granular tissue.

In Radical or modified Radical operation:—The entire bony and membranous posterior wall is sacrificed. No packing is used. The post-operative care consists in cleaning the free drainage that takes place and the judicious application of Silver Nitrate cautery to keep off the excessive granulation tissue till the cavity is lined by just a thin layer of granulation tissue. When the cavity is dry, epidermisation takes place over the healthy layer of granulation tissue.

Summary :—

1. The endaural route is definitely the direct approach to the antrum, with the Spine of Henle as the guide.
2. It is definitely superior to the post-auricular incision, from the purely aesthetic point of view.
3. There is very much less danger, or in fact, no danger of accidental exposure of the Transverse Sinus or the Middle Fossa.
4. There is much less chance of damaging the Facial Nerve canal with very unpleasant consequence of Facial paralysis.
5. Post-operative convalescence is very much shortened, as there is no need to remove sutures and the patient can usually be discharged on the 3rd or 4th day.
6. The oft-seen displacement of the external ear seen in the old post-auricular incisions is never present in this case.

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3. Orders for reprints should be sent along with the articles.
4. Editorial communications may be addressed to Dr. P. V. Cherian, 5, Victoria Crescent, Egmore, Madras.

The Association of Otolaryngologists of India

The minutes of the General Body Meeting held at Bombay on 21 December 1949.

The meeting of the General Body was held at Seth G. S. Medical College, Bombay on 21st December 1949 at 9.30 a.m., under the Chairmanship of Dr. C. A. Amesur and following matters were discussed:

(1) The Honorary Secretary's report moved from the Chair for adoption, was adopted unanimously.

(2) Moved by Dr. Joshi and carried unanimously that the copy of the audited accounts be sent to members before the Conference to enable them to verify the queries.

(3) Journal report was given by Dr. Cherian, Chairman of the Editorial Board, was moved from the chair for adoption. It was adopted unanimously.

Dr. Cherian stressed the difficulties of bringing out the journal regularly because of the lack of co-operation from members who have not been sending articles regularly.

He said the original articles, journal reports and reviews of book will all be welcome.

(4) Moved by Dr. R. A. F. Cooper, seconded by Dr. Hiranandani that Chairman of the Editorial Board be the ex-officio member of the Governing body. It was passed unanimously.

(5) Following amendment moved by Dr. Joshi and seconded by Dr. Hiranandani was carried unanimously.

(6) The audited accounts were put forward by Hon. Treasurer Dr. R. A. F. Cooper. Moved from the Chair for adoption was carried unanimously.

(7) Moved by Dr. Satyanarayan and seconded by Dr. Joshi that the Association should hold its conference wherever Association of Surgeons of India meet, whenever possible. Dr. Cherian brought to the notice of the Chair that it could not be discussed since one months notice is not given. The discussion was therefore postponed to next year.

(10) It was resolved that the next Conference should be held at Lucknow.

(11) The following resolution proposed by Dr. Cherian and seconded by Dr. Joshi was passed unanimously.

RESOLUTION:

'This Conference resolves that hearing aids and its accessories should be imported to this country customs duty free.'

(12) The following resolution moved from the chair and seconded by Dr. Cooper was passed unanimously.

RESOLUTION:

'This Conference resolves that in teaching hospitals, where there are 300 or less beds, and there is no E. N. T. Unit, one unit to be created.'

(13) Mr. President explained the importance of deaf clinics in various Provincial and District Hospitals.

Dr. Subramanian:—It is not necessary to pass this resolution as it is part of the E. N. T. Department.

Dr. Joshi:—If such is created it will constantly work with more efficiency.

Dr. Gupta:—They should be created in teaching Hospitals.

President:—If we ask more, we will get something.

RESOLUTION:

'It is resolved that the appropriate authorities be requested to create deaf (hearing aid) clinics in various Provincial and District Hospitals.

(14) Election of office Bearers:

Dr. Subramanian:—This time Associate Secretary be elected from a place where the next Conference is going to be held.

Mr. President explained the importance of electing the Associate Secretary from the same place as the President since the former will be very helpful to the President and Dr. Subramanian may bring this amendment next year if he so desires.

Election of President:

Proposed by Dr. Cherian.
Seconded by Dr. Joshi.
Passed unanimously.

} For Dr. Thirumal Rao.

Election of Associate Secretary:

Proposed by Dr. Thirumal Rao.
Seconded by Dr. Misra.
Passed unanimously.

} For Dr. Narsimha Rao.

(15) Resolution No. 8 of the Governing Body at its meeting held on 18th December, 1949 about appointing E. N. T. specialists was passed unanimously.

'Each Hospital should have E. N. T. Department under a qualified specialist'.

(16) Resolution No. 9 of the Governing Body at its meeting held on 18—12—49 about missionary doctors was discussed.

Dr. Gorde suggested that it was not wise to pass the resolution at this stage.

This amendment by Dr. Gorde was seconded by Dr. Tirumal Rao and he suggested that this may be discussed next year. The original resolution was then put to vote and then passed 10 voting in favour and 6 against it.

'Missionary doctors doing full time work in charitable hospitals without doing any private practice be brought on the Provincial Medical Register. This concession will cease when they sever the connection with the hospital.

(17) Moved from the Chair and passed unanimously:

- a. 'The Dean of Seth G. S. Medical College be thanked for allowing the use of the college premises for the proceedings of the conference.
- b. Messrs. Sharp and Tannon be thanked for their honorary services and be again informed that they are appointed as the Hon. Auditors, for the next year.

(18) The retiring President Dr. Amesur then handed over the charge to the newly elected President Dr. Thirumal Rao by decorating with the President's seal.

Dr. Thirumal Rao, Chairman of the meeting thanked the members for honouring him.

(19) The following resolution was moved by Dr. Cherian and seconded by Dr. Cooper was passed unanimously.

'We place on record our greatest appreciation for the excellent work for Dr. Amesur as the President of the Association.

(20) The following resolution, moved by Dr. Cooper and seconded by Dr. Hiranandani was passed unanimously.

'We place on record our sincere thanks for the excellent services Dr. S. G. Joshi has rendered to the Association as Hon. Associate Secretary of the Association.

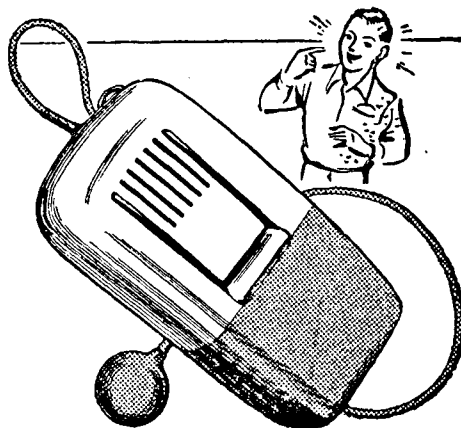
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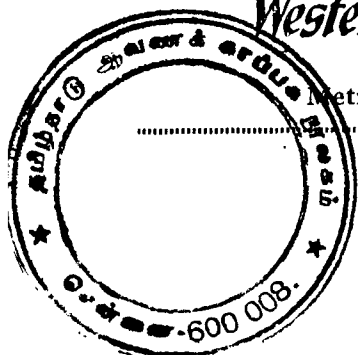
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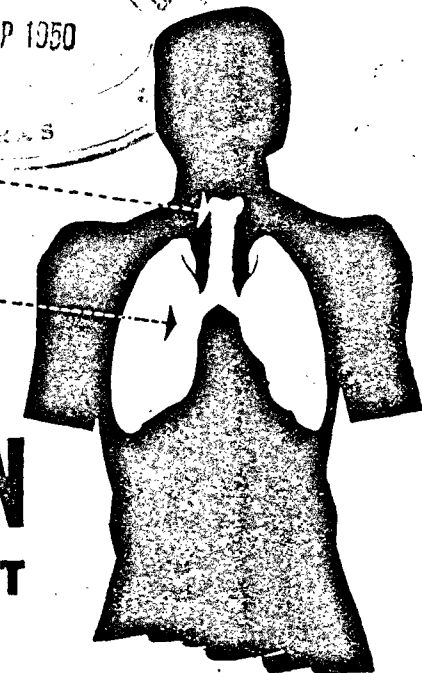
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Dr. C. SATYANARAYANA
S. G. JOSHI

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BRONCHIAL AND PULMONARY AFFECTIONS

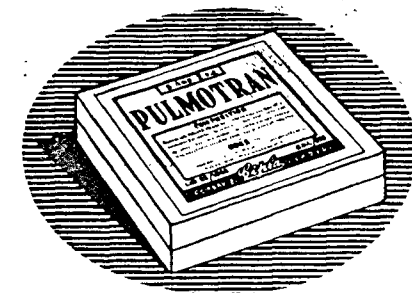
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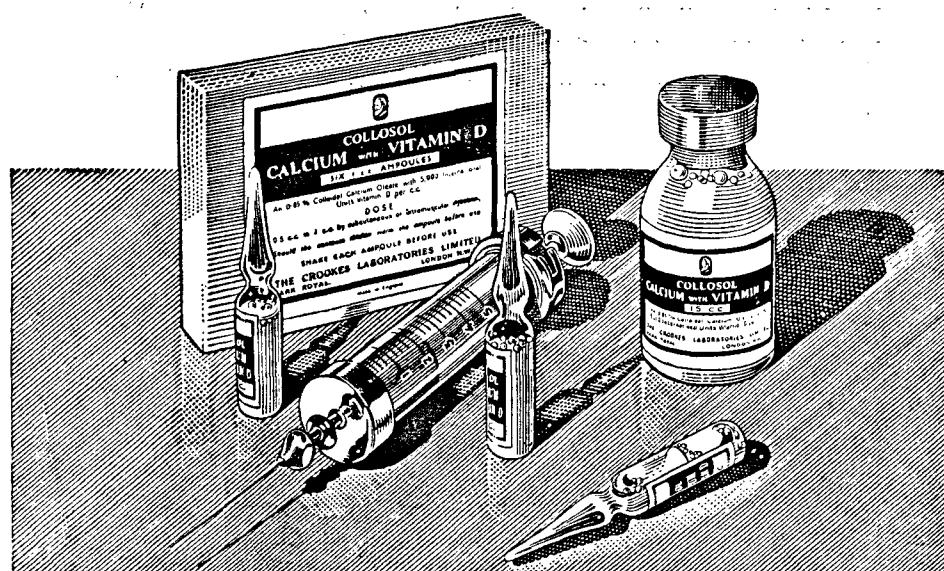
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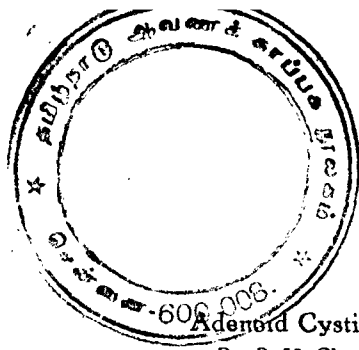
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Adenoid Cystic Epithelioma of the Nose

BY

Dr. P. V. CHERIAN, M.B.E., M.B.B.S., F.R.C.S., D.L.O., F.R.F.P.S.

