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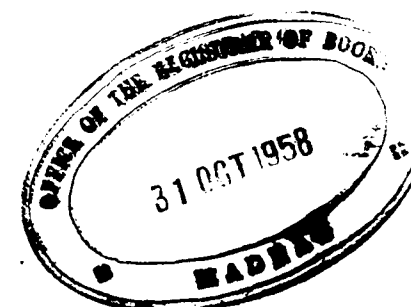
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INDIAN JOURNAL OF OTOLARYNGOLOGY

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OFFICIAL SCIENTIFIC JOURNAL OF THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Indigenous Drug combination in the treatment of Rhinosinal Infections and Allergic Rhinitis

(A Preliminary Report on the Study of the Effect of SEPTILIN*)

BY

Dr. R. A. F. COOPER, M.S.

AND

Dr. N. R. MERCHANT, M.S., D.O.R.L.

The modern scientific world today is becoming increasingly aware of the wealth of therapeutic agents of our ancient indigenous medicine. With the world-wide acclaim of India's wonder-drug, *Rauvolfia serpentina*, the scientific world may be anxious to accept other indigenous drugs that have been scientifically investigated.

Struck by the claim that some of the indigenous remedies have marked anti-infective properties, it was decided to study the effect of *Septilin* because it embodies the antibacterial principles of several plants. And possible effect in Allergic Rhinitis was also investigated.

Septilin is claimed to be an effective therapy against all infective states particularly of the ear, nose and throat. Further, it helps to build up resistance to infection in the mucosa, dries up the excessive secretions of the mucus membrane and is most effective in the treatment of the common cold.

*SEPTILIN of Himalaya Drug Co., Bombay.

COMPOSITION

Each tablet contains :		Grains
Balsamodendron mukul	...	2.5
Vanda roxburghii	...	1.0
Shankh Bhasma	...	0.5
Ext. Phyllanthus emblica	...	0.25
Ext. Tinospora cordifolia	...	0.75
Ext. Rubia cordifolia	...	0.50
Ext. Moringa ptergosperma	...	0.25
Ext. Pristimera indica	...	0.1

PHARMACOLOGY

A brief review of the pharmacology of the various ingredients of *Septilin* will not be out of place.

Balsamodendron mukul.—(Guggul) : The oleo-gum-resin exuded by this tree has been regarded as a sovereign remedy in ancient medicine. It is a bitter stomachic and carminative and improves digestion. It is quickly absorbed and is excreted by skin, mucous membranes and kidneys and in the course of excretion it disinfects their secretions, improves the function and stimulates the activity of the respective organs. It has marked antiseptic properties.

Recent scientific investigations show that the therapeutic action of this drug is not unlike that of ACTH for it raises the general defence mechanism of the body and so helps to overcome infective processes and inflammation. It is hence reputed to be an ancient “Broad Spectrum” drug with a wide therapeutic range.

Shankh Bhasma.—This is calcium carbonate and calcium hydroxide in a natural easily assimilable form.

Tinospora cordifolia.—(Gulvel) : is a diuretic and alterative agent and tonic. It stimulates the liver and is also antipyrogenic.

Rubia cordifolia.—(Manjistha) : is well known for its antipyrogenic properties and is widely used as a blood purifier.

Phyllanthus emblica.—(Amla) : is the richest natural source of ascorbic acid. The effects of vitamin C on the adrenal cortex and in building resistance to infections are well-known.

Moringa Pterygosperma.—(Sonjna) : The root bark of young trees contains a physiologically active basic principle “Spirochin” and an antibiotic substance “Pterygospermin”. Spirochin is effective in combating Gram-Positive infections, specially staphylococcal and streptococcal. It promotes epithelization and has an analgesic effect. Pterygospermin exhibits pronounced antibacterial activity against Gram positive and Gram negative organisms.

Pristimera indica.—Contains antibacterial principle Pristimerin which is active against a large number of Gram positive cocci, particularly *Streptococcus viridans* and *Streptococcus pyogenes*.

THE STUDY PROPER

In the past 7 months, 27 cases were selected for the above study from Dr. R. A. F. Cooper's O. P. D. at Bombay Hospital. Of these 17 were cases of Acute Purulent Sinusitis (with or without associated allergy) and 10 were cases of frank allergic rhinitis. Each patient was examined twice a week and the progress of the disease/relief was carefully noted.

Cases with purulent rhino-sinusitis presented varied complaints, *viz*: Repeated Colds, Sneezing, Fronto-temporal Headaches, Fever, Foul smell to themselves, Watery, Cough, Nasal Blocking, Loss of interest in the surroundings, Epistaxis, Mucopurulent Rhinorrhea, Edema over lower eyelids and even Deafness.

The main complaints of patients with Allergic rhinitis were: Watery Rhinorrhea, Sneezing, Nasal Obstruction and Headache at times.

Any previous treatment with other drugs was inquired and a thorough E. N. T. check-up was made in each case in the first instance. The status of the nasal mucous membrane was observed. Tenderness over the frontal and maxillary sinuses was elicited and the character of the discharge in any/all of the meati was noted. When there was no obvious discharge in nose but a history of purulent rhinorrhea a radiogram of the sinuses was obtained to investigate the state of the sinus mucous membrane.

A note was also made of any accompanying nasal lesion, viz.: Allergy, D. N. S., Polyposis, Hypertrophied turbinates.

A search was also carried out to find out any pathology in Teeth, Tonsils and Gums. Further, an antral lavage was carried out on one or both sides when deemed necessary. In each case the study was directed to observe:

- (1) Smear (direct) and culture of the material obtained by a post-nasal swab, *before* treatment with Septilin.
- (2) Earliest clinical response with Septilin.
- (3) Duration of treatment with Septilin required to produce total improvement.
- (4) Any ill-effect of the drug.
- (5) Direct smear and culture of the material obtained by a post-nasal swab *after* treatment with Septilin to see if the organisms responsible had disappeared.
- (6) To compare the effect of Septilin + Antral lavage + symptomatic treatment with those without Septilin. (A control series of 15 cases was studied who received symptomatic treatment and antral lavage but *no* Septilin).
- (7) Leucocytic count $\left\{ \begin{array}{l} \text{Total} \\ \text{differential} \end{array} \right\}$ In allergic cases.
- (8) Nasal cytology.

RESULTS

Out of a series 17 cases with frank Purulent Sinusitis 12 cases were completely relieved of their ailment; one (case 14) improved partly (*i.e.* though the discharge disappeared and bacteriologically he was sterile, his headache still persisted); two had no relief from the symptoms (cases 12 & 19) and two of them did not keep the follow up (cases 2 & 3). Clinical response set in from the very next day of treatment as in cases 4, 5, 8, 10, 18 & 20 to the 5th day as in case 7, from the beginning of treatment with Septilin.

Total improvement occurred in from 3—21 days. Symptoms disappeared, mucous membrane returned to normal and bacteriologically they became sterile.

In general, cases of sinusitis associated with allergy required a longer course of treatment than those without allergy (cases 6, 11, 16, 25). On an average these cases required treatment with Septilin for 12.5 days to be totally free from symptoms. Out of 17 cases of sinusitis 4 had associated allergy.

Two of the cases presented a history of allergic manifestations to sulfonamide and penicilline (cases 5 & 20). Both these cases tolerated Septilin without any undue manifestations and were cured in 6 & 3 days respectively.

Re: Antral lavage + Septilin—Recovery was much speedier when an antral lavage was combined with treatment by Septilin. The control series required repeated washings while in those with Septilin and lavage, only a single puncture was necessary and often the recovery set in by the next day. Clinical improvement however, always preceded the stage of bacteriological sterility as revealed by the smear and culture reports.

In two cases, the patients returned after about a fortnight with similar symptoms as before (cases 11 & 16). Nevertheless, they recovered with a second course of Septilin. This proves there was at least no immediate resistance to the drug.

No definite conclusions could be made for the duration of treatment required by cases of Rhino-sinusitis with a badly deviated nasal septum or septic tonsils and those without these accessory lesions. About the role of Septilin in Allergic Rhinitis, only one (case No. 13) had considerable symptomatologic relief within 10 days of treatment. The clinical signs (*viz.* discoloration and bougginess of the mucous membranes over the turbinates and septum) however, remained unaltered. Case 26 had some improvement *i.e.* the amount of watering and the number of sneezing were reduced but did not disappear. Clinically, the nasal mucous membrane showed no evidence of return to normal. The rest of the cases (*i.e.* cases 15, 17, 21, 22, 23, 24, 27 & 28) had no relief whatsoever—clinical or symptomatologic—in spite of a rigorous treatment with Septilin lasting for 21 days. There was no relief in the sense of nasal obstruction. The watery rhinorrhea and sneezing continued and the headache persisted. None of the above cases however, became worse during the course of treatment. Neither total and differential leucocytic counts nor the nasal cytology revealed any significant change.

DOSE

All the cases were put on II tablets of Septilin t.d.s. for 3 days initially. Cases in which improvement was not apparent by 3rd day, the drug was continued till clinical improvement set in. Drug was discontinued as soon as total clinical and bacteriologic improvement was noted. Total improvement occurred in from 3—21 days. In general II tab. t. d. s. were given for 10 days; discontinued for 3 days and administered again for another 10 days.

CONCLUSIONS

1. Septilin has a sterilising effect on the organism with Acute Rhino-sinusitis.
2. Clinical improvement precedes stage of bacteriological sterility.