AND

Dr. C. SATYANARAYANA, M.B., M.S., D.L.O.

Adenoid Cystic Epithelioma of the nose is not uncommon in Madras. To-day we present these notes about a case of adenoid cystic epithelioma of the nose and parotid area. Many of the epithelial tumours of the skin show a tendency more or less pronounced to reproduce the dermal glands and are therefore styled as adenoide. They differ from true adenomas of the skin glands. Several varieties of these tumours are known. The most common among them are: (i) adenoid cystic epithelioma and (ii) simple adenoid epithelioma.

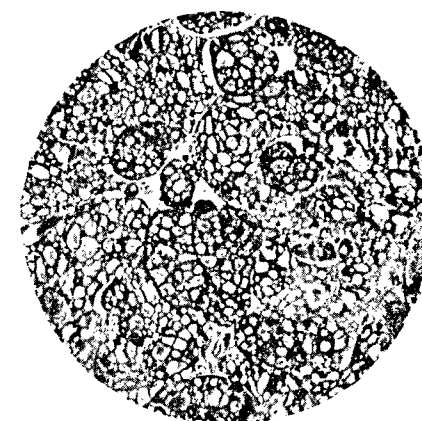
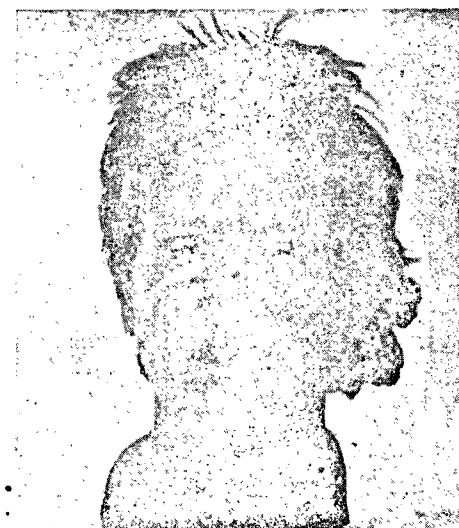
(i) **Adenoid Cystic Epithelioma** :—This tumour is a benign type of epithelioma. Ancell described it in 1842. Since then many others have described it. Brooke's clinical studies separated this tumour from the group of adenomas of the sebaceous glands. It differs from adenoma sebaceum in its occurrence in a much smaller number, and in the absence of the definite histological characters of sebaceous gland tumours and prominence of squamous cells. Brooke observed these tumours in three members of a family. The early lesions may resemble "miliun" and they slowly reach, but do not exceed the size of a pea, or a bean, continuing to enlarge slightly for some years. The growth of adenoid cystic epithelioma is

generally slow. Yet the appearance of an adenoid character in a basal cell epithelioma is an indication of potential malignancy and of the possibility of metastasis, which is very rarely found in ordinary basal cell carcinoma. In a case reported by Fordyce, a small frequently recurring basal adenoid cystic epithelioma of ala nasi after a slow course of several years, terminated with widespread metastasis involving every bone in the body. Brooke found more of adenomatous structure than usual. Unna emphasises the squamous cell elements in his designation, "acanthoma adenoides cysticum" and he regards the tumour as a pure embryonal acanthoma with marked tendency to cyst formation". The adenoid structure appears as finger-like projections from the basal epithelium or ducts of the glands and they only contain minute or large cystic areas of hyaline, colloid or mucoid material. The cells in closing these foci are often cylindrical. The squamous cells in the concentric form undergo extensive hornification or calcification. Usually these structures may compose the bulk of the tumour of the structure of reticulated epithelium resembling rodent ulcer with many thin cell strands which may be prominent. Brooke thinks the origin of the tumour is from the normal cells. Lenuço refers it to the embryonal cell groups derived from hair follicles or the basal cells of the epidermis. Recent workers support the view that the tumour arises from the basal cells of the epidermis. These tumours may be single or multiple. Dorst observed multiple tumours of the scalp in the same patient, some of which had the structure of adenoma sebaceum, others that of adenoid cystic epithelioma. Buxton described a tumour arising at the orifice of the Stensen's duct. It ran a slow course for 20 years, producing a growth as large as a hen's egg and finally involved the submaxillary lymph nodes. The structure presented many cystic cavities lined by convoluted layers of basal cells among which in turn were many small spaces filled with mucoid material. This tumour is popularly known as "*turban tumour*" if it occurs extensively on the head.

Anterior View.

(Pre-operative)

Lateral View.



Low Magnification, Adenoid Cystic Epithelioma.



Nasal part of the Growth Removed.



Lateral View.

A Case Report :—The case in question presented a tumour protruding from the left nostril and left parotid area. The nasal tumour arose from the vestibule of the nose at the mucocutaneous junction. The parotid part showed hard masses of irregular growths. The septum of the nose was pushed to the right side. Breathing through the nose was obstructed. Medial wall of the left maxillary antrum was partially destroyed and the antrum was filled with growth. Skiagram of sinuses and transillumination showed opacity of the antrum. There was no history of epistaxis, nor was facial paralysis, of the left side. Hearing was normal. Patient complained of headache and sense of smell was lost. Glands in the neck were not enlarged. Patient was operated in 3 stages. At first nasal part was removed and later a Caldwell-Luc's operation was done on his left antrum. Finally parotid part was removed quite easily. It did not infiltrate into the parotid gland. Skin grafting was done. No facial palsy resulted. Patient left the hospital, cured.

PATHOLOGICAL REPORT

"Epidermis under thin layer of dermis covers the surface of the tumour tissue which consists of irregular masses of spherical or ovoid basal cells. Each of the main masses is composed of many small cell-masses of irregular shape. Most of these cell masses show no structural differentiation. In places however there is a branching, a gland-like arrangement and small cystic spaces surrounded by epithelial cells which give the picture characteristic of epithelioma adenoide cysticum."

Discussion :—We have since seen a number of cases of adenoid cystic epithelioma of the maxillary antrum. It is as stated a form of epidermoid carcinoma of low grade malignancy. The cells may be of squamous or basal cell type and show an irregular glandular arrangement often with formation of small cysts. Tumours seldom infiltrate deeply.

Treatment :—Surgical excision is the best form of treatment. Others advise surgery and surface radium application.

Headaches of Nasal Origin

BY

C. A. AMESUR, M.S. (Lond.), D.L.O. (Eng.).

A fairly large percentage of patients, who come to consult a nose and throat surgeon complain of headache, as their chief subjective symptom. It is here as well to mention that very few diseases go through their course without causing headache at one time or other. Some of these sufferers have constant headache and look very much run down, others have only periodic attacks. Some of these people suffer in silence, whereas others seek medical relief from the various systems of medicine, not only from the hands of duly qualified men, but also from unqualified vaidas and hakims. Those who are lucky enough to choose a qualified man, will very likely be investigated for errors of refraction, bowel disorders, foci of sepsis in various parts of the body, etc. The object of this paper is to focus some attention of yours, to the nose, as the cause of headache if you have failed to find sepsis or other factor somewhere else in the human frame.

I shall mention here a few facts of nasal anatomy, including its nerve supply. The para-nasal sinuses lie very close to each other specially the frontal, ethmoidal and sphenoidal; therefore chronic infection of one may go and infect the other. These sinuses also infect the maxillary antrum by gravity and continuity of mucosa. This antrum of Highmore being situated lower down, as a rule, does not infect the other sinuses, especially of the infection of the antrum, is due to the dental infection of second bicuspid, or first and second molars.

Leaving aside for the time being a very specialized olfactory nasal mucosa in the upper part of the nose, above the attachment of the middle turbinate externally, and corresponding part of the septum internally, one finds that the rest of the mucosa of the nose and accessory para-nasal

sinuses is of the columnar ciliated type. The action of these cilia both in health and disease is to propel the fluid from the sinuses into the nose via the osteia.

The sensory nerve supply of these sinuses is as follows:—

Maxillary sinus :—Posterior superior alveolar branch of the maxillary nerve, which is the second division of the trigeminal—the fifth cranial nerve.

Frontal Sinus :—Terminal twigs of the supraorbital branch of the frontal, which is a branch of the ophthalmic division of the fifth cranial nerve.

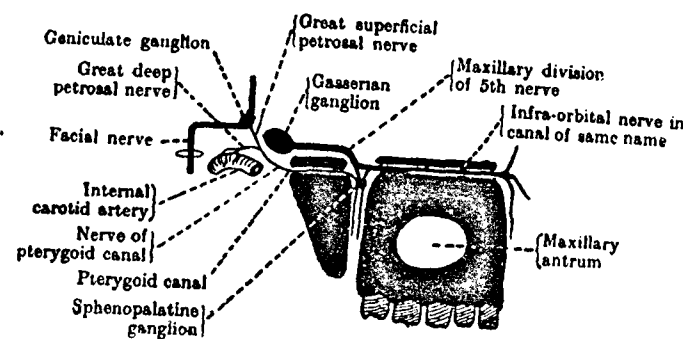
Ethmoidal Air Cells :—The naso-ciliary branch of the ophthalmic; the orbital and posterior superior branches of the sphenopalatine (nasal) ganglion—these fibres being derived in the nasal ganglion from the maxillary branch of the fifth cranial nerve.

Sphenoidal Sinus :—The orbital branch of the sphenopalatine ganglion.

Thus you will see, that, the first and second divisions of the trigeminal nerve directly supply the paranasal sinuses; whereas the third division *viz.*, the mandibular, supplies the nasal mucosa indirectly by the otic ganglion, and its communicating branch with the deep petrosal nerve, which enters the sphenopalatine (or the nasal) ganglion.

Spheno-Palatine (Meckel's or Nasal) Ganglion

This nasal ganglion being the cause of many of the obscure nasal headaches, it is as well to know its position and nerve paths. This ganglion is a triangular body, reddish-grey in colour, and is suspended from the maxillary branch of fifth, by sphenopalatine nerves, in the upper part of the sphenopalatine fossa, external to the sphenopalatine foramen, surrounded by fat and branches of internal maxillary artery and their companion veins.



SPHENOPALATINE GANGLION (Meckel's)

Showing various connections

(Fig. 1 & 2) (After A. L. MCGREGOR).

Its relation with the para-nasal sinuses is as follows :—

Internal :—The mucous membrane of the nose and fat, which according to Sluder may be 1 to 9 mm. in thickness, covering the sphenopalatine foramen.

Postero-superior :—Sphenoidal air sinus.

Antero-Superior :—Posterior ethmoidal cells.

Antero-inferior :—Maxillary air sinus.

Thus you will see why chronic infection of these sinuses may cause irritation of this ganglion and so the obscure headaches, missed by physicians. (Fig. 1).

By orthodox anatomists this nasal ganglion, like other ganglia is supposed to have the sensory, the motor and the autonomic *i.e.*, parasympathetic and sympathetic roots.

Sensory :—The two sphenopalatine nerves, branches of the maxillary division of the fifth nerve. These simply pass on to the nasal and palatine nerve without making a cell station in the ganglion. Therefore we may say that this ganglion has no sensory root.

Motor and Parasympathetic root :—This was the great superficial petrosal nerve. Now we know that this nerve has no motor fibres in it, but only the parasympathetic which come from the pars intermedia to the *geniculate ganglion* of the facial nerve, thence to the sphenopalatine ganglion where they have *true* cell station.

It is therefore that this should be considered as the only root of the nasal ganglion. The postganglionic fibres of this parasympathetic run mainly to the lacrimal gland via the orbital and temporo-malar nerves, thus showing why some people with headaches also suffer from excessive tears from the corresponding eye.

Few of the post-ganglionic fibres also supply the nasal mucosa as was shown by the stimulation of the Vidian nerve by Jung about a decade ago.

The sensory fibres of the great superficial petrosal nerve arise within the geniculate ganglion, thus becoming equivalent to the posterior roots of the spinal nerves. The inflowing fibres run in pars intermedia to the brain, whereas the outgoing fibres go in the great superficial petrosal nerve and *pass through* the nasal ganglion without making a cell station, into the descending palatine nerves, to end in the taste buds of the palate. They presumably carry gustatory impulses from the palate to the brain. This gustatory view may be false, till further research may prove, for at present the anatomists tell us that the chorda tympani supplies the anterior two-thirds of the tongue, and the glosso-pharyngeal the posterior third.

The sympathetic root is the great deep petrosal nerve. These are the post-ganglionic fibres from the superficial cervical ganglion and come *via* the plexus round the internal carotid artery and then run forward through the pterygoid canal joining loosely with the great superficial petrosal nerve, thus forming the Vidian nerve or the nerve of the pterygoid canal and thence to the nasal ganglion. Here they *do not* have a cell station, but according to Schaeffer a few of the sympathetic fibres do have a cell station here.

It is as well to mention here that the French rhinologists do not fully agree with these views. To them the Vidian nerve has three roots as follows :—

1. Great superficial petrosal nerve is the same.
2. Great deep petrosal nerve is parasympathetic, its fibres coming from Jacobson's nerve, branch of the ninth cranial nerve.
3. Sympathetic fibres come from the cavernous plexus.

In conclusion one may say that the sphenopalatine ganglion is a cell station only for the parasympathetic fibres, which are secretory to the lacrimal glands and probably secretory and vasodilator fibres for the nasal mucosa. The nerves which go to supply the para-nasal sinuses simply pass through the ganglion. (Fig. 2).

This anatomy of the nasal ganglion will lead you to think that unless the suppuration and thus irritation is near the ganglion one would not get headache from this cause, especially when I have mentioned that it has no sensory root, but the sensory nerves merely pass through it. To go a stage further we must find irritation of these sensory nerve-endings from the infection of the para-nasal sinuses. This brings us to the consideration and localization of headaches of the various sinuses.

Maxillary sinus or Antrum of Highmore

This is the most frequently infected sinus and its pain in the first instance is in the cheek over the canine fossa. If the pain be lower down it is due to the periostitis of the maxilla, secondary to the infection of the second bicuspid or the first two upper molars. It is a common experience to find the antral headache referred to the frontal region supplied by the supra-orbital nerve and so the maxillary headache being misdiagnosed as frontal sinusitis. The explanation of this referred pain is a communicating twig, between the infraorbital nerve, which is in the roof of the maxillary sinus, and the supra-orbital nerve, supplying the frontal sinus area. Often this antral headache comes on soon after patient gets up from bed and passes off shortly after mid-day.

Of late I have treated six cases, who though had headaches off and on, but not had enough to consult the doctor, came primarily on account of unilateral swelling of a lower eyelid. Four of these cases showed no pus in the middle meatus even after putting the patient in antral position for five minutes. These on exploration proved to have pus in the antrum. Antrum was washed daily and in one case two washes were sufficient, but in others four to six washes were required.

Frontal sinus

Suppuration of this sinus usually gives rise to headache about two hours after getting up from sleep. To start with the pain may be a dull ache and then may in severe cases become excruciating, splitting or throbbing. It is present in the

area supplied by the supraorbital nerve. In the early stages it can only be diagnosed by tenderness when index fingers are applied inwards and upwards in the floor of the frontal sinus, which is thinnest in this position.

At this point it will not be out of place to describe the "vacuum headache". This is due to the narrowing of the naso-frontal canal by the surrounding ethmoidal cells. Further when the congestion of the mucosa becomes great, the canal becomes occluded and so stops the aeration of the frontal sinus. Now the air present begins to get absorbed, thus causing vacuum, and this brings about a dull frontal headache.

Ethmoid

In chronic ethmoiditis we get headache which in its early stages is localized at the root of the nose and in the Sluder's area, bounded above by the supraciliary ridge, externally by the supra orbital foramen, and internally by the nasal bones. This is easily relieved by cocainising the nasociliary nerve in the antero-upper part of the nostril.

Yet in other cases of ethmoiditis the headache may be in the parietal region, being felt by the patient over the vertex.

Sphenoidal Sinus

Sphenoidal headache is usually localized to the occiput, which is tender on pressure. As you must be remembering how close to the sinus is the nasal ganglion, one can easily see how suppurative changes in this sinus, bring about the nutritic changes of this spheno-palatine ganglion resulting in Sluder's syndrome which he described as follows: "coryza followed by pain starting at the root of the nose, in and about the eye, involving the upper jaw and teeth, sometimes also the lower jaw and teeth, extending backwards to the temple and about the zygoma to the ear, emphasized at the mastoid, but always severest at a point five centimeters back of that; thence reaching backwards by way of the occiput and neck, it may extend to the shoulder, the arm, and even to the finger tips.

Such symptoms may be accompanied by lachrymation and sneezing attacks".

Atrophic Rhinitis

Here the headache is often generalized because the crusts of the ozena either fill or occlude the paranasal sinuses.

Autonomic Nervous System

So far we discussed the sinus suppuration as the cause of obscure headaches, except when dealing with sphenoidal sinus, a mention was made to the Sluder's syndrome due to the nasal ganglion. The autonomic system was divided by Langley into the parasympathetic, represented in the nasal ganglion by the great superficial petrosal part of the Vidian nerve; and the sympathetic represented here by the great deep petrosal nerve part of the Vidian nerve. Now irritation of these two different parts of the Vidian nerve give rise to different syndromes which *Ruskin* calls as the anabolics (parasympathetic) and the catabolic (sympathetic) depending on how the irritation of the different fibres bring about the body metabolism. In the anabolic type the disturbances are chiefly muscular, vasomotor and secretory whereas in the catabolic type they are chiefly visceral and spastic.

Anabolic Type

Here the sufferer is usually a stout person having headaches of the Sluder's distribution, described already under sphenoidal sinus, and rheumatism in the neck, arms and legs. Either the trapezius or the sternocleidomastoid muscle shows some nodes in it. As a rule they have no palpitations and in women no dysmenorrhoea. As these patients may also suffer from gall-bladder and tonsillar sepsis, the diagnosis may be missed for years, unless one has this Vidian nerve in mind.

Now if this nasal ganglion is locally irritated, one irritates at the same time the secretory autonomic fibres, resulting in lots of sneezing and watery nasal discharge. This state of affairs will also react favourably to our treatment of the nasal ganglion.

Katabolic Type

This type is more frequently seen in women who are usually thin, fairly tall and active. They are generally under weight and run down and have a long neck, but underdeveloped breasts. They are the sufferers from tachycardia and dysmenorrhoea. They further suffer from multiple visceral complaints which we put down to be due to hysteria.

The examination of the nose reveals a deep red and fairly dry mucous membrane. In modern women one often sees the face powder sticking to the turbinals or septum. The nostrils are as a rule roomy, but mucous in the floor or in the naso pharynx may be of such consistency as to make the patient say that she suffers from nasal obstruction and discharge tickling in the back of the throat.

Treatment

The golden rule of the treatment is, that, if, any of the para-nasal sinuses show suppuration, then bring about free, spontaneous and permanent drainage of that sinus. In other cases our object should be to intercept the nerve impulses reaching the brain from the chronically inflamed but not septic mucosa of the nasal sinuses. Here in all cases except the catabolic ones, give a surface anaesthesia to the nasal ganglion with ten percent cocaine. If this conservative line fails, inject the sphenopalatine ganglion with five percent phenol in ninety five percent alcohol.

The katabolic type of case is very susceptible to cocaine, so I shall advise you to use local application of pilocarpine to the nasal ganglion.

Experience of Mastoid Surgery*

BY

Dr. H. L. ANAND.

Mr. President, Ladies and Gentlemen,

In this short paper I shall attempt to express my experience of the mastoid surgery. I was introduced to mastoid surgery in 1929, when, as a student I had to dress the mastoid wounds in the hospital wards. I recollect some appalling results. The gross infection occurred in post operated mastoid wounds. It was a time when the method of packing the wound with thick B.I.P. was still in vogue. This method obviously kept the cavity patent and healing was delayed. There were many failures—some with persisting chronic middle ear suppuration, few with post-auricular fistulae; and those which healed had large depressions and ugly scars. There were very few dry ears after a simple mastoidectomy performed on an acute condition. I remember that the patients after a mastoid operation lingered on in the hospital wards for several weeks, and then, when discharged from the hospital, they were attending the out-patients department for an indefinite period.

To-day, the patients after the mastoid operation, leave the hospital with completely dry ears and healed wound in less than two weeks. The method I practice I will briefly give you the details of simple mastoidectomy.

1. Skin incision curves widely outwards providing a large anterior skin flap which covers the bony cavity when stitched. This helps in avoiding a post operative depression in the scar.

2. I try never to disturb the surrounding muscles.

3. The diseased bone and cellular structures are freely removed with gouge and curette.

4. I close the wound except for a fine rubber tube or a baby size rubber catheter which communicates with the bony cavity. This tube is brought out from the lower end of the wound curving below and in front of the ear through the bandage and out. The outer end is closed with a sterile stopper. The tube is retained in position with few bits of sticking plaster. Through this tube the attendant injects with a syringe penicillin solution every four to six hours. It is a good practice to aspirate with another syringe the discharge from the wound before injecting penicillin solution. The tube remains in the wound for six or seven days, at the end of which, when stitches are removed, the tube is also pulled out. The external meatus of the ear is daily cleaned, without disturbing the deeper dressing of the wound. In rather severe infections, I combine the local penicillin instillation with injections of penicillin; and in some cases, even sulphadiazine tablets. In about ten days' time, the wound and the middle ear are both dry. I never see pus after the operation in the wound or the middle ear.

The same essentials apply for the radical mastoid operations, except that the posterior wound is completely closed. The rubber tube is brought out through a flap in the external auditory canal. The most important factor in my experience in getting a dry ear after a radical mastoidectomy is to close the eustachian tube by curetting the lining mucous membrane as far down as possible.