3. Recovery is much speedier when treatment with Septilin is combined with antral lavage (as compared with a control series).
4. In cases of Rhino-sinusitis with associated Vasomotor Rhinitis, a longer regime of treatment with Septilin was required.
5. Septilin was useful in cases allergic to $\left\{ \begin{array}{l} \text{sulfonamides.} \\ \text{penicilline.} \end{array} \right.$
6. No toxic reactions were seen during the course of treatment.
7. No drug resistance was noted.
8. Septilin was not found quite useful in cases with frank allergic rhinitis.

ACKNOWLEDGEMENT

We take this opportunity to thank the Superintendent, Bombay Hospital, Bombay for allowing us to use the hospital records. We also thank the Himalaya Drug Co., for bearing the expenses of the laboratory work and for their liberal supplies of *Septilin* used in this clinico-pathologic trial.

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Radical Neck Dissection for Metastatic Cancer

BY

Dr. N. T. MATANI, M.S., D.O.R.L.

It is well known that the Cancer of head and neck regions most frequently metastasises to the cervical lymph nodes. This is because of the extremely rich lymphatic drainage and also the mobility of the area in which the primary lesion is located.

Were it not for its tendency to spread, the problem of treatment concerned with the primary lesion would be relatively simple. Fortunately however, the cervical lymphatic system is a relatively closed system and the distant metastasis is not likely to occur.

Thus the cervical lymph nodes not only act as effective barriers to the spread of the disease, but the area lends itself very nicely to enblock resection, both by itself and in continuity with the resection of the primary.

Most of the published reports on this subject are largely limited to the discussion of the primary lesion, and little consideration is given to what is actually the major problem and common to all the forms of head and neck cancer - namely the management of the cervical metastasis.

Experience has shown that the cervical metastasis can be cured by radiation therapy provided that the node or group of nodes is small or of moderate size. In other words, radiation therapy can be utilised to the localised group of nodes.

Often however, there are multiple metastatic nodes in the neck not demonstrable clinically. In these cases, radiation therapy administered through small ports must inevitably fail, while neck dissection will succeed.

Whereas neck dissection can be applied over the entire potentially involved field (mandible to clavicle, trapezius to

mid line), radiation therapy of cancer lethal doses over such an extensive area may not possibly be tolerated by the patient. Hence in actual practice, the neck dissection is accepted as the more effective method of treatment.

INDICATIONS FOR RADICAL NECK DISSECTION ARE

1. The primary lesion giving rise to metastasis should have been clinically controlled or if not controlled, there should be a plan for removal of the primary at the same time that the neck dissection is performed.
2. There should be a reasonable chance of complete removal of the cervical metastatic Cancer.
3. There should be no clinical or X-Ray evidence of the distant metastasis.
4. Neck dissection should offer a more certain chance of cure than radiation therapy (it generally does, but under certain circumstances,---as where a primary lesion is anatomically inoperable, irradiation of neck is the method of choice).

The widespread use of neck dissection in otolaryngology is a fairly recent development, therefore the number of potential "five year cure" cases is relatively small. However an attempt is made to record my personal experiences during my four years internship.

HISTORICAL REVIEW

The credit for the development of the neck dissection as a curative operation for cervical metastasis belongs mainly to *George Crile*, whose first report on this subject was published in 1906.

This pioneer surgeon emphasized that the cure rate for the operative removal of the Cervical metastasis could be considerably improved if a radical operation was performed.

Since the time of Crile, a great deal has been done to standardise the operation of radical neck dissection.

SOURCE OF CLINICAL DATA

The present report is based upon the study of 30 cases of neck dissection performed at B. Y. L. Nair Charitable Hospital, Bombay, during the period of four years from 1954-'57.

This operation has been used with increasing frequency due to the fact that a steadily increasing number of patients have been admitted to our Hospital.

Out of 50 cases of Cancer head and neck operated during this period, block dissection was undertaken in 30 cases.

AGE AND SEX				
<i>Age</i>				
0—10				
11—20	...	...	<i>Total</i>	... 30
21—30	...	1		
31—40	...	3	<i>Sex</i>	
41—50	...	8	Male	... 24
51—60	...	11	Female	... 6
61—70	...	3		
71—80	...	2		
81—90	...	2		
91—				

The youngest patient was aged 22 years and the oldest was 88 years.

80 percent of the cases were in 5th, 6th and 7th decade of life.

About 80 percent of patients were males and 20 percent females.

With respect to the age and sex, the incidence in this series of cases corresponds with the age and sex incidence of the head and neck Cancer in general.

SITE OF PRIMARY LESION

Larynx	...	13
Tongue	...	9
Tonsil	...	3
Check	...	3
Lower Lip	...	1
Thyroid	...	1
		30

As is evident from the chart, the extracordal carcinoma of larynx was the commonest primary site of malignancy in this series of operated cases. The next in order of frequency was tongue, check, tonsil...etc.

DIRECTION OF METASTASIS

<i>Primary</i> lesion localised to one side	...	30 cases
Metastasis to same side	...	20 cases
Metastasis to opposite side	...	Nil
(crossed metastasis)		
Metastasis to both sides	...	2 cases
No clinical evidence of metastasis	...	8 cases
		30

In two, metastasis was bilateral and bilateral neck dissection was done preserving the internal jugular vein on one side.

In 8 cases, there was no clinical evidence of metastasis in the cervical nodes, but at operation, enlarged nodes were encountered in 3 cases which histologically proved to be malignant. This emphasizes the fact that the clinical examination may not always throw light on the extent of metastasis.

There was no case with cross-metastasis. In 20 cases, the metastatic nodes were on the side of lesion and block dissection was done on the same side only.

Because of time limitation, I shall avoid any detailed discussion, involving the actual technique of neck dissection. This aspect of problem has been covered in the movie.

All the same, it is my feeling and I believe the feeling of most others, that no matter what technique is used, the dissection should be done thoroughly and as extensively as possible.

The area covered should be from trapezius to the midline. All tissues between the platysma muscle and the facia overlying the prevertebral muscles should be included in the block, with the exception of the carotid artery and the vagus nerve.

The inferior portion of the parotid gland below the level of the mandible, the submaxillary gland and the submental region should be included in the resected block.

In view of the close proximity of the nodes to the XIth accessory nerve, I do not believe it a good cancer surgery to spare the nerve, and we have seen no serious disabilities resultant from its removal.

COMPLICATIONS

Post-operative shock.—A discussion of the operative shock following the radical neck dissection is of significance mainly from the stand point of prevention. Since the advent of the liberal blood replacement, serious surgical shock is seldom encountered following neck dissection. Blood is administered at the start of the operation and continued throughout the entire procedure, even during the immediate post-operative period, and as long as the blood pressure remains significantly lower than the pre-operative level. Average patient receives about 1000 c.c. of blood during the operation.

The merit of such a routine is reflected in the absence of shock and in the fact that all patients are ambulatory within 24 hours.

Pulmonary Complications.—With the advent of chemotherapy, and antibiotics, improved anaesthesia techniques, sodium

pentothal anaesthesia, liberal use of blood transfusion and early ambulation, the incidence of pulmonary complications have been reduced to an almost insignificant figure.

Constant use of suction of the mouth and pharynx removes secretion and checks post-operative atelectasis and pulmonary infection.

RESULTS

Since my experience is limited to a period of 4 years, my case records cannot include 5 year survival. However, in series of my cases, follow up is as follows :—

Surviving	...	23
Non-surviving	...	7
		30

Year of Survival	No. of cases
3 years	... 4
2 years	... 5
1 year	... 6
1-6 months	... 8
Death from causes other than	
Cancer	... 5
Dead from Cancer	... 2
	30

We must stop looking upon the operation as a major procedure to be avoided, if possible. We must develop our skill and ability to perform the operation so that we can and will perform it without undue trepidation. We should have no more compunction about advising this procedure than we would in advising a mastoidectomy or a laryngectomy. We should also

develop our technique to the point where we can perform the procedure in a reasonable length of time, so that long operative time will not be deterrent to advising the operation.

I have purposely avoided the problem of "prophylactic" or preventive neck dissection. This is a very provocative question at the present time, but I venture to predict that, in not too distant future, preventive neck dissection for malignancy of head and neck will be a routine and commonly accepted procedure. After all, we have been discussing the importance of doing neck dissection early, and what better way to do it than to do it before the metastatic nodes have developed.

Without doubt, there has been a rapidly increasing interest in the neck dissection in our field, and a rapid increase in the awareness of its need. This is represented by the fact that it is with increasing frequency that neck dissection is being done for primary carcinoma in the field of otolaryngology.

I may mention again that study such as these serve only to record my personal experience and we consider it of great importance to detect the early metastasis and remove the Cervical metastasis by radical neck dissection.

Principles of Treatment of Chronic Suppurative Otitis Media*

BY

Dr. N. SRINIVASAN, M.B.B.S., D.L.O.

The only excuse for my selecting this subject is the fact, that more often than not, this condition defies all attempts by otologist at a cure. In the recent past so much has been said and done to effect a successful cure of this pathological condition, but yet times without number many an otologist throws his hands up and says "what to do next?" Besides, the deafness due to C. S. O. M. is far greater than the other pathologic condition like otosclerosis. The deafness is certainly preventable. Hence the importance of treatment of C. S. O. M.

The advent of antibiotics has neither given the real helping hand nor changed the approach in combating this condition. In fact, in my opinion, the coming into market some of these antibiotic ear drops has added to the difficulty of the aural surgeon in competing with this pathological condition, due to the use, and more often misuse of these drugs by a number of non-E. N. T. specialists. I have come across a few cases where a suppurating middle ear condition has been caused indirectly by the indiscrete use of these antibiotic aural drops by some over-enthusiastic general practitioners.