Some modifications of radical mastoid operation have been tried by me when the patient had useful hearing in the ear. In this operation, in my opinion, the question of preserving the ossicles is not so important as the problem of how to preserve the mobility of the oval and round windows, as I believe that good hearing depends on the proper functioning of these windows. This can only be achieved by an operation which leaves air space in the tympanic cavity covered by mucous membrane.

* Paper read at the First Annual Conference of the Association held at Madras in December 1948.

I have never purposely uncovered the dura mater and the lateral sinus in an otherwise uncomplicated mastoiditis, as I feel by so doing, the infection is brought a step nearer to the intra-cranial contents.

I have so far never attempted *endaural* route as practised by Lempert and others.

In a few cases facial nerve paralysis was noticed in spite of the utmost care exercised in removing the cells of the diseased mastoid bone. Fortunately, most of these eventually recovered. However those that did not, remain an everlasting stigma.

Inflammation affecting or invading the labyrinth, I have always treated with a very great conservatism. This may mean just a paracentesis of drum membrane, a simple mastoidectomy and very rarely radical mastoidectomy. In my experience, all of them excepting one, recovered without draining the labyrinth. In one case the labyrinth had to be opened when I was convinced that it was dead, and the patient having constant symptoms of vertigo, etc. In all I had to deal with 11 cases so far.

Next come the meningitis, brain abscess and lateral sinus thrombosis. I am a great believer in lumbar puncture and examination of the cerebro-spinal fluid in all cases of suspected intra-cranial complications, and the combined use of sulphanamides and penicillin. I first clear the focal area of infection surgically, *viz.* an appropriate mastoid operation is performed.

Lateral Sinus Thrombosis :—My practice has been, after performing simple, modified or radical mastoidectomy, to expose the lateral sinus to the upper end until the healthy sinus wall is reached. At this point the sinus is temporarily plugged. The lower end is exposed short of jugular bulb, and then this lower end is also plugged. The sinus is then opened—whatever blood-clot one can reach is turned out. As much of the outer wall is removed as possible. The upper plug is gradually released, until one feels assured of free bleeding—the plug is firmly replaced. Lower end is similarly dealt with. If no bleeding

occurs here, the plug is removed completely. The wound is left open and lightly dressed. Penicillin and sulpha drugs are administered in full doses. The plugs from the sinus are removed on the third or fourth day. I have never tied an internal jugular vein or opened the jugular bulb area. This is because of my belief that in a thrombosed sinus there is always an aseptic clot beyond the infected portion; and when one had opened the sinus, and removed the infected clot, and drainage is established, there is very little chance of the spreading of the thrombosis towards the heart. I have been just lucky but I have never lost a case on account of this procedure.

I have never attempted mastoid operations and fenestration to cure tinnitus, vertigo and deafness.

In the end I add that most of our modern achievements in mastoid surgery are due to the discovery of the sulphanamides, penicillin and streptomycin. We all feel that the opportunities of mastoid surgery are dwindling as the prophylactic measures against the incidence of ear diseases are increasing. The antibiotics have definitely changed the conception of surgery with ear conditions.

I close with final caution. These drugs will not by themselves, and unaided, cure, except perhaps in the earlier stages of infection. Once the pus is formed in bone or other tissues, the process may be retarded, which will simply mean masking of symptoms; but such abscesses will not resolve. These drugs cannot replace surgery if an undrained abscess is present.

Mastoid Surgery*

BY

Dr. S. G. JOSHI, M.S.

Mr. President, Ladies and Gentlemen,

Before presenting to you my little experience on mastoid surgery I should like to pay my sincere tribute to our first Hon. Secretary of this Association late Dr. Homi Gandhi under whose guidance and inspiration I had the privilege to work. I was associated with him for nearly 12 years and the paper I am presenting to you is the work done by both of us conjointly.

Time allotted to my share may not permit me to discuss the subject in detail. Moreover my predecessor Dr. Anand has lightened my task considerably by introducing the subject to you.

I am presenting to you 562 cases admitted to the King Edward Memorial Hospital, Bombay, during last 12 years which also includes 34 of my private cases. This series may be a small one, compared with those of other hospitals. Yet I believe it may give sufficient material for thought and consideration. I hope I shall be able to pass some useful information for your thought.

(Mastoid Surgery) Temporal bone surgery has made considerable strides like other branches of medicine and hazards like fenestration operation which one would shudder to undertake in the past have become as a matter of routine surgery. Thanks to sulpha drugs and penicillin.

Endaural approach stands first, thanks to the pioneer work of Prof. Holmgren of Sweden and to the master man and great technician Dr. Julius Lempert who has almost perfected this method of approach. Until I had seen and carried it out

myself, I would have not have believed or accepted such a possibility. So far as acute mastoiditis of perforative type-like the subperiosteal or Bezold's type, opinions differ. With due respect to Dr. Lempert I beg to differ from him in this respect. Postaural approach is the method of choice in such cases. So often, periphlebitis and even an extradural abscess have been the operative findings on the table and which complication however, was not diagnosed, preoperatively. In these days of sulpha and penicillin drugs, mastoid abscesses have been a rarity in other countries. It is much different with us. Endaural route is the approach of chronic radical mastoid surgery and for fenestration operation.

The second advancement has been in the use of dental drills and burrs cutting, polishing etc. in place of the usual gouges and hammer. With a little practice one is really wonderstruck how easy it is to exenterate the mastoid, leaving, behind a smooth cavity ideal for epithelization or for skin grafting. It has a further advantage in exposing the semi-circular canals and in doing the fenestration operation for otosclerosis, which cannot be accomplished by any other method.

First time I learnt the proper use of bone curettes in mastoid surgery, when I was at Lemperts Clinic. It is remarkable how easy the exposure of epitympanum, so very essential in radical mastoid operation becomes when these curettes 000 and 0000 are used. Since then I have been using these in all temporal bone surgery. Unsuccessful operation results after radical mastoid may be due to inadequate exposure of epitympanum and non-removal of infected tensor tympani muscle which can be so well done with loup and curettes. In cases of persisting otorrhoea after mastoid surgery I have used in some cases 50 mg. Radium applicator with remarkable results.

The use of magnifying loup (lenses) makes surgery more precise and easy. With a magnification of $2\frac{1}{2}$ times—one visualises all important structures, namely the foot of stapes,

* Paper read at the First Annual Conference of the Association held at Madras in December 1948.

the facial ridge which almost appear submucous and the other structures, like the chorda tympani and tensor tympani muscles.

No mastoid surgery could be carried out properly without the use of suction and irrigation.

Skin grafting :—Healing of the radical mastoid wounds should have been a problem with many of you. At least it has been my headache ever since, in a number of cases. We were not doing skin grafting following a radical mastoid operation and it used to take from 6 weeks to sometimes 3 months for the wound to be dry and epithelised. Skin grafting immediately following radical mastoid operations, allows the wound to heal within less than 3 weeks and also prevents stenosis of the canal. Skin grafts are more likely to take, on a smooth bony bed and this is secured admirably by the use of dental drills.

Even as regards healing of wounds after a conservative mastoid operation great advancement is made by the method of primary closure of the wound, allowing the wound to heal by the blood clot method, ensuring asepsis by lavaging the operated cavity and draining it at the same time by two in-dwelling fine rubber tubes (rubber tubes made from catheter No. 2 to 3 with side openings), at two extreme ends of the wound irrigating it with dilute penicillin solution (1 cc. containing 500 units) 6 hourly. At the same time penicillin injections are given 50,000 units 3 hourly for 6 to 7 days. In our latest series we have carried out this method in 12 cases with complete success. All these cases were advanced acute mastoiditis, with a subperiosteal abscess. They have healed within 8 to 10 days, requiring no further dressings. This is so comforting both to the patient and the surgeon especially if one recollects the struggle and worry to dress a young child after mastoidectomy, whose co-operation could hardly be expected. My predecessor Dr. Anand has very well stressed this method of treatment.

*Significance of facial palsy during an attack of acute otitis media :—*It usually warrants immediate active steps to be taken. However it may resolve on conservative lines or may recover after myringotomy and every case, does not always require a conservative mastoid operation.

Out of three cases of otitis media with facial paralysis one refused operation, and recovered with sulph drugs.

Two recovered after myringotomy. It does not always mean caries round the facial canal but might be due to dehiscence in the facial bony tunnel or may be of toxic origin.

One should not forget that unsuccessful operative results may not be due to any fault of the operator but could also be due to the lack of resistance and the great virulence of the infective organisms in a given case. I can site one case here. A patient came with acute otitis media with bulging membrane, when myringotomy was done, immediately on admission. He developed mastoiditis all the same. A conservative mastoid operation was then carried out. He later developed a localised extra dural abscess. The patient was reoperated. He further developed a localised temporal lobe abscess which was opened and drained. The disease progressed unabated and the patient developed a generalised meningitis and died, showing how when resistance fails any amount of surgery, however well planned and efficiently performed may yet be disappointing in its results.

The routine use of hydrogen peroxide as ear drops so commonly used by the lay public and so often prescribed by the general practitioner needs strong condemnation and should be discouraged from being used, as seen by frequent serious and even fatal complications following its use.

The following cases will bear out the above statement :—

(a) Two cases developed meningitis following the use of hydrogen peroxide as ear drops, for chronic suppurative otitis media. In one the lumbar puncture was frankly purulent and gangrenous. Both the patients died.

(b) 3rd case developed mastoiditis and meningitis. Patient was too ill for any operative procedure and died.

(c) 4th case developed acute mastoiditis. A conservative operation was done which resulted in recovery.

When a mastoid wound does not heal one has to think of the following possibilities:—

1. Incomplete operation - all infective foci not exenterated.
2. Petrositis.
3. Tuberculous mastoiditis.
4. Syphilitic infection.
5. Infection by Bacillus Pyocyaneus.
6. Ascending infection from nasopharynx. e.g. chronic sinusitis, tonsillitis and nasopharyngitis.
7. Poor resistance of the patient, anaemia etc.
8. Cholesteatomatous complications.

Anaesthesia:— Local: one per cent. novocaine or procaine hydrochloride infiltration.

General: Ether intra-tracheal.

Gas and Oxygen.

Cyclopropaine.

Two stage Operations:—Views may differ. In a case of large subperiosteal abscess I would prefer two stage operation, with an idea to minimise the bleeding at the time of operation and allowing the inflammatory oedema in the soft parts to subside. The first stage being, simple incision of the abscess, to be followed by 3 to 4 days later, by second stage i.e. a regular mastoid operation.

However some of our patients, after incision, because of relief of pain, left the hospital against medical advice and did not turn up to undergo a regular mastoid operation, with the result, they developed more serious complications, with disastrous fatal results in some and others recovered after undergoing more extensive operative procedure and some developed chronic mastoiditis. One often feels if one stage operation would have been better in these cases.