I personally feel that it is highly imperative to clearly understand and appreciate the basic principles and then apply the same rigidly and conscientiously. It is impossible to correctly apply the principle and treatment without knowing the aetiological and causative factors. Hence I would like to indulge a few moments in the causative and aetiological factors of this condition before I proceed to say about the treatment.

*Paper read at Tenth Annual Conference of the Association of Otolaryngologists of India. (Saturday, Feb. 1, 1958, New Delhi).

What is chronic suppurative otitis media? It can, broadly be defined, as a chronic infective involvement of the middle ear cleft—the eustachian tube, the tympanic cavity including attic and the mastoid—consequent to an unarrested acute infection caused by the invasion of septic organisms. The development of chronic suppuration in the middle ear can be the result of

(a) a severe infection causing necrotic changes in some part of the tympanum, which change may be marked enough to lead to chronicity. And again this change may involve the mucosa, the ossicles, and the bony walls, in addition to the invariable destruction of the drum membrane. Granulations and polypus may follow. A marginal perforation involving the annulus gives a pathway for an ingrowth of squamous epithelium. This invasion spreads rapidly, proliferate, desquamate and ultimately forming a cholesteatoma.

(b) In certain cases there has been an interference with the normal development of tympanic mucosa so that it has (mucosa) remained hyperplastic or fibrotic through probably some hereditary factors, or otitis media in new born and very early infancy. Resistance to infection naturally becomes very poor in these types of mucosa and therefore acute otitis media developing in these hyperplastic and/or fibrotic mucosa, almost always becomes chronic, because of the limited capacity of this type of mucosa to heal. Again granulations and polypus form.

(c) Lastly, the formation of cholesteatoma from an ingrowth of epithelium from Shrapnell's membrane without a pre-existing perforation or even an otitis media. It is believed that this ingrowth of epithelium results from negative pressure in the attic. There are two factors in production of this negative pressure—(i) the attic may be shut off by persistent hyperplastic subepithelial connective tissue in the epitympanum, or (ii) prolonged occlusion of the eustachian tube due to nasopharyngeal pathology. Now the resulting indrawing of Shrapnell's membrane leads to the formation of a blind pouch by invagination. The neck of this pouch is too narrow and constricted to allow escape of desquamating squamous

epithelium, leading to ultimate formation of cholesteatoma. The presence of such a cholesteatoma becomes known only when it becomes large enough to extend out of the attic and till saprophytic infection of the epithelial debris sets off a perforation and discharge.

An arbitrary time limit of 6-8 weeks is used to be put in accepting the chronicity of middle ear suppuration. Personally I do not contribute to that view. According to James Babbitt the transition from an acute infection to a chronic state often becomes a matter of otologic opinion.

There should be no two opinions regarding the importance of an early and a successful treatment of acute infections of the middle ear, as we are all well aware that the great majority of chronic suppurative otitis media are the sequelae of untreated and/or badly treated cases of acute otitis media. It is also a common knowledge that most of these cases of middle ear infection are to be found in poorer classes and amongst village folks. Great many of these population take it for granted that the discharging ear is a usual occurrence in childhood and that there is no need to make a noise about it. "I had it, my father had it, and his father had it, and if this little one's ear leaks, so what?" is the attitude taken by this population.

STAPHYLO PROTEIN VULGARS B. PYOCYANUS

Bacteriologically many types of organisms have been isolated from the purulent discharge from the chronic otitis media. A routine bacteriological examination of the discharge of every case of middle ear suppuration offers little of practical value in an average case. In most cases it is a mixed infection.

Some kind of classification of this pathological condition will, in my opinion, be useful and helpful in visualizing the pathological process. Many an otologist has classified this, but I personally prefer the clinical classification suggested by Lilly. There are four types in this classification, can be called, a, b, c, d.

(a) In this type there is a thin mucoid discharge with little or no odour coming out from a perforation in the anterior quadrant of the drum membrane. Evidence of marked destructive disease in the middle ear will be lacking. The discharge increases during ordinary head colds. Persistent nasopharyngeal pathology keeps up the continuance of the discharge.

(b) Here the pathological changes are confined to the middle ear. A perforation is central, fairly big in size and the middle ear can be seen filled with muco-purulent or purulent secretion. There is foul smell suggestive of caries of the ossicles or cholesteatoma. Granulations and polypus may be present. As a rule no evidence of pathology in attic is seen.

(c) The attic seems to be the seat of pathology. The conditions mentioned in types (a) and (b) may be associated. The discharge has a foul odour and is usually small in quantity. The perforation is along the posterior margin of tympanic membrane and Shrapnell's membrane. Cholesteatoma is usually present.

(d) These are the cases where the extension of the disease is seen in mastoid labyrinth, facial nerve etc. Cholesteatoma is most certainly present. They are the cases where surgery is unavoidable and imperative.

The important signs and symptoms in chronic suppurative otitis media are—

- (1) The discharge—its nature, like colour and consistency ;
- (2) The position of perforation ;
- (3) The presence of granulations and polypus ;
- (4) Hearing loss and tinnitus.

In my opinion pain, facial nerve involvement, vertigo, are more of complications of chronic suppurative otitis media than actual signs and symptoms.

The discharge.—A very foul smelling discharge, dirty greyish yellow colour is suggestive of cholesteatoma with its degenerative epithelial and osseous association. A thin mucoid discharge with practically no odour will point to the pathological factors in nose and nasopharynx.

Small shiny white flakes, greasy in consistency mixed with purulent discharge definitely indicate cholesteatoma.

A remote possibility of malignancy should be kept somewhere in the back of one's mind when a thin foetid blood-stained discharge is seen.

A marginal, particularly posterior and attic perforation are usually associated with cholesteatoma especially when the suppuration, is of long standing. Granulation tissue as in a wound in any other part of the body is indicative of an attempt at repair.

Hearing.—Defective hearing in C. S. O. M. varies in degree depending on the site and type of pathology. In a primary pseudo-cholesteatoma confined to attic the hearing may not be affected at all. There is definite loss of hearing in an average case of C. S. O. M. The degree of involvement of the medial wall of the tympanic cavity plays a very important part in determining the loss of hearing. Interference with the mobility of the foot-plate of the stapes in oval window is most probably a greater factor in defective hearing than the actual perforation of the drum or even the necrotic condition of the ossicles. A very marked hearing loss may mean a much deeper involvement than that of the conducting mechanism alone.

I would like to put the treatment of C. S. O. M. under four main headings—

- (a) Prophylactic.
- (b) Conservative or medical.
- (c) Surgical.
- (d) Rehabilitative.

I firmly believe that there are two distinct aspects in the treatment of C. S. O. M. The first and the main object which will be the ideal in treating C. S. O. M. is to (a) stop the discharge, (b) to bring back the defective hearing to as much normalcy as possible. The second aspect is a life saving measure to prevent possible dangerous complications.

In the prophylactic, institution of therapeutic measures to build up general resistance particularly in children is highly essential. This lack of resistance is very marked amongst ill fed, undernourished classes of people dwelling in unhygienic surroundings. Secondly maintenance of aural hygiene is important. Precautions while sea-bathing, swimming in contaminated pools, prompt treatment of fungus infections and keeping the external auditory canal free of wax and epithelial debris are very essential.

The most important prophylactic step is the very prompt, correct and adequate treatment at the onset of acute otitis media.

Attention to infective and pathological conditions in nose, nasopharynx and paranasal sinuses cannot be over-emphasized.

Coming to the second heading, namely conservative medical treatment, it is the ideal method in coping with the clinical classification type (a) mentioned a little while ago. This is an essentially a consulting room and an out-patient treatment. A great majority of cases of C. S. O. M. will come in this group.

We all know the so called wet and dry methods of treatment. Wet or dry, the main principle and object is to clean the middle ear. The maintenance of this aural hygiene, whether by the wet method of syringing or the dry one of mopping with cotton definitely holds the prime place in the treatment. Syringing has its own advocates and non-advocates. In condemning the indiscriminate use of aural syringe in untrained hands, I like to emphasize that in certain cases syringing the ear with warm antiseptic lotion in selected cases is highly

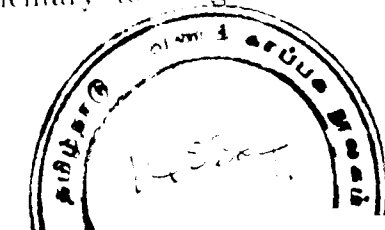
beneficial. The time spent in cleaning the ear thoroughly and efficiently will definitely be rewarded with good results. Preliminary instillation of hydrogen peroxide before cleaning has its advocates and non-advocates. Without going into the details of the merits and demerits, the preliminary use of the H_2O_2 in certain cases is useful.

After laying the mucosa of the middle ear dry and clean of all the discharge the introduction of the desired medicine through the external auditory meatus comes in. A huge big list of various medicaments can be produced for the introduction through the external auditory canal. The whole range of drugs known to bactericidal has been used in various combinations, as dry powders and wet solutions. To-day every antibiotic drug is being used either in the form of a powder or a liquid. It is my opinion that one is as good as the other so long the cleansing process scrupulously and meticulously carried out. I still have a lot of faith in the good old Sultzberger's boric-iodine powder. The use of spirit has its own value in the treatment of C. S. O. M.

The effectiveness of any particular antibiotic depends upon the sensitivity of the organism to that drug. Medication through the eustachian tube is one of the methods being tried in the recent years.

Zinc ionization, the method of iontophoresis can give good results in selected cases, particularly of the type (b) namely a big central perforation with the pathology confined mainly to the middle ear.