Dangers of treating mastoid abscesses with incision alone:—

Report of 4 cases that came to us 4-6 weeks of incision.

First case:—Mastoid abscess incised by general practitioner when first seen by us 6 weeks after the incision, had developed an extra dural abscess with temporo sphenoidal lobe abscess. A conservative mastoid operation was carried out which ended in a successful recovery after 4 months.

Second case:—Patient's condition was so low that operation could not be carried out and died.

Last two cases:—Extensive mastoiditis, perisinusitis and extra dural abscess with recovery after operation.

Epithelialisation of a conservative mastoid wound at times occurs and leaves behind an epithelialised tract, in spite of proper care. Some how in these patients there is a tendency for rapid epithelialisation. It has happened with us on more than three occasions.

In a few cases cholesteatomatous process continues in spite of radical surgery. It is probably in the nature of things that this should be so.

The utility or futility of scraping eustachian tube after radical mastoid operation:—

I have given it up.

The usual procedure, just before the completion of a radical mastoid operation has been to scrape the bony eustachian canal by increasing sizes of eustachian rasps, with an idea to scrape away the unhealthy granulations in the canal and the canal would subsequently be closed or sealed up, when healing was complete, thereby creating a permanent barrier against ascending infection from the nasopharynx, reaching and reinfecting the middle ear via the eustachian tube. In practice it is impossible to close the natural epithelialised passage by mere scraping. Secondly, it reveals a poor conception of the pathology of chronic mastoiditis. The tensor tympani muscle and its surrounding bony sheath which may be studded with foci of suppuration or is converted into a mass of granulation tissue which could be very well located and visualised by the use of magnifying glasses, but which is usually not looked for or is overlooked. One of the cases of failure in radical mastoid surgery is due to no attention being paid to or incomplete removal of the diseased tensor tympani muscle and the bony tunnel in which the muscle is lodged.

Diagnosis :—Mastoiditis has to be diagnosed from :—

1. Furuncle (a) with cellulitis.
(b) with granuloma with discharge at the external auditory canal.
Twice we have made this mistake, once at the operation table found a normal mastoid. In the second case the operation got postponed by a week for some other reasons and during a week's period the cellulitis due to the furunculosis subsided and no operation was found necessary.
2. Suppurative adenitis with cellulitis.—Near insertion of sterno mastoid particularly this is so when one is dealing with Bezold's abscess and when there is no perforation or discharge from the ear.
3. Parotid abscess—with fistula in the external auditory canal with granuloma round the fistulous opening.

4. Squamous Carcinoma of the external auditory canal.
We have four cases in our series.
 - (a) In one the diagnosis was missed and mastoid operation was done, when the wound would not heal. A section biopsy was done which revealed carcinomatous nature of the lesion.
 - (b) In three cases the nature of the lesion was correctly diagnosed, and proved by biopsy.

Results :—I may be permitted to mention a few words regarding the subsequent course of the mastoid wound after discharge of the patient from the hospital. Something more is desired of our present method of recording. These notes are from patients so long as they were indoor patients. For want of accommodation it is usual to discharge patients before the wound is completely healed. Dressings continue but outpatient records are not entered in the indoor-patient history papers and therefore since these results are drawn from the indoor-patient history papers, I cannot with exactness state the time taken for complete healing of the wound and whether there were any failures or fistulae formed. I can only present to you my impression and observations :—

Total No. of Cases 562.

Sex	Cases	Percentage.
Male	397	70%
Female	165/562	30%
Age	Average	
Upto 10	145	26
11 — 20	131	23
21 — 30	128	22
31 — 40	73	13
41 — 50	45	8
51 — 60	27	5
61 — 70	10	2

Youngest 2 months.

Oldest 70 years.

Nationality :

Hindu	432	71 %.
Muslim	65	11.5%.
Christian	52	9 %.
Parsee	10	2 %.
Jew	3	0.5%.

Classified according to the treatment given :—

Conservative mastoid operation		301
Radical mastoid operation		152
Modified Radical operation		9
Fistula closure		9
Incision of subperiosteal mastoid abscess only		21
Myringotomy		25
Refused operation		19
Inoperable		8
Conservative medical treatment alone with sulpha and Penicillin		18

Operative mortality :

	Deaths.	Total cases.	Percentage mortality.
Total deaths :—	16 in	562 cases	3%.

Details of Operative Deaths :—

Serial Case No. & Year	On admission.	Operation.	Results.
1. 48/1937	Acute mastoiditis	Conservative mastoid operation facial nerve palsy-meningitis.	Expired.
2. 95/1938	Incision of abscess done outside with mastoid fistula & rigidity of neck with meningitis.	Conservative mastoid.	Expired same day.
3. 97/1938	Re-operated one year after first operation.	Conservative mastoid.	Expired after two days.

Serial Case No. & Year.	On admission.	Operation.	Results.
4. 109/1939	Mastoid fistula 1 month after incision, outside brain abscess (Cerebral).	Conservative mastoid.	Expired after 21 days.
5. 118/1939	Patient 60 years old, Acute mastoiditis.	Conservative mastoid developed meningitis.	Expired after seven weeks.
6. 141/1940	Bezold's mastoiditis.	No operation Patient too ill.	Expired 2 days later.
7. 142/1940	Cerebellar abscess.	Patient stopped breathing suddenly during induction though the heart was beating regularly. Patient was kept on artificial respiration for 18 hours. Evidently the respiratory centre was paralysed though the cardiovascular centre was unaffected. Conservative mastoid with drainage of cerebellar abscess.	Expired after 18 hours.
8. 165/1940	Acute mastoiditis with facial palsy and meningitis.	Conservative mastoid.	Expired in one day.
9. 248/1943	Acute mastoiditis with meningitis.	Conservative mastoid.	Expired same day.
10. 291/1944	Chronic mastoiditis with meningitis	Radical mastoid.	Expired 4 days later.
11. 304/1944	Acute mastoiditis with meningitis.	Conservative mastoid.	Patient expired 14 days later.
12. 352/1945	Acute mastoiditis with meningitis with labyrinthitis	Radical mastoid.	Expired 3 days later.
13. 395/1945	Acute mastoiditis with abscess.	Incision abscess.	Expired in 24 hours.
14. 417/1947	Acute mastoiditis with meningitis.	Conservative mastoid.	Expired after 8 days.

Serial Case No. & Year.	On admission.	Operation.	Results.
15. 533/1948	Acute mastoiditis with meningitis Patient semi conscious.	No operation.	Expired after 3 days.
16. 535/1948	Consulsions and mastoiditis.	Conservative mastoid.	Expired 6 days later.

Total deaths—16 in 562 cases *i.e.* less than 3%.

Of these 16 cases no operation was done in two cases.

Out of 14 cases operated :—

11 cases in a serious condition with meningitis and often in an unconscious state and were bad risks.

3 died after conservative mastoid operation.

Of these 3 :—

Two died of meningitis, following injury to dura with resulting, leakage of C. S. F.

One had broncho-pneumonic complications.

Facial Nerve Palsy:

VII nerve palsy is not an uncommon complication of mastoiditis.

Of the total of 18 VII Nerve Palsies :—

4 were pre-operative.

14 developed post-operative palsy. Of these 14—3 cases showed signs of facial weakness at the time of operation while the rest 11 cases showed signs of facial weakness from 1 to 4 days after operation and these cases were mild and recovered completely when under treatment.

Pre-operative facial palsy.

1. 165/1941	Acute Mastoiditis with VII nerve palsy and meningitis	
2. 287/1944	Chronic Mastoiditis VII nerve palsy,	7 days duration.
3. 288/1944	Chronic Mastoiditis	12 days palsy.
4. 443/1946	Chronic Mastoiditis	5 days palsy.

Post-operative facial palsy.

1. 45/1938	Conservative mastoid	
2. 48/1938	Conservative mastoid	VII nerve palsy, meningitis and expired.
3. 89/1939	Conservative mastoid	Hard ivory, type of mastoid.
4. 126/1940	Conservative mastoid	Palsy after 4 days.
5. 193/1941	Radical mastoid	On 2nd day of operation.
6. 233/1942	Conservative mastoid	On 2nd day of operation.
7. 246/1942	Radical mastoid	On 2nd day of operation.
8. 294/1944	Conservative mastoid	On 4th day of operation.
9. 385/1945	Radical mastoid	Just weakness on 2nd day.
10. 417/1946	Radical mastoid	VII nerve Palsy after 10 days.
11. 426/1946	Conservative mastoid	VII nerve Palsy after 4 days.
12. 482/1947	Radical mastoid	VII nerve Palsy on 5th day.
13. 487/1947	Radical mastoid	VII Nerve Palsy at the time of operation.
14. 492/1947	Radical mastoid	VII Nerve weakness on 2nd day.

Lateral Sinus Thrombosis :—5 cases.

When once you open the sinus you have got to ligature its lower end. The distal aseptic clot may not remain as such and there is no knowing when it may get dislodged. Often it is difficult to decide if there is a thrombosed clot. There may be a condition of perisinusitis only.

Post-operative 1 died Pre-operative 4.

Ligature and excision 2 cases recovered.

No operation : 1 case recovered.

Refused operation : 1 case expired 3 weeks later.

Brain abscess :—6 cases: Post-operative 1 died { 3 recovered
 Pre-operative 5 — { 2 died
 Cerebellar 3 2 Recovered.
 1 Expired.
 Cerebral 3 1 Recovered.
 2 Died.

Injury to dura with leakage of C. S. F. 3 Cases.
 2 died of meningitis
 (in pre-penicillin
 days).
 1 recovered after
 sulpha and peni-
 cillin.

Injury to sinus :—Has happened with us, a number of times. It is difficult to give the actual figures. However no case was lost because of bleeding, nor did sinus thrombosis follow after injury to the lateral sinus.

1. Atypical cases :—Anuerysm of the internal carotid artery in the carotid canal: Patient presented a painful granuloma, a fleshy mass at the external auditory canal, bled easily on touching and was suggestive of chronic mastoiditis.

On biopsy, profuse bleeding followed and so the canal was packed and bleeding controlled.

Section report showed the character of blood clot.

X-Rays showed a sclerosed mastoid. Patient was operated.

Congested veins: No abnormality detected in the mastoid bone.

Patient died in the ward.

Postmortem :—No abnormality detected in the brain or dura. There was a bulge in the right cavernous sinus. On dissecting further an anuerysmal dilatation of the carotid artery in the carotid canal was detected—a leaking type of anuerysm. Patient used to get occasional post-nasal bleeding and this could now be explained by the blood tracking from the middle ear along the eustachian passage.

2. Erysipelas :—Following a radical mastoid operation the patient developed spreading cellulitis which travelled the whole globe before it settled. There was complete recovery after repeated multiple incisions. For over a year he was left with resurgically clean scalp without a single hair to be seen.

3. Diptheretic Mastoiditis :—Child of 8 years had chronic otorrhoea, left ear with granulations. Detected just by chance, as swab from the discharge, sent for preparation of a routine autovaccine preparation. Otorrhoea stopped after a full course of anti-diptheretic treatment.

4. Tuberculous Mastoiditis: 5 cases.

Four cases primary, lungs unaffected.

One secondary to : miliary lung tuberculosis.

Of the four one was operated for a conservative mastoid four years before, with complete healing. He was re-admitted into the hospital four years after the mastoid operation with a large fluctuating swelling in the left fronto parietal region. X-Ray showed extensive caries of the left fronto parietal region. Kahn test was negative. No tubercle bacilli in smear from ear discharge was seen. Section of bone and granulation showed tuberculous nature of the disease.

2nd case had bilateral conservative mastoid operation done three times at another sister hospital with sinuses on either side. Patient was put up for re-operation. On further thought, examination of the ear discharge showed tubercle bacilli in smear.

3rd case was admitted with tubercular meningitis. Patient died.

4th case clinically, diagnosed as T.B. mastoiditis. He had multiple tympanic perforation and a sinus over the mastoid. No operation was done.

5. **Silent type of mastoiditis**:—Patient male 35 years of age was admitted for a large fluctuating swelling over the right fronto parietal region of 4 months duration, high up above the mastoid process. There was no pain, nor tenderness. There was neither fever nor any history of otorrhoea or any previous ear trouble. X-Ray showed clear cut rounded defect over mastoid process. Uneventful recovery followed after conservative operation with primary closure.

(b) Patient aged 40 years had slight ear ache with pinkish membrane. There was no mastoid tenderness or swelling. Tympanic membrane was intact. Patient looked ill. X-Ray showed marked destruction of bone. On operation extensive mastoiditis with an extra dural abscess, over temporo sphenoidal region was found.

6. **Squamous Carcinoma of external auditory canal simulating chronic mastoiditis. Four Cases**:—One patient showed pale granulations in the floor of the external auditory canal at the junction of bony and cartilaginous part. Patient complained of slight uncomfortable feeling. There was no pain. A biopsy was advised. Patient did not turn up and was being treated by another consultant. Patient came for re-examination after three months with facial palsy and severe pain. Section taken this time showed the character of squamous carcinoma grade II.

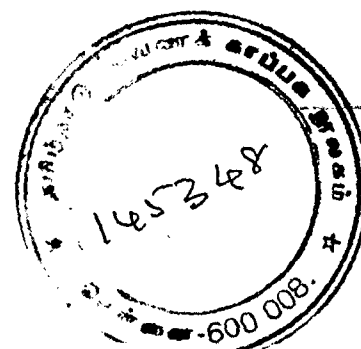
2nd case presented a polyp and discharge at the external auditory canal. A radical mastoid operation was done and the wound would not heal. Patient developed limitation of the movements of the lower jaw almost like lock jaw. Seen by the orthopedic surgeon who advised treatment of the lock jaw

after the mastoid wound had healed. Biopsy from the granulation tissue from the mastoid wound showed the character of squamous carcinoma grade III, a highly malignant lesion.

Summary:—562 cases of mastoiditis admitted to the King Edward VII Memorial Hospital in the last 12 years have been reviewed. Though the incidence of mastoiditis has been lowered and there are reports of recoveries of cases of acute mastoiditis now and then with sulpha and penicillin therapy, the place of surgery in mastoiditis is unchanged. These drugs supplement surgery but cannot replace it. Mastoiditis still happens to be a serious surgical complication and one meets with fatalities on and off in spite of intensive combined treatment with surgery, penicillin and sulpha drugs.

Endaural approach and the use of magnifying loupe and the use of dental burrs have been further important additions in the progress of temporal bone surgery. In fact no fenestration surgery is possible without them. Primary closure after operations for acute mastoiditis and the use of skin grafts in chronic mastoid and fenestration operation, has shortened the postoperative healing time to a considerable extent and have thus enabled the patients to return to their work in 2 or 3 weeks time after the operation. Acute mastoiditis with a subperiosteal abscess is not at all of uncommon occurrence in our country. Over 50 per cent. of cases were operated for acute mastoiditis.

My thanks are due to Dr. Rege who helped to collect the data for the paper and to the Dean of King Edward VII Memorial Hospital for allowing me the use of the hospital records in preparing this paper.



A Case of Laryngeal Lipoma

BY

Dr. B. S. BALGE, M.S., D.L.O.

Innocent tumours of the larynx are comparatively uncommon except papillomas; even the papillomas are now believed to be the result of a virus infection.

In my six years of institutional practice, I have seen one case of a fibroma in the vallecular fossa and one case of an innocent tumour in a Sikh boy which resembled the one which is being reported here. Unfortunately the boy died after a preliminary tracheotomy and the nature of the tumour remains unknown. Lipomas are very rare in the larynx*. Palmer and Mehler found 32 cases reported over 42 years. I am, therefore, describing the following case.

Mrs. K. J., aged 27, consulted me on 15—11—1949 for the following symptoms;

1. Noisy respiration, especially marked on lying down at night and on exertion, from the age of two years.
2. Recurrent attacks of cough and fever.

Past History :—The tonsils and adenoids were removed at the age of 17, without any improvement in the symptoms. The chest was screened and pulmonary tuberculosis was excluded. She had been treated for anaemia and chronic bronchitis.

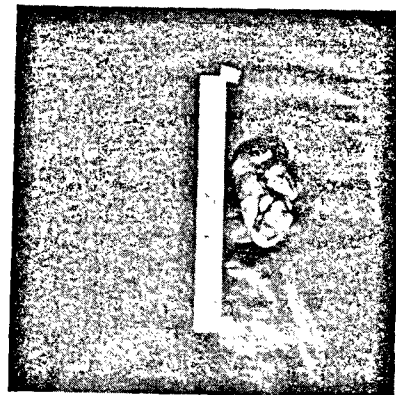
Physical Examination :—She was moderately anaemic and of a fair build. The teeth were unhealthy. On indirect laryngoscopy, a large well-defined-spheroidal tumour of the size of a sour lime was seen behind the epiglottis on the left side. The vocal cords were not visible.

* Palmer and Mehler, Laryngoscope 46, 653 (September) 1936.

LARYNGEAL LIPOMA



Low Magnification.



Entire Tumour after removal.



Incision indicated by Local Scar.

She was admitted to the Civil Hospital here, on 7—12—1949. The following investigations were done:

1. Screening of the chest : Lungs clear.
2. Total red cell count : 2·95 millions/ cmm
 Haemoglobin : 60%
 Blood Group : II (A)
 Blood Pressure : 120 systolic, 90 diastolic.

A median tracheotomy was done under local anaesthesia the day after admission. After attention to oral hygiene, the growth was removed five days later by a right sided, trans-thyroid pharyngotomy, under cervical block and ether administered through the tracheal cannula. (The prevertebral muscles were not sutured over the carotid sheath to the sternomastoid, as the operation took a long time, about 3½ hours). The growth lay just under pharyngeal wall. It was enucleated and was found to be much larger than expected. After removal, the growth was seen to have occupied a small depression in the left ary-epiglottic fold. The muscle-fibres of the aryteno-epiglottideus were seen in the bed. The redundant mucosa was cut away and the mucous membrane sutured. The pharynx was closed over a large-sized rubber catheter. The wound was closed in layers with drainage.

A blood transfusion (250 cc) was given. Penicillin was given for 2 weeks after the operation.

The following are the salient features of the convalescence :

1. The feeding tube had become displaced and had to be removed on the day following operation. At this time the patient had fever (temperature 101F°) and the pulse rate was 140/ min.
2. The temperature came to normal on the following day. The pulse rate came down gradually in the succeeding days. The nutrition was kept up by the intravenous and rectal route, till the fourth day, when the feeding tube could be re-introduced.

3. The tracheal cannula was removed after 7 days.
4. The nasal feeding was discontinued after 10 days.
5. Small abscesses formed and discharged the linen ligatures which were used.
6. There was oedema of the right ary-epiglottic fold and the right pyriform fossa was obliterated. This persisted in spite of penicillin. The patient was given iodides orally and milk injections. The oedema gradually became less and the patient was discharged on 11-1-1950 with residual oedema.

Follow up:—The patient was seen again on 20-3-1950. The wound had healed soundly. The larynx was normal. There was neither oedema nor recurrence. The patient had no difficulty in breathing and was symptom-free.

My thanks are due to, Dr. F. De Souza, F.R.C.S.E., Dr. G. V. Barve, M.S., Dr. H. I. Jhala, M.D., F.C.P.S., Dr. A. Pereira, M.B.B.S., Dr. P. P. Sheth, F.R.C.S., Dr. B. M. Joshi, L.C.P.S. and Mr. Munir Kadri.

Abstracts

CYSTS ON THE BASE OF THE TONGUE IN INFANTS

By SHAPIRO, M.J.,

(*The Annals of Otolary, Rhinology and Laryngology* Vol. LVIII No. 2, June 1949).

The author reviews in detail, the development of the base of the tongue, the thyroglossal tract and the lingual - duct of *Wenigowski*. He suggests the possibilities of the cysts being:—

1. Lingual Duct.
2. Thyroid (four types) including thyroglossal tract.
3. Mucous glands.
4. Cystic lingual tonsil.
5. Foetal cell remnants as in a case of cystic teratoma of the tongue in an infant reported by Nicholl and Teacher.
6. Dermoid.

Then he reviews the symptoms, diagnosis and emphasises the use of palpation or direct laryngoscopy. In three of his four cases the treatment was simple incision and drainage; but in the fourth complete excision was resorted to.

N. R. AMESUR.

THE TOXIC EFFECTS OF STREPTOMYCIN ON THE EIGHTH CRANIAL NERVE

By KARL BERG OF OSLO,

(*The Annals of Otolary, Rhinology and Laryngology* Vol. LVIII, No. 2, June 1949).

The author describes the histopathological appearance of the Vestibular apparatus from the toxic effects of Streptomycin in twenty five experimental cats. He shows that the primary lesion is localised in the sensory epithelium of the labyrinth; with slight secondary changes in the vestibular ganglion and in Dieter's nucleus. In one cat he found degenerative changes in the organ of Corti.

N. R. AMESUR.

THE PRESENT POSITION OF FACIAL NERVE SURGERY

By JOSEPHINE COLLIER F.R.C.S., London, England,

(*The Annals of Otolary, Rhinology and Laryngology*, September 1949, Vol. LVIII, No. 3.)