Coming to the surgical treatment certain amount of minor surgery is needed even in types (b) where there are granulations and/or polypi. When once we come across the clinical types (c) and (d) major surgery is undoubtedly the answer. One should remember that in these cases (c) and (d) types antibiotic therapy is only complementary to surgical measures and can never replace them.



In doing a mastoidectomy I wonder whether the gold old Viennese School dictum that "One should be very radical about a conservative mastoid and very conservative regarding a radical mastoid", will still hold good. But one thing is certain when a C. S. O. M. particularly of the types (c) and (d) are holding out very severe threat to the life of a patient no power on earth so far can substitute a radical mastoidectomy. I like to mention what the great late Prof. Neumann of Vienna used to say (mention a C.S.O.M. patient coming to Neumann for treatment).

As you see the question of aiming the ideal namely a clean dry ear with getting back of useful hearing is not the prime factor in treating such cases of C. S. O. M. The one and only object of treatment is the question of saving the life.

Lastly we come to the rehabilitation. Here after getting a perfectly dry ear and treating all the nasopharyngeal pathology one would like to attempt at the closure of the perforation in order to get the hearing improved. The object is twofold. Firstly to prevent re-infection and then to improve the efficiency of hearing. Various methods have been practised for the closure of the perforation. Irritation of the drum margins with chemicals to promote granulations and closure of perforation has been attempted. Use of artificial ear drums by means of cotton-wool, waxed paper, rubber piece cut to the size of the tympanic membrane have all been advocated and used.

The recent and the latest step to close the perforation and get back the hearing is the tympanoplasty which by all reports is very encouraging. We are very fortunate to-day that we are going to be enlightened on tympanoplasty by two of our eminent otologists at the conclusion of my paper. I can say with some authority that it definitely is well worth our while and listen to what the unassuming Lady Dr. Leelavathi has to say about Tympanoplasty.

Preliminary Investigations of a New Preparation: Florotic

BY

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

Ahmedabad.

Florotic is an antibiotic-steroid ear drop preparation for treatment of inflammatory otic infections. It was supplied in a combination package consisting of Florotic powder and aqueous glycerine diluent with accompanying glass dropper. When reconstituted as directed with 5 cubic centimeters of the diluent, Florotic provides in each cubic centimeter of suspension the following amounts of active ingredients:

Florinef (Squibb Fludrocortisone Acetate)	... 1.0 milligram
Neomycin Base (as sulfate)	... 3.5 milligrams
Polymyxin B (as sulfate)	... 10,000 units
Mycostatin (Squibb Nystatin)	... 100,000 units

The reconstituted suspension is stable for 7 days at room temperature.

SELECTION OF THE CASES FOR STUDY

From a number of patients, suffering from various ear diseases, 64 patients were selected consecutively without any discrimination of age, sex or duration of the disease. Those complaining only of ringing noises in the ear and with normal ear-drums were not chosen for study.

Out of 64 cases, 6 failed to turn up for observation. Seven patients were suffering from two diseases simultaneously.

Trial.—Three drops of reconstituted Florotic suspension were instilled into the external auditory canal of the patients, two to four times daily. The period of treatment varied from five days to one month, but in most cases for two to three weeks.

Results.—The results are serially tabulated as per the statement attached herewith.

EXPLANATION

The result was marked 'good' when the symptoms completely disappeared and did not recur during the period of treatment.

'Satisfactory' : when the patient felt that he was getting better or when there was objective improvement.

When there was no improvement or very little change, the result was noted as 'unsatisfactory'.

DISCUSSION

Out of a total of 64 cases not a single one showed any side reaction.

(1) **Otitis media.**—Fortytwo cases were of chronic suppurative otitis media out of which the result was good in 8 cases, satisfactory in 17 cases and unsatisfactory in 17. Most of the patients have used 2 bottles and the average duration of treatment was 15 days

(2) **Granulating Myringitis.**—The result was good in all the 5 cases except one. All were suffering for a long time. Only one patient had to use two bottles. Except one all the patients recovered within 8 days.

(3) **Furunculosis.**—Out of the seven cases treated the result was good in five and satisfactory in two. Three patients were suffering for a long time and had to use two bottles. Others recovered within 8 days with only one bottle.

(4) **Fungus infections.**—Out of the 5 patients the result was good in 3 and satisfactory in two. All the patients except one recovered within a week with only one bottle.

(5) **Irritant Dermatitis.**—Two patients were suffering from irritant dermatitis. The result for one was good and for the other it was satisfactory. Both had to use two bottles and recovered within 18 days.

(6) **Mastoid cavity after operation.**—Patients, who continued to have discharge after the operation, were selected. Out of the 3 cases the result for one was satisfactory by using one bottle. Other two patients used two bottles but the result was unsatisfactory.

(7) **Atrophic Rhinitis.**—On empirical grounds, the drug was tried in a patient suffering from atrophic rhinitis. The result was satisfactory as long as the patient was under treatment. Further investigation is considered desirable for a proper evaluation of the drug in this condition.

SUMMARY

Out of the 64 cases the result was good in 22; satisfactory in 24 cases and unsatisfactory in 18 cases. Out of the 18 cases where the response was found to be unsatisfactory, 17 were of chronic otitis media of long duration. Results were specially encouraging in Furunculosis, granulating myringitis and mycotic infections where satisfactory or good response was obtained in 100% of the cases.

ACKNOWLEDGEMENT

The material used for this investigation was kindly supplied by E. R. Squibb & Sons, New York.

FLOROTIC INVESTIGATION

S. No.	Age (Years)	Sex	CLINICAL DIAGNOSIS	Duration	No. of bottles used	Time of treatment in days	Response	Remarks
1	6	M	Granulating myringitis left ear	4 months	2	18	Good	
2	13	F	Furunculosis right ear; Otitis media lt. ear	1 day	2	15	Good	
3	15	M	Chronic suppurative otitis media. Bilateral	4 years	1	...	...	
4	17	M	Mastoid cavity left ear	Chronic	2	18	Unsatisfactory	
5	5	F	C. S. O. M. left	2 years	2	16	Unsatisfactory	
6	36	F	C. S. O. M. + fungus left	7 days	1	8	Satisfactory	
7	4	M	Furunculosis left	4 days	1	10	Good	
8	6	F	C. S. O. M. right ear	Since childhood	3	25	Unsatisfactory	
9	21	F	C. S. O. M. right ear	Do	2	21	Satisfactory	
10	44	F	C. S. O. M. left ear	Do	3	24	Satisfactory	
11	7	M	C. S. O. M. right ear	5 years	2	14	Satisfactory	
12	28	M	C. S. O. M. right ear	...	1	...	...	
13	25	M	Furunculosis	...	1	...	...	
14	1	M	C. S. O. M. both ears	Since Birth	2	15	Unsatisfactory	
15	25	M	C. S. O. M. right ear	2 years	3	24	Satisfactory	
16	15	M	C. S. O. M. left ear	4 months	2	15	Satisfactory	
17	9	M	Discharging mastoid cavity	5 years	1	7	Satisfactory	
18	27	M	C. S. O. M. left	7 years	1	...	...	
19	39	M	C. S. O. M. left ear	10 days	2	18	Good	
20	29	M	Fungus both ears; Irritant dermatitis	20 days	4	30	Satisfactory	
21	9	M	C. S. O. M. left ear	3 years	2	15	Satisfactory	
22	9	M	C. S. O. M. left	4 years	2	14	Satisfactory	
23	5	M	...	4 months	2	14	Good	
24	14	M	C. S. O. M. right ear; Polyp. left ear	8—9 years	2	16	Satisfactory	
25	20	F	Granulating Myringitis left	8 days	1	5	Good	
26	10	M	C. S. O. M. left ear	1 year	3	22	Unsatisfactory ?	
27	20	M	C. S. O. M. left	3 months	2	16	Good	
28	18	M	C. S. O. M. left	Since childhood	2	20	Satisfactory	
29	40	F	C. S. O. M. left	3 months	2	15	Unsatisfactory	
30	5	F	C. S. O. M. left	1 year	2	15	Unsatisfactory	

31	27	M	Granulating Myringitis	...	1	9	Good	
32	5	M	C. S. M. O. left	Since childhood	2	15	Unsatisfactory	
33	12	F	S. O. M. right	Do	1	7	Satisfactory	
34	28	F	C. S. O. M. Bilateral	...	1	8	Satisfactory	
35	6	M	C. S. O. M. left ear	3 months	2	14	Good	
36	2	M	Fungus both ears; Furunculosis Rt. ear	Since birth	1	7	Good	
37	9	M	C. S. O. M. right ear	2—4 years	2	18	Unsatisfactory	
38	24	M	Furunculosis right ear	15—20 days	1	7	Satisfactory	
39	14	F	Furunculosis right ear	14 months	2	15	Satisfactory	
40	40	M	C. S. O. M. left; mastoid cavity	22 years	2	14	Unsatisfactory	
41	19	M	Subacute otitis media Rt.; C. S. O. M. left	2 years	2	25	Satisfactory	
42	9	M	C. S. O. M. right	4—5 years	2	16	Unsatisfactory	
43	18	M	Granulating Myringitis right	Since birth	1	8	Good	
44	15	F	Furunculosis left	15 days	1	8	Good	
45	30	F	C. S. O. M. + Fungus	1 month	1	8	Good	
46	15	F	C. S. O. M. right	Childhood	2	20	Unsatisfactory	
47	25	M	C. S. O. M. + Blyp. left ear	15 days	2	15	Satisfactory	
48	12	F	C. S. O. M. right	4 months	1	8	Unsatisfactory	
49	18	M	Atrophic Rhinitis	...	2	14	Satisfactory	
50	60	F	C. S. O. M. Bil.	Years	1	10	Satisfactory	
51	18	M	Fungus left ear	2 months	1	7	Good	
52	1	M	C. S. O. M. bil.	2 months	1	10	Good	
53	22	M	C. S. O. M.	6 months	1	14	Unsatisfactory	
54	14	M	C. S. O. M. left	5 months	2	15	Unsatisfactory	
55	16	M	C. S. O. M. both sides	2 years	2	16	Unsatisfactory	
56	7	M	C. S. O. M. left subacute otitis media	20 days	2	16	Satisfactory	
57	25	F	C. S. O. M. right	4 years	2	16	Unsatisfactory	
58	10	M	C. S. O. M. left Myringitis	5 years	2	16	Good	
59	8	M	Multiple boils right ear	15 days	1	7	Good	
60	41		C. S. O. M. + Furunculosis	...	2	17	Good	
61	5	M	C. S. O. M. left	2 years	2	15	Unsatisfactory	
62	19	F	C. S. O. M. + Irritant dermatitis	Since childhood	2	15	Good	
63	50	F	C. S. O. M. left	2 months	2	15	Satisfactory	
64	30	M	Granulating myringitis	2 years	1	...	...	