The author discusses the problems of facial nerve injury after a mastoid operation. It is important to note accurate history of onset of paralysis and correct interpretation of findings by diagnostic aids to enable

us to give a clear picture of the condition at the site of injury. Electromyography and electric reactions etc., are great modern diagnostic aids. The cause of injury to the nerve may be either compression by a detached bone or a pack or due to a tear in the nerve sheath or its fibers. The transient block of the nerve due to compression causes paralysis occurring within a few days or weeks: a spontaneous recovery follows. Clinically it is not possible to differentiate between the paralysis due partial or complete interruption of the axons. An exploration alone decides the cause. Modern operative technique minimizes scar tissue formation and thus facilitates satisfactory nerve regeneration. The use of fibrin foam and binocular operating microscope has been recommended by the author. The author condemns the use of sulphonamide powder in the wound and the practice of curetting excessive granulation tissue: Alginate dressing postoperatively has got good scope after nerve operation in mastoid. The plastic surgeon can prevent the wasting of denervated facial muscles by the use of temporary facial strips superficial to the muscles, tarsorrhaphy etc. The type of operation necessary should be given a good consideration. The scope for further progress is in:—

1. Improvement in after treatment of radical mastoid cavity after nerve grafting ensuring early epithelization which will not hamper regeneration of nerve.
2. Better treatment of the denervated facial muscles to prevent their wasting and stretching by the physiotherapist and the plastic surgeon.
3. More precise indications for operations—
 - (a) In early cases can nerve degeneration be prevented or is inevitable?
 - (b) In late cases where degeneration of nerve has occurred what is the optimum time for exploration?

N. K. APTE.

IRRADIATION OF NASOPHARYNX

By D. F. PROCTOR, M.D. Baltimore,

The Annals of Otolary, Rhinology and Laryngology, September 1949, Vol. LVIII, No. 3.

The author discusses the value and limitations of the irradiation therapy of nasopharynx. The use of irradiation therapy originated in Dr. Crowe's Clinic at The John Hopkins Hospital in 1924. The lymphoid tissue is normal constituent of the nasopharyngeal mucous membrane; hence it will recur and hypertrophy under the stimulus of infection and allergy inspite of the most thorough surgical removal of adenoids. Lymphoid tissue is fortunately very sensitive to irradiation. Small doses may suffice to reduce the size of nodules, flatten the crypts and crevices and discourage subsequent hypertrophy. One should not be tempted to rely upon it as a panacea.

The author classifies the patients suitable for irradiation as follows:—

- (a) Those with hearing impairment due to lymphoid tissue obstructing the tubal orifices.

- (b) Those with recurring acute respiratory or ear infections originating in infected adenoid tissue.
- (c) Some patients with bronchial asthma on basis of bacterial allergy.

The dosage recommended by Dr. B. T. Field and Dr. Russel Morgan is:—maximum dosage in 10 mgm. hrs. with 0.3 m. m. Monel metal filter is approximately 1600 r. The dose is much less than this because of air spaces between the applicator and the tissue treated. Fear of carcinogenic effect is futile if not more than two or three courses are given.

N. K. APTE.

SURGERY OF MENIERE'S SYNDROME: EVOLUTION OF NEUROSURGICAL AND OTOLOGIC PROCEDURE

By FRANK B. LATHROP, M.D., (Boston),

(Annals of Otolary, Rhinology and Laryngology, September 1949, Vol. LVIII, No. 3.)

The author discusses the various surgical procedures advocated in the treatment of Meniere's syndrome. An operation is indicated when medical treatment fails to alleviate the acute episodes of intractable vertigo, tinnitus and disability of labyrinthine hydrops.

The Otolary aims at interruption of neurogenic impulses by disruption of vestibular end organs; while the neurosurgeon aims to disrupt the flow of neurogenic impulses between the vestibular end organs and vestibular nuclei.

Labyrinthine approach:—

Avulsion (Cawthorne's method) or Electrocoagulation (Day's method) of the membranous horizontal semicircular canal, and vestibule. Period of hospitalization and rehabilitation is less. Period of economic incapacitation experienced by the patient is slightly longer after avulsion of semicircular canal.

Resection of the eighth nerve:—

Total resection of the nerve—Dandy's intracranial route partial resection of the nerve—differential resection of the nerve by Mc Kenzie. This is ideal operation as it does not affect hearing. It is suitable for patients in whom the hearing is bilaterally good or the disease is thought to be bilateral.

(Both operations are technically more difficult.)

Other operations advocated:—

- (1) Injection of alcohol into the peri-labyrinthine fluid
 - via. oval window...Wright's method,
 - via fistula in semicircular canal...Mellison's method.
- (2) Destruction of vestibular end organs and organ of Corti... Lempert's method.

- (3) Attack on the endolymphatic sac ...Portman's operation.
- (4) Removal of stellate ganglion and ligation of vertebral artery...Passe.
- (5) Fenestration, denervation of the tympanic plexus, and section of the chordatympani nerve as advocated by Dr. Samuel Rosen of New York.

N. K. APTE.

FUNCTIONS OF THE PAROTID GLAND

By LOUIS NASH M.D. & Lewis F. MORRISON, M.D.

Annals of Otolaryngology, Rhinology and Laryngology, Vol. LVIII, No. 4, December 1949.

The author has reviewed medical literature for the last seventy-five years and has given clear picture of the normal function and forms of the parotid gland.

Functions of the parotid gland are:—

- (1) The fluid secreted protects, moistens and cleanses the internal structures and upper oesophagus.
- (2) The enzymes aid in the digestion of certain carbohydrates and nucleoproteins—Ptylin.
- (3) There is hidden a poorly understood factor in the gland that has an effect on circulating blood sugar. It is debatable whether the factor is antagonistic to insulin or pancreas stimulating.
- (4) The normal uric acid content of the parotid secretion is constant. (Hence it is an index of actual metabolism of the gland or its cellular activity.)
- (5) The potassium thiocyanate content of the secretion is inversely proportional to the blood pressure. There is inter relationship between it and thyroid gland.

The role of alkaline - phosphatase and glucose in the secretion is not properly understood.

The author has described the nerve supply of the gland in detail.

The factors causing the clinical disturbances in the function of the gland are discussed in detail. The plan of laboratory investigations suggested by the author as an aid in the diagnosis of disturbances in the form and function of the parotid is as follows:—

- (1) Microscopic examination.
- (2) Culture.
- (3) Volume and rate of secretion.
- (4) Uric acid content as a measure of the gland metabolism and function.
- (5) Salivary amylase, its proportion to the serum amylase.
- (6) Thiocyanate level.
- (7) Biopsy.

N. K. APTE.

INTERNATIONAL COURSE IN AUDIOLOGY STOCKHOLM, SEPTEMBER, 1950

*The Journal of Laryngology and Otology, March 1950, Vol. LXIV, No. 3,
General Notes—Joint Advisory Committee in Otolaryngology.*

In a letter to the editor, published in Volume 37, No. 6 of *Acta Otolaryngologica* it was proposed that a practical course in audiology should be arranged in Stockholm this year.

It envisages many important subjects, with main emphasis on the practical training. The course is to run from September 11th to 20th. The fee of the course will not exceed 250 Sw. Crowns, of which 100 Cr. should be sent together with the application for enrolment, which is binding.

The following teachers will deliver the lectures:—

Bijtel, Amsterdam.	de mare, Karlstad.
Bordley, Baltimore.	Peyser, Stockholm.
Carhart, Chicago.	Ruedii, Zurich.
Cawthorne, London.	Shambaugh, Chicago.
Dishoeck, Amsterdam.	Sirala, Edinburgh.
Ewing, Manchester.	Simpson-Hall, Edinburgh.
Freckner, Stockholm.	Sourdille, Strasbourg.
Furrer, Zurich.	Stevens, Havard.
Grieg, Washington.	Tato, Buenos Aires.
Groen, Utrecht.	Tegner, Stockholm.
Hardy, Baltimore.	Vetter, St. Gallen.
Holmgreen, L., Stockholm.	Zwislocki, Basel.
Holmgreen, G., Stockholm.	
Huizing, Groningen.	
Knapp, Boston.	
Larsen, Odense.	

Lempert, (He will bring with him Dr. Meltzer, Dr. Weaver, & Miss. Dorothy Wolff.), New—York.

Applications for enrolment together with the deposit for the hotel rooms to The Secretary: 33 Birger Jarlsgatan, Stockholm. C., Sweden
Telegram: Catgner, Stockholm. C. A. Tegner—Secretary.

N. K. APTE.

CYSTS OF THE MAXILLA

By Russel A. SAGA, M.D.

*Annals of Otology, Rhinology and Laryngology
Vol. LVIII, No. 4, December, 1949.*

The author has discussed the different types of maxillary cysts, their common characteristics, their diagnosis, and treatment.

Characteristics of these cysts are:—

- (1) Location in the maxilla.
- (2) Containing straw coloured fluid with cholesterol crystals.

- (3) Slow development.
- (4) No symptoms until they reach such size as to cause pressure symptoms or paresthesia due to pressure on the fifth cranial nerve.
- (5) Pain and foul discharge when infected.

Different types are:—

- (1) Radicular cysts. (2) Follicular cysts. (3) Median maxillary cysts.

Diagnosis is by aspiration, X-ray, injection of lipiodol into the maxillary sinus and in the cyst.

These have to be differentiated from (1) adamantinoma (2) odontoma. (3) carcinoma. (4) subperiosteal abscess.

Treatment is by:—

- (1) Simple enucleation of the cyst lining and dressing.
- (2) Enucleation of lining and a nasocyst window.
- (3) Removal of the posterior cyst wall and conversion of two cavities into one followed by a naso-antral window.

N. K. APTE.

RHINOTOMY FOR EXPLORATION OF THE NASAL PASSAGES AND THE ACCESSORY NASAL SINUSES

By J. E. BORDLEY & W. P. LONGMIRE,

Annals of Otolaryngology, Rhinology and Laryngology, Vol. LVIII, No. 4, December 1949.

The author has described a new operative procedure which ensures direct external exposure of intranasal spaces and the surrounding nasal sinuses with minimal facial scarring and disfigurement. The operation is suitable where the usual intranasal operations would not afford adequate exposure. The operation is indicated in patients with extensive intranasal tumours, who have been operated previously many times, or with local osteomyelitis. The author has described the steps of operation in detail, illustrated with good diagrams.

N. K. APTE.

ADENOMA OF THE TRACHEA

By HOWARD McCART, M.D.,

Annals of Otolaryngology, Rhinology and Laryngology, Vol. LVIII, No. 4, December 1949.

According to the author this tumour is not of common occurrence. Only four cases have been reported. Histopathology shows a great resemblance to a mixed salivary tumour. The tumour is locally malignant with a tendency to infiltrate locally. Dyspnoea is the only symptom of late onset; cough and haemoptysis are rare. Diagnosis may be by indirect

or direct laryngoscopy and biopsy. Many cases are discovered at post-mortem accidentally. The tumour originates from the secretory ducts of the tracheal glands. Treatment is by an external operation; but total laryngectomy is required if the tumour has infiltrated locally.

N. K. APTE.

BRONCHOPULMONARY ANATOMY

By CHEVALIER & JACKSON, M.D.,

Annals of Otolaryngology, Rhinology and Laryngology, Vol. LVIII, No. 4, December 1949.

The segmental concept of bronchopulmonary anatomy is very useful for—

(1) *Lung abscess*:—facilitates external drainage and postural drainage endoscopic drainage and endobronchial instillation of drugs like penicillin, sulphonamides etc.

(2) *Bronchiectasis*:—Overholt says as it is a segmental disease; it requires an economical segmental resection especially in bilateral cases.

(3) *Tumour*:—bronchoscopy detects early segmental atelectasis. Pneumonectomy or lobectomy ensures better chances of cure.

(4) *Tuberculosis*:—The disease affects posterior or superior segment of the lower lobe and not apical. It is a bronchopulmonary disease.

(5) *Foreign bodies*:—Removal of these must not be attempted without proper localization by roentgenograms.

The author has described a standard clinical terminology which is acceptable to the bronchologist, thoracic surgeon and radiologist.

N. K. APTE.

RECENT ADVANCES IN BRONCHOLOGY AND IN THE DIAGNOSIS AND TREATMENT OF PULMONARY DISEASES

By H. J. MOERSCH, M.D.,

Annals of Otolaryngology, Rhinology and Laryngology, Vol. LVIII, No. 4, December 1949.

The author has described recent advances regarding diagnostic and therapeutic procedures of pulmonary diseases. New instruments, gadgets, bronchoscopic motion picture camera are the outstanding accomplishments.

(1) *Middle lobe syndrome*:—Compression of the middle lobe bronchus due to an enlarged lymphatic gland causes obstructive pneumonitis with suppuration of non-tuberculous origin. It is mistaken for pneumonia or cancer due to recurrent episodes of cough, fever and haemoptysis. Lobectomy is the treatment.

(2) *Asthma*:—Stenosis of the superior division of the bronchus to the lower lobe accounts for asthma or bronchiectasis.

(3) *Malignant disease*:—Cytologic examination of the bronchial secretion or sputum not only enables to diagnose cancer but to distinguish different histologic types of cancer. A negative report does not exclude cancer. Alveolar cell carcinoma has multicentric origin. Adenoma or cylindroma can be diagnosed by bronchography and X-ray.

(4) *Tuberculosis*:—Bronchoscopy is necessary to know the course and progress of the disease during streptomycin therapy. Dihydro-streptomycin has less neuro-toxicity. Combining streptomycin with para-aminosalicylic acid does away with the drug resistance.

(5) *Aortic aneurysm and congenital anomalies*:—Angiography and bronchoscopy are useful in diagnosis.

(6) *Bronchogenic cyst*:—Bronchoscopy is helpful to find whether it has undergone carcinomatous change.

(7) *Atelectasis in the new-born*:—In urgent cases bronchoscopy is to be instituted.

(8) *Fibrocystic disease of the pancreas*:—Bronchoscopy relieves the associated lung condition.

(9) *Intra-thoracic thyroid tumour*:—By administration of radioactive iodine the thyroid tissue concentrates the isotope. By passing a Geiger counter over the chest diagnosis is established.

(10) *Aerosol therapy*:—Good for selected cases of bronchiectasis bronchitis, lung abscess and purulent pneumonitis. Bronchoscopy and cytologic study and culture are useful to know the cause.

N. K. APTE.

TONSILLAR FUNCTION—REVIEW OF THE EVIDENCE

By A. J. WRIGHT (Bristol),

The Journal of Laryngology and Otology, January 1950, Vol. LXIV, No. 1.

The author reviews the available evidence as to the function of subepithelial lymphatic system e.g.—tonsils, Payer's patches, appendix, lymphoid tissue at the pyloric end of stomach. They have a common function as is seen by their uniformity of structure, connections and relationship to the neighbouring parts. The lymphatic system is highly developed in early life when immunity is being built up against infection and atrophies in old age.

Functions of lymphatic system are:—

- (1) Return lymph rich in proteins into general circulation.
- (2) Remove waste products of cell metabolism.
- (3) Lymph-nodes act as settling chambers and filters removing iner foreign bodies and micro-organism from circulation.
- (4) Absorb fat in intestinal lymphatics.

The primary function of subepithelial lymphatic system according to the author is sampling of the micro-organism in our environment with induction of samples into the lymphatic system. Immunity is then developed as a result of defensive materials elaborated in the lymphatic system. Natural immunity is developed as the samples come in contact with the actively phagocytic lining of the spaces in the lymph gland and the tightly packed lymphocytes therein.

Tonsils and adenoids bear the brunt of bacterial attacks as they sample the content of micro-organisms in the inspired air and the foodstuffs taken in. The removal of tonsils does not cause any undesirable effects but prevents further attacks of inflammation and renders individuals less susceptible to diphtheria, scarlet fever and acute rheumatism. The subepithelial lymphoid tissue must be removed when it becomes the site of the disease during their fight for the development of immunity.

N. K. APTE.

CRITERIA FOR CONSULTANTS AND SPECIALISTS

British Association of Otolaryngologists - Annual report of Council 1948-49.

Journal of Laryngology and Otology, January 1950, Vol. LXIV, No. 1.)

The Council recommended the adoption of the following criteria:—

- (a) Consultants and Specialists must be engaged solely in the practice of Otolaryngology.
- (b) Consultants and Specialists shall have a minimum of five years training experience in Otorhinolaryngology after qualification.
- (c) To be approved as a Consultant or Specialist a candidate must hold or have held an appointment as a Surgeon in charge of or an Assistant surgeon in an Ear, Nose, and Throat department of a hospital, which department must include an outpatient department and beds set aside for reception of patients suffering from diseases of the ear nose and throat.
- (d) Consultants must hold an approved higher degree or diploma.

N. K. APTE.

STREPTOMYCIN IN TUBERCULOSIS—

By M. ARONVITCH & N. LEVIN, Montreal,

Canadian Medical Association Journal 1949, IX 1,577.

The author records the results of treatment with streptomycin in forty-four cases of tuberculosis in over one year. Streptomycin is bacteriostatic. It has shortened the stay in sanatorium by months or years. Oral, laryngeal, and pharyngeal cases respond exceptionally well. The complications of the drug, can be disregarded if daily dose is one gram per day

by two intramuscular injections because, these wear off with discontinuation of the drug. Streptomycin resistance can be avoided by advocating single course for two months. The second course of treatment if found necessary was given after two months of observation.

N. K. APTE.

BLAST HYPERAEMIA OF THE TYMPANIC MEMBRANE

By F. BOYES KORKIS (Lond.).

Journal of Laryngology and Otology, February 1950, Vol. LXIV, No. 2.

The author has described a syndrome which occurs with sufficient frequency to make it a fairly common entity in infantrymen, artillerymen etc. The syndrome comprises a triad of signs e.g.,

- (a) Exposure to a source of blast.
- (b) Characteristic type of attic hyperaemia persisting for long periods of time.
- (c) Inner ear deafness, demonstrable on objective examination.

Blast hyperaemia of the tympanic membrane presents a pattern which can be readily differentiated from ordinary inflammation of the drum and middle ear. In traumatic hyperaemia, three vessels are seen in the postero-superior quadrant in the attic region, posterior to the short process of malleus. The vessels cross the posterior-malleolar fold and make towards the umbo, running along the posterior border of the handle of malleus with a convexity anteriorly. In acute myringitis there is general reddening of attic region, malleolar flush along the handle of malleus, the radial perimalleolar vessels, and circumferential vessels. Tympanic branch of internal auditory artery, takes part in the vascular supply of the middle ear with the other arteries. This explains the associated type of nerve deafness, due to the pressure of exudation fluid from the dilated inner ear vessels, upon nerve filaments of hair cells. Audiometry reveals a high tone loss of hearing in all cases in which hyperaemic appearance is noted.

The author suggests further investigation as regarding blood supply of the drum and follow up of cases to know the duration of high tone loss, and to know whether that loss is temporary or permanent.

N. K. APTE.

MENIERE'S ATTACKS AND MENIERE'S DISEASE

By HANS BRUNNER,

The Journal of Laryngology and Otology, March 1950, Vol. LXIV, No. 3.

According to the author, the vasomotor labyrinthitis is responsible for Meniere's attacks, and the degenerative changes of sensorial organs usually associated with hydrolabyrinth are responsible for Meniere's disease. The

vasomotor labyrinthitis is the result of increased permeability of the blood-vessels of the internal ear, which in author's opinion is caused by toxins including a virus infection, or by histamine or H-substances indicating an allergic mechanism, or by toxins plus allergy. The cochlear and labyrinthine findings obtained in the intervals between the attacks is variable. The objective and subjective symptoms of Meniere's attacks vary.

The writer's findings are shown in the following table:—

Otological findings on the involved side

	Cochlea Slight perceptive deafness	Labyrinth Hypo-excitability (Caloric test only)
Nystagmus to the involved side.	Marked deafness Slight perceptive deafness Perceptive deafness	Normal Normal Non-excitability
Nystagmus to uninvolved side.	Slight perceptive deafness Mixed deafness Normal Normal	Normal Hypo-excitability Non-excitability Hypo-excitability (transitory)

Tinnitus and diminution of hearing is the principal symptom of Meniere's disease, but dizziness is the outstanding feature of Meniere's attacks. The genuine Meniere's attack is invariably associated with a spontaneous nystagmus which is of highest intensity at the climax of the attack.

The writer has suggested the following classification of the subjective symptoms of Meniere's attacks:—

- (1) Grand attacks — Consist of labyrinthine symptoms e.g., dizziness, nystagmus, disturbances—equilibrium plus cochlear symptoms e.g., tinnitus and deafness, headache and projectile vomiting.
- (2) Incomplete attacks — Consist of labyrinthine or cochlear symptoms.
- (3) Abortive attacks — Are fleeting grand attacks, consisting of dizziness, increased tinnitus and transitory deafness.
- (4) Equivalents — Dizziness is completely replaced by headache or gastro-intestinal troubles. Nystagmus is present.

A definite prognosis cannot be made regarding the attacks or the damage to the internal ear due to the attacks.

Treatment is

- I. Symptomatic — Drugs acting on cerebral cortex or the vagus endings or the vagus centers or the sympathetic nerves.

Drugs which counteract histamine sensitivity or a hypothetical disturbance in the metabolism of water and salts.

- II. Mutilating treatment — Aims at a destruction of the functions of the labyrinth.

- (1) Drugs acting on the cochlea first and then on the labyrinth.
(2) Drugs acting on the labyrinth first and then on the cochlea—e.g., Streptomycin. Disadvantages are hospitalization and bilateral labyrinthine damage.

Surgery is the exception rather than the rule in the treatment of Meniere's disease.

N. K. APTE.

CALCIUM DEFICIENCY



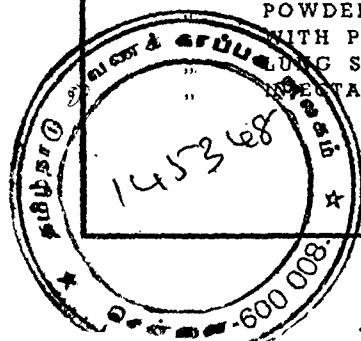
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