A Foreign Body in the Larynx

BY

Dr. N. T. MATANI, M.S., D.O.R.L. (BOM.)

REPORT OF A CASE

L. G., a male child, aged three years, was admitted in the B. Y. L. Nair Charitable Hospital, Bombay, on November 15th, 1956, with a history of accidental swallowing of a foreign body—Shirt Stud.

On admission, the child was in a state of collapse, cyanosed, with very feeble respiration and foam in the mouth. Pulse could not be felt and the heart sounds were feeble. The child was immediately removed to the Operation Theatre. The patient by this time had stopped breathing.

On direct laryngoscopic examination, the stud was found impacted between the vocal cords. The flat bottom of the stud was seen riding the vocal cords, the narrowed portion of the stud was gripped between the cords, which were in spasm. Immediate stab tracheotomy was done. Artificial respiration started with oxygen through the tracheotomy opening. Intracardiac coramine was given.

After half an hour's continuous artificial respiration, the child started breathing. First the respirations were feeble and irregular but became regular in another ten minutes. Radial pulse was now perceptible. After waiting for an hour more, direct laryngoscopy was done and the stud was removed. Patient was still unconscious and developed high temperature (103° F), with respiration 40/per mt., pulse 158/mt. On the same day, patient had generalised convulsions on four occasions. There were marked fluctuations in T. P. R. Patient was kept on continuous oxygen, broad spectrum antibiotics and injection Cortizone 25 mgm. six hourly. Patient regained consciousness

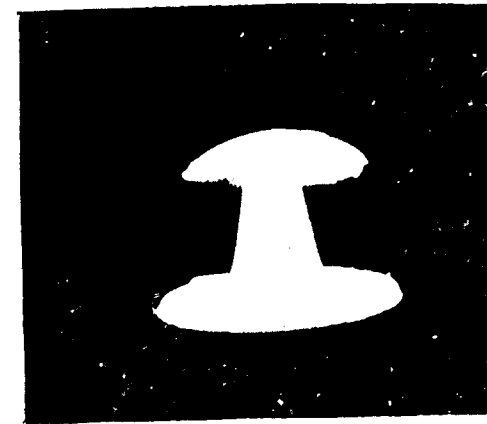


Fig. 1

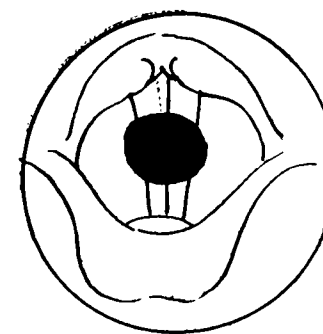


Fig. 2

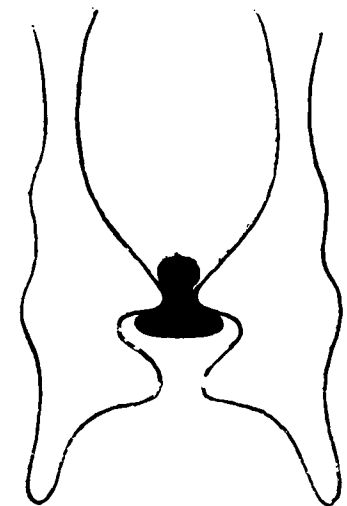


Fig. 3

on second day, but did not seem to recognise his parents. T.P.R. fluctuations settled down to normal in two days, but loss of consciousness of surroundings persisted for another ten days.

I am inspired to report this case due to the fact that two similar cases have been reported in clinical meetings of Bombay Association of Otorhinolaryngologists, but in both cases, the diagnosis was established post-mortem. The state in which the child was seen in the Operation Theatre reminded me of two previous cases—A blue child with no respirations and foam in the mouth. However, it was thought worth while to attempt revivals. Continuous artificial respiration with a stab tracheotomy, intra-cardiac coramine and continuous Oxygen, brought round the patient after almost half an hour. This emphasises the need to continue efforts at resuscitation for a long time, before giving up hope. The effect of anoxaemia on the central nervous system was manifested by fluctuation of T.P.R. and loss of consciousness of surroundings. However, no paralytic lesion was manifest.

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Association Notes

PRESIDENTIAL ADDRESS*

BY

Dr. R. A. F. COOPER, M.S.,

Senior Surgeon, Sir J. J. Group of Hospitals, Bombay.

Delivered at The Tenth Annual Conference of the Association of
Oto-Laryngologists of India, Delhi, 30th January, 1958

Hon. Shri Jaggjivan Ram, Ladies and Gentlemen,

The present occasion is unique in the annals of the Association of Otolaryngologists of India as it marks the first time when it holds its session in the Capital of the Indian Union. I feel deeply honoured that the signal distinction of presiding over this historic session has been entrusted to me. I realize that there may be many obvious shortcomings in my presidential address, and so I trust to your indulgence to overlook such failings as your critical faculties will surely detect.

I could not do better in my introductory remarks than to comment on the deprecatory manner in which specialization in our field has been viewed by general medical journals. These did not, in any way, disguise the poor opinion they held of contributions made by pioneers in our small, but important, branch of medicine. These journals thought that the contributions of our pioneers were of little, if any, significance, as their findings were relegated to the cellar, being published many months later—and then too, not *in extenso*, but in a severely amputated or truncated form, so that the abstract bore no resemblance to the original. The way in which specialists in our field, yearning for tidbits of knowledge, were thus tantalised may better be imagined than described until special journals appeared in literature.

Even today the characteristic independence of thought and action of our members is not allowed free play by those in charge of the original parent subject from which we have strayed to establish our own special domain. Our pioneers were not guided by the conventions obtaining in large clinical centres. On the other hand, they had laboriously to evolve their own procedures. The difficulties confronting them were numerous, for many of them worked in isolation. Their work was often on original lines, but it tended to be duplicated as the most elementary medical library facilities were lacking. Today, as we look back, we are able to appreciate the value of their work,

*—This address should have been published in the March 1958 issue of the Journal. It is regretted that the same was missed due to oversight. **Editor.**

which was invariably accomplished with what we should now call primitive equipment. We have only to think of their achievements when we hear today the plea put forward by some of the lack of fund and equipment. Such pleas as we are only too prone to advance as an obstacle to original research and progress in our field are a feeble excuse to cover up our own lack of patient endeavour, and resolute perseverance, which takes second place to collection of the shekels.

Until recently otolaryngology was considered a "dying" speciality, whatever this might have meant according to the forgotten author of this anomalous *obiter dictum*. Little did that unknown wiseacre realize that the tables might have been turned on him, for no curative process has attained hundred per cent effectiveness. The unknown author of the absurd *obiter dictum* hardly realized that the march of research and science would make an anachronism of what he might have believed to be the unimprovable achievement of his time. The argument cuts both ways.

Critics have avowed that otolaryngologists did not distinguish themselves in world wars and were poorly trained. This charge may easily be disposed of by a reference to the history of otolaryngology. Oto-Rhino-Laryngology is one of the oldest specialized fields known to medicine, and among the three rhinology is perhaps the oldest. It is said that an Egyptian ruler's eunuch in 3500 B. C. treated and healed his king's nostrils. Otology in the early days was practised by surgeons. It gained in importance in the thirties and forties of the nineteenth century. France was the first country, according to Stevenson and Guthrie, to separate otology from the surgeon's rigid grip.

The first hospital for ear complaints was founded in 1805 in London, but, it was in conjunction with facilities for the treatment of eye ailments. Otolaryngology as we know it today is, however, a fairly new field. Otolaryngology has made rapid strides in the last 10 to 15 years, and this is particularly true of otology. For obvious reasons, much interest has been aroused in the conservation of the auditory faculty. Mastoid surgery is a constructive process, compared with its former "destructive" features. The study of the physiology of the inner ear holds promise of great advancement in the treatment of diseases peculiar to it. The little stapes bone has focused the attention of otologists the world over. Workers like Dr. Samuel Rosen and Dr. Julius Lempert have enriched otology with their achievements, and today a deaf person may share the priceless boon of his more fortunate fellow beings.

As new specialized fields are fenced off, there is bound to be encroachment on familiar ones. Thus otolaryngology is deprived of a large sphere legitimately falling within its scope. This does not by any means signify

that otolaryngology is a decadent branch of surgery. The plain fact is that it is in travail, which is accentuated in our country for obvious reasons, as the difficulties of the social worker, on account of public prejudice, are matched by governmental apathy. Perched on its lofty pedestal, the Government is unable to appreciate the inferiority complex of a person hard of hearing. Yet, there is a saving grace for the person so afflicted, but this saving grace has its attendant disabilities. A deaf person, certainly does not carry the stamp of his or her infirmity, as does a blind or a limbless person; but it is none the less real and is all the more pitiable as it is not manifest.

Some relief to persons so afflicted may be afforded by those engaged in our speciality, but such is the grip exercised by the general surgeon that he is reluctant to leave our speciality to those versed in its practice. Thus, a twofold task confronts otolaryngologists in this country: to make known to the public that specialized treatment is available for those afflicted with auditory and laryngeal complaints and to establish their claim to their special field of practice *vis-a-vis* the general surgeon.

The development of chest surgery has further restricted our field, and the end of our problems is not yet in sight. Use of the bronchoscope by the chest surgeon is questionable, though one cannot deny the chest surgeon's right to study the pathological lesion he will operate. I am of the opinion that endoscopy should be left to an otolaryngologist, as he has been doing this type of work for a number of years to remove foreign bodies etc. It is but fair that he should continue to perform diagnostic procedures in order to maintain his technique. Further, the number of chest surgeons efficient enough to tackle endoscopy is small to serve the needs of the entire country. The only present solution to the problem is for both chest surgeons and otolaryngologists to share this work and the material available in hospitals.

Meanwhile, it would not be out of place to refer to the tendency of the general practitioner, apparently to take over a portion of the minor procedures in our field. This tendency may be both understandable and justifiable as long as he restricts himself to treating acute rhinitis, acute tonsillitis, peritonsillar abscess, acute otitis and acute sinus disease: but one must draw the line and stop when it comes to the removal of a tonsil in a dispensary. The average dispensary is not equipped for the surgical emergency to which a simple tonsil operation may sometime lead. The general practitioner's ministrations may be successful with a number of patients, but some day some poor individual is bound to pay with his life for the general practitioner's officiousness. The time has come when our Association must approach either the Government or the Medical Council to curb the general practitioner's tendency to perform a tonsil operation.

This brings me to a correlated problem. The study of otolaryngology for undergraduates in many universities is extremely sketchy. The undergraduate student attends the E.N.T. department for 15 days, including two Sundays. How can one, in these few days, explain the technique of examination and diagnostic porcesses?

Otolaryngology does not figure at even the final University Examination. The general surgery paper is supposed to include one question in otolaryngology according to University regulations, but in actual practice a question on this subject is set once in five years on an average. Recently, a *questionnaire* sent to 574 general practitioners in Iowa showed that from 1½ to 80 per cent of their work pertained to otolaryngology. If this high incidence of otolaryngological complaints is true of Iowa, it is even more so of our country, where changes of temperature are sharp. Imagine our medical graduates with a perfunctory knowledge of otolaryngology going to rural areas where they are not likely to encounter an otologist for, at least, 200 miles around. Yet, according to the above statistics otolaryngology is bound to form an extensive proportion of his practice. Whatever may be the aim of undergraduate medical education, whether it be to produce a good general practitioner or merely to lay the foundations of a medical career, in either case the attention given to otorhinology is meagre, while the subject occupies an indifferent place in the curriculum. Whatever may be the attitude of advanced countries in the West, in a backward country like India, where even basic medical aid is often not obtainable, the primary purpose of undergraduate medical education must be, at least for some time to come, to turn out well trained good general practitioners.

In the old days a general surgeon was well versed to teach various surgical matters in all their aspects, but today the rapid advancement of medical sciences and the spectacular progress in diagnosis and treatment have made increasing specialisation inevitable. It is imperative that both teaching and valuation of the students' knowledge in the specialities be performed by specialists. One must also let general surgery have proper scope in its own field, which should not be abbreviated by the spurious and haphazard growth of specialities or specialities in specialities. Specialities like ophthalmology and otolaryngology which have really deserved an exclusive status should remain unimpaired. A mischievous impression has gained ground in the mind of the student that specialities being unimportant are not subjects for examination, and that he need not therefore unduly bother about them.

As we have seen above, many of the minor and the more common maladies for which the patient seeks relief belong to the specialities. Otorhinolaryngology dates to about the same time as ophthalmology, and is not one of those specialities like radiology or anaesthesia, both of which are by their

nature auxiliary to the practice of medicine. In view of the historical background a fair proposal would be to have one combined paper in ophthalmology and otorhinolaryngology at the final M.B.B.S. examination.

We may now review the position of our speciality as far as post-graduate teaching in this country is concerned. We must hang down our heads in shame that even in this year of grace 1958 India cannot boast of even one proper post-graduate teaching institution with a hospital for treatment of diseases of the Ear, Nose and Throat. Each University has its own syllabus and methods, but the teaching as a whole is haphazard and not based on the lines of institutions in advanced Western countries. The most glaring deficiency of training in this country seems to be the lack of uniformity in the scope of otolaryngology in our teaching institutions. A complete course for a post-graduate degree requires that candidates be trained in all phases of otolaryngology, peroral endoscopy, maxillo-facial surgery and surgery of head and neck. Institutions in India where our speciality is taught with all the ramifications I have just alluded to, may be counted on the fingers of one's hand. Operative procedures in many of our institutions do not yet go beyond tonsillectomies and submucous resections. Some institutions include endoscopic procedures, some, plastic work of the ear, nose and throat; and very few, fenestration surgery. I do not know of any school where a post-graduate student devotes a sufficient number of hours to surgical pathology as applied to our speciality. Their knowledge of pathology is bookish. The following are suggestions for the advancement of our speciality and its teaching.

(1) Teaching and examination should encompass all phases of otolaryngology, peroral endoscopy, maxillofacial surgery, surgery of the head and neck, and plastic operation in Ear, Nose and Throat.

(2) Institutions must develop teachers capable of handling this programme. The excellence of the clinicians of our time was attributable to the fact that they had, for the most part, wide experience of general practice before they began training in our speciality. By the same token our young men, the teachers of the future, must have fundamental training in general surgery. The programme should extend to a minimum of 18 months' general surgery and two and a half years' course in Otolaryngology. We can well afford to add an additional year, for the general expectation of life has increased.

(3) There should be at least one full-time unit in each teaching hospital, but this does not by any means imply abolition of the system of honorary staff. One must not belittle the good work done by honorary members of hospital staffs in the past, nor condemn the system outright. Do not forget the valuable medical assistance rendered by them to patients or

the teaching work done both for under and post-graduate student at a considerable sacrifice of their time. I am afraid that until the general economic position of our country improves and this improvement may be many years in coming, we shall have to depend on the co-operation and services of honorary staffs.

(4) Institutions should provide opportunities for research for both staff and, on a slightly restricted scale, for housemen.

(5) Sound and efficient residency training is essential. A candidate ought to spend out of his four years' course, six months on the study of general medicine, one year on that of general surgery and two and a half years in internship in otorhinolaryngology. My suggestion to add an extra year, I anticipate, will evoke considerable criticism. Some will object to the extra cost and the prolongation of the course. Some may anticipate a dearth of residents. I am sure residents will always outnumber the jobs, even though a large number of hospitals have lately been added to the list of approved residencies. The additional year may be justified on several grounds. Few of the individuals going in for our speciality have enough experience of general medicine and general surgery. A longer period of internship in otolaryngology will give the residents opportunities to see and treat patients with afflictions more rarely seen than in former years. This is particularly true of surgery of diseases of inflammation. During the longer period a resident may familiarize himself with various operative procedures not available to him in a shorter one. Finally, the field has so widened of late that an additional year is necessary for adequate training.

There has always been a sharp difference of opinion on the best time for teaching the basic sciences. Some suggest that it must be before the clinical work has begun, while some recommend they be taught concurrently with the clinical subjects. One would venture to say that six months' study of anatomy, physiology, acoustics, pathology, pharmacology, principles of surgery and didactic otolaryngology should precede the clinical training; otherwise they are likely to cause frequent interruptions. Lectures on biochemistry and bacteriology and allied subjects may be given. Pathology should be continued during the entire period of training. Residents should examine their own microscopic sections and do their bacteriological work themselves, supervised by the staff members of the pathology department. An anatomical review with complete dissection of two head, face and neck should be compulsory. Lectures and cadaver surgery particularly for training in maxillofacial, neck, sinus and temporal bone surgery should be enforced.

There should be weekly meetings in either interdepartmental subjects, or journal or clinicopathological subjects. Residents should attend speech training centres, and conservation of hearing clinics. In the last year a

pseudo-examination must be held every month on the same lines as the final examination. Those who wish to specialize and practise fenestration or maxillofacial surgery must put in at least a year's additional work, in the subject after qualification.

(6) The question often arises who must do plastic surgery in otolaryngology. Ought it to be done by the otolaryngologist or the general plastic surgeon? It is perfectly logical that an otolaryngologist does his own plastic surgery provided that he has the ability and the requisite training. I agree with Dr. Mosher that "the plastic surgeon must be a good dress maker". The otolaryngologist should take special training before embarking on plastic surgery. Short, inadequate training periods for otologists who expect to do plastic surgery cannot too strongly be condemned.

(7) Arrangements may be made at the University level to invite teachers either from abroad or from other Indian Universities to conduct courses in their specialities.

(8) Minimum standards must be determined and enforced. There is no need for separate post-graduate boards. We have in the Medical Council of India an efficient body of men to look after and upgrade post-graduate teaching in any branch of medicine or surgery. May I request the President of the Medical Council of India to see that post-graduate qualifications in this branch of surgery are obtainable in every University of this country. I know of some quite prominent Universities in this country where post-graduate qualifications in otolaryngology are denied to young aspiring students. Students seeking to obtain high degrees in these subjects have yet to travel far and wide to fulfil their ambitions as some of our Universities have no course in otolaryngology. I challenge these Universities to advance one valid reason for debarring the younger generation from obtaining the knowledge they seek and thus, by their perverse policy, depriving the poor millions of this country of medical aid. I am positive that there are enough and capable otolaryngologists of repute who can well handle teaching work. Shortage of clinical material is not admitted. Then why the delay in starting the required courses? I am sure there are no insurmountable difficulties facing these Universities when others have started such courses years ago.

The future of our speciality is not dark, provided we wake up to our responsibility of improved teaching in our institutions and preparing a generation of otolaryngologists with a sound basic knowledge and aptitude for research.

Progress in our field will be accelerated by recognition and encouragement of young and zestful workers. Our researches have not progressed fast enough owing to the paucity of financial aid. All our appeals for funds seem

to fall on deaf ears, for those who hold the purse strings are singularly indifferent to our entreaties. The handicaps of a person with impaired hearing does not register even a faint emotional impulse in persons who are sound of limb and body. Even the Veteran's Bureau in America, which I visited last year, declares rather callously that when the veteran is furnished with a hearing aid, he is one hundred per cent rehabilitated and is not entitled to the veteran's compensation.

Some people get unnecessarily irritated when a person with whom they are talking is unable to hear their low pitched voice. The person with impaired hearing does not manifest any discernible emotional complex, while perhaps, on the other hand, people with sound hearing are repelled by his seeming stupidity stemming from no other cause than his disability.

The menace of cancer, the grave handicaps of the deformed, the prospect of restoration of sight to the partially blind, the relief of tubercular patients—all these objectives are duly exploited to raise funds for organizations devoted to the treatment and care of persons suffering from one or another of these ailments. On the other hand, the cause of aural cripples faces a big blank, as their condition does not evoke any emotional appeal, for they do not have any visible symptom proclaiming their disability. An intensive campaign for their benefit must be conducted on the following lines:—

- (1) Enlistment of the best minds for co-operative otological research;
- (2) Collection of funds to be distributed through our Association for research;
- (3) Encouragement of research by awards calculated to stimulate really talented and promising investigators;
- (4) Aid to gifted young workers by the grant of fellowships;
- (5) Reservation of our help to those who have done well in scientific applied otology.

The question now arises how we may be able to help these acoustically handicapped. All school going children must periodically be examined by an otologist. It is not enough that infected tonsils and adenoids are removed. Examination of children must be divided among many otologists, in order that a detailed study is made of every child.

Individual and group audiology is most essential. Even today not a single deaf mute institution in the whole of India has either a trained audiologist or the right equipment, *e.g.* group hearing aids, group audiology apparatus etc. Remedial measures to prevent deafness in later life may best be initiated in childhood. Elimination of infected lymphoid tissue from

nasopharynx-pharynx etc., attention to infected ears, correction of nasal irregularities, mouth breathing etc., proper breathing exercises, supply of proper vitamins, nourishing diet, outdoor exercises all these could be planned and regularized in childhood, when better facilities exist for constant observation and treatment.

Every University town must have a special hospital for Ear, Nose and Throat. Until these are established, every teaching hospital must open out a rehabilitation centre, where the deaf and dumb millions of this country, who, with expressionless faces, go about begging and pass their lives like animals, may be trained and brought to human standards and made useful units of society. The lot of these unfortunate ones is worse than that of the blind, for although they clearly see the hustle and bustle of life, its charm and variety, they have, nevertheless, to retire into seclusion because of their inability to hear, and the want of sympathy from those blessed with hearing.

Centres for the treatment of the deaf will require the services of group hearing aids, expert and skilled audiologists and speech therapists. Today there is no dearth of social workers, but if only we can enlist their aid to start Deaf Clubs, our task will greatly be simplified. Fulfilment of this objective, educative and long overdue, is not expensive, for where there is a will there is a way. The fruits of these preventive and ameliorative measures are seen in Western countries, where even congenital deaf mutes are trained to be useful members of society. Audiology has today made rapid strides in Western countries, while we have not even lined up at the starting post. Audiology is a highly technical science, and unless some of our qualified youths are sent by the government for studies in this field accompanied by an assurance of suitable employment of their talent later, I am afraid we shall continue to languish. The growing enlightenment of our times and the aroused social conscience of the people leave no room for doubt that the present neglect of the aurally afflicted will not, cannot and must not continue indefinitely.

The time has come when hearing aids must be manufactured in, our country and distributed gratis among the needy, as in the U. K. When giant steam and electric equipment is manufactured in India, one wonders why a tiny hearing set still needs to be imported. The Government's telephone factory at Bangalore ought immediately to start a separate department devoted to the production of audiological equipment. As matters now stand, the cost of imported hearing aids is beyond the resources of all but the wealthy. Imagine the plight of the only earning member of a family when he is categorized to be irreparably deaf and is faced with the problem of finding within his scanty resources the substantial sum of Rs. 350 or thereabouts—may be, more than his monthly income—to afford him some relief from his affliction and enable him to share the joys of life.

It is high time that the government started an All-India Council for the care of only the deaf, because in a combined council for cripples of all types once again the emotional factor will throw this unapparent disability into the back ground. It is the blind and maimed who will be in forefront. One has to be deaf to appreciate the functional, psychological and emotional set back.

Our Association is devoted to a small, but by no means insignificant, aspect of therapy, as you may have gathered from what I have said. In the circumstances, would it be unreasonable if I were to appeal to you, Sir, to ensure that the Government will be pleased to grant our Association official recognition? A welcome concession to the poverty stricken juniors in our profession would be the grant of suitable railway and air privileges, enabling them, wherever they be in this land of great distances, to attend our annual conferences. The request is not unreasonable, as similar facilities are already extended to various scientific and cultural bodies in the country, as well as to delegates attending similar conferences and congresses in the prosperous countries of the West.

I cannot do better than elaborate all I have, so far said by a homely simile. According to Fredric T. Hill, one may compare a hospital to a symphony orchestra. In an orchestra, in order to have a satisfactory performance, each member must play in harmony and in time under the conductor's baton. Doctors are natural soloists; specialists notoriously so. While a surgeon may do a solo in certain operating room passages and an obstetrician may strike a high C and perhaps sharp it a bit in the delivery room, each and everyone in the profession must perform under the administrator's direction. Otherwise there are bound to be discords, disastrous to both the patient and physician.

Dr. Mosher has repeatedly averred that one be bigger than his speciality. To me, this means having the broadest possible conception of the practice of medicine while confining one's actual work to that field in which one is trained and is considered competent. It may be phrased as being diagnostically broad and therapeutically limited. This requires constant association with men in other fields of medicine, who think of the patient as a whole rather than any limited anatomical part thereof. It means group practice in the best professional sense, the pooling of all skills necessary for an adequate conception of any clinical problem.

Unfortunately, most discussions of group practice have placed an excessive emphasis on the economic phase, rather than on the more important objective of better medical service. One should extend this principle to all patients, private as well as hospital. The professional resources in hospitals

are usually pooled. This should mean the group study of a case whenever indicated, liberal resort to consultation, and transfer to other physicians or services of the patient if he would benefit thereby.

The practice of medicine, as we have known it, faces numerous and serious threats today. We hear criticisms of the cost of medical care and the inability of many of our people to obtain adequate medical aid. As against this, in no other profession is a man asked to forego as much as in ours, over and above the sacrifices of a medical man, in the way of irregular meals, prolonged hours of work and scant family life. Actually, the most justifiable criticism is the cost of poor medical care, the toll of mistaken diagnosis, or diagnosis made too late, or differing in diagnosis for reasons other than the merits of the symptoms and signs, or the results of inadequate therapy. These, too, often produce costs that never can be met, costs in lives sacrificed or irreparably damaged. The promised panacea of political or government controlled medicine would seem hardly to be the answer from all evidence at hand. Yet, it does make palatable political fodder.

Otology may be in a dilemma, but the future is certainly bright. If our teaching centres work in harmony and with a sense of responsibility, the situation will certainly improve. As the specialities will overlap, the sharing of materials will be the natural outcome. The focus of attention should be on doing well, irrespective of who does it. We in India must not sit with folded hands, expecting all the fruits of research and progress to come ready for us from foreign countries. Let us guard against complacency. If we attain excellence as specialists we need not concern ourselves about what others do in our particular field. Our achievements and skill will be their own commendation.

PAKISTAN OTO-RHINO-LARYNGOLOGICAL SOCIETY

"Dr. R. A. F. Cooper during the term of his Presidentship contacted the Secretary of the Pakistan Oto-Rhino-Laryngological Society giving the details of the activities of our association and inquired about their's. He also proposed exchange of journals. The Pakistan Oto-Rhino-Laryngological Society has started sending their issues and we shall reciprocate. Dr. Cooper further suggested a combined annual conference say once in three to five years. This would help exchange of ideas, advancement of Science and social contacts. At its last meeting Pakistan Oto-Rhino-Laryngological Society has decided to send a deputation of some of its members at our next annual conference at Gwalior. We welcome this friendly gesture on the part of the Pakistan Oto-Rhino-Laryngological Society and shall endeavour to make the deputation as comfortable as possible. We shall look forward to reciprocating the gesture and meeting our colleagues from across the border".

THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

(BOMBAY BRANCH)

The 2nd Bombay Otolaryngologists Convention 1958.

Office :

Near Municipal School,
Chembur, Bombay-38.

Dear Doctor,

We have pleasure to announce that the Bombay Branch of of All-India Association of Otolaryngologists has decided to hold The 2nd Bombay State Otolaryngologists Convention on Sunday, the 9th November 1958 at the J. J. Hospital, Bombay-8. In order to enable the outstation busy Otolaryngologists to attend, the convention is arranged on Sunday and for a day only. It is only by meeting together very often that we the Otolaryngologists of Bombay State will be able to solve, our basic problems pertaining to our speciality. We, therefore, request you to enroll yourself as a delegate and to take keen interest in scientific discussion and thus make the convention a success.

The subscription including breakfast, lunch and evening tea is Rs. 12/- (Rupees twelve only) per head.

Yours sincerely

Convention Committee

<i>Chairman</i>	...	Dr. L. H. Hiranandani.
<i>Honorary Secretary</i>	...	Dr. N. K. Apte.
<i>Honorary Treasurer</i>	...	Dr. K. U. Shah.

Members :

Dr. R. A. F. Cooper.	Dr. S. R. Rege.
Dr. Joe DeSa.	Dr. P. P. Karnik.
Dr. V. A. Desai.	Dr. Jittoo Mehta.

THE BOMBAY STATE OTOLARYNGOLOGISTS CONVENTION 1958

Provisional Programme

Sunday, the 9th November 1958.

8-30 a.m. to 9-30 a.m.	...	Assembly of Delegates, Physiology Lecture Theatre, Grant Medical College, Bombay.
9-30 a.m. to 10-15 a.m.	...	Breakfast.
10-15 a.m. to 11-00 a.m.	...	Welcome address, Inaugural address, Introduction of President, Presidential address.
11-00 a.m. to 1-00 p.m.	...	Scientific papers.
1-00 p.m. to 2-00 p.m.	...	Lunch.
2-00 p.m. to 3-00 p.m.	...	Scientific papers.
3-00 p.m. to 4-30 p.m.	...	Panel discussion—Brain Abscess.
4-30 p.m. to 5-30 p.m.	...	Tea, films, etc.
5-30 p.m.	...	Vote of thanks.
8-30 p.m.	...	Dinner.

(Subject to changes).

Form 'A'

THE BOMBAY STATE OTOLARYNGOLOGISTS CONVENTION 1958

I would like to enroll as a delegate for the Convention.

I am a Vegetarian/Non-vegetarian.

Name (full in Block letters) :

Qualifications :

Address (full in Block letters) :

Name of Institution (If attached) :

Signature.

N.B.—Last date for returning the form is 18th October 1958.

To

Dr. N. K. Apte,
Near Municipal School,
Chembur, Bombay-38.

Form 'B'

SCIENTIFIC PAPERS

(Last date of returning the form is 18th October 1958).

I would like to read a paper at the Convention. I am forwarding herewith a summary of my paper :

Title (in Block letters)

Time required for reading :

(Maximum time allowed is 10 minutes)

Facilities required :

(Epidiascope, slide projector, microscope will be supplied)

Name in full (Block letters)

Address in full (Block letters)

Signature

N.B.—Only a delegate will be allowed to read paper. Time 10 minutes and 5 minutes for Discussion. If there are more than one paper on the same subject, the selection of Managing Committee will be final.

Form 'C'

SUBSCRIPTION

(The last date for returning the form is 18th October 1958).

The subscription should be sent either in cash/moneyorder to be endorsed in the name of Dr. K. U. Shah.

I am forwarding herewith my subscription of Rs. 12/- by money order/cash.

Signature.

N.B.—Only those who will send subscription in advance will be enrolled as delegates

To

Dr. K. U. Shah,
20, New Queens Road, Poly Clinic,
Bombay-4.

ANNOUNCEMENT**Changes of dates of "Symposium on fungus diseases in India".**

The Symposium on fungus diseases in India previously notified to be held in December 1958, has been deferred due to unavoidable reasons. The final dates for the Symposium are February 5 and 6, 1959. Last dates for sending abstracts (not exceeding 300 words) and full papers have been extended to October 30 and December 15, 1958 respectively. Dr. C. G. Pandit, Director, Indian Council of Medical Research, New Delhi has kindly consented to preside over the Symposium.

Scientists from the U.S.A. and U.K. are expected to participate in the Symposium.

The following are the informations regarding the International Committee for the study of Cancer of the Larynx. Dr. Alonso Justo, M. who is the President of the Committee has requested me to form an Indian Committee and has sent me the following forms to be followed in case of the Cancer of the Larynx. I request the co-operation of all the Otolaryngologists in collecting the informations required and send it on to me. —*Editor*.

STATUTE FOR THE INTERNATIONAL COMMITTEE FOR THE STUDY OF LARYNGEAL CANCER

The Latin American, Saxon-American and European,

Committees for the Study of Laryngeal Cancer have resolved, to form an "International Committee" for the study of Laryngeal Cancer.

This committee will be integrated by 3 delegates from each of the component Committees.

The re-election of the authorities will be made at the International Congress of O. R. L., for periods of 4 years. In case the Congress is suspended the renovation of authorities will not be suspended.

Members of the committee may be laryngologists, radiotherapists, surgeons, oncologists or other physicians who dedicate to study that subject.

Once the Committee is nominated it will name its authorities: president, vice-president and secretary.

Votes for the first election will be addressed to Chevalier L. Jackson, Philadelphia; for the following elections, the existing committees will indicate where and to whom the votes should be addressed.

Once the Committee is created, it will determine its official seal.

In case new Committees should be created in other continents (Asia, Africa, Australia) they could enter the Central Committee with the same number of delegates and same prerogatives of Committees already existent.

The president may charge specific commissions to any of the members of the committee, if he considers it necessary (treasurer, sub-secretary, etc).

Duties: the objects of this Committee will be:—

- (A) 1st.—To propend all laryngologists of the world to use the same topographical, clinical and anatomopathological nomenclature for neoplasms of larynx and hipopharynx.
- 2nd.—To propend them all to use the same rules to determine the degree of total of partial malignity (local, lymph node metastases or distant metastases).
- 3rd.—To attain universal conventional signs and colours to characterize tumors and their metastases in the patterns.
- 4th.—To use the same characteristics to determine the different methods or technics of treatment.
- (B) 1st.—The Committee may accept donations or the economical help it believes convenient for the best performance of its duty.
- 2nd.—The Committee may create an archive for clinical histories if its economical means allow it to do so.
- 3rd.—The Committee may organize a library, a reference archive, as well, as graphic and scientific material.
- 4th.—The Committee may establish a permanent secretaryship with fix see if it thinks it convenient.
- (C) 1st.—It will tend to the diffusion among laryngologists, of the most important articles appeared about laryngeal cancer and other subjects related to that one.
- 2nd.—It will try to make all the propaganda possible for the fight against laryngeal cancer: its prophylaxis, its early treatment, etc.
- 3rd.—It will tend to create centers of re-education and social help for patients operated of cancer of the larynx or hipopharynx.
- (D) 1st.—The Committee will try the histories of patients with cancer of the larynx to be carried out throughout the world according to the same rules.

2nd.—It will annually make the recopilation of statistic information about all the elements, it believes necessary, using principally the information of the different continental committees and may even ask the National Committees for information and also the different clinics or presons it believes convenient.

3rd.—The Committee must publish, at least annually, a summary with or without commentary of those statistics.

4th.—It will publish when it thinks convenient articles for divulgation and orientation.

5th.—The Committee may encourage to publish or investigate about cancer of the larynx: establishing prizes or helping with the material means it possesses, some clinical or therapeutical tendencies as well as investigations.

6th.—All publication made by the Committee using information of other centers or obtained from persons not related to it will be signed impersonally by the Committee.

7th.—Members of the Committee alone or associated, may only publish information or their own archives or of their hospital centers and those which have been authorized by the author or by the head of respective center.

(E) 1st.—The Committees componing the Central Committee may be formed in different ways: *e.g.* the Latin American Committee is related to Latin American Congresses where the President is named for a period lasting generally 3 years and this President shall name the rest of the members of the Committee; the full committee names the presidents of national Committees and so on and so forth. The president of the Saxon America Committee is named by the Panamerican Congress.

In Europe, delegated of the different nations chose a president who must, the European Executive Committee.

2nd.—Each continental committee may have its own life and its own activity, but it must accept the general lineaments dictated by the International Committee.

The Commission for the project of the Statute for the International Committee was formed by: Chevalier L. Jackson, Jean Leroux Robert in Justo M. Alonso.—

AGE (average and extremes):

SEX (amount of each or percentage):

RACE (percentage):

Cases of Cancer among Parents, Brothers and Sisters (percentage):

He or she has smoked ... { in excess—%
with moderation—%
sporadically—%

First symptom (frequency) ... { dysphony
pain swallowing
dyspnea
haemoptoic cough
adenopathy

Time passed between 1st symptom and 1st consultation to the physician.

Time passed between 1st medical exam. and 1st specialist exam.

Time passed between 1st specialist exam. and beginning treatment.

Localization of the lesion (percentage) ... { glottis
subglottis
supraglottis
hipopharynx

Biopsy ... { carcinoma % ... { differenced
indifferenced
sarcoma % ... { fusocellular
indifferenced

Degree of lesion: 1— { death during the first year more than
5 years survival

2— { death during the first year more than
5 years survival

3— { death during the first year more than
5 years survival

4— { death during the first year more than
5 years survival

Treatment { surgery % ... { laryngofissure
partial laryngectomy
total laryngectomy
radical neck dissection
radiotherapy %

Cases treated from 1950 to 1953—% of cures more than 5 years
Causes of death:

Bad result (before the first year):

Good result (how long):

Cause of death:

While the International Committee does not embrace a classification, what it will probably do in its first official meeting, taking place in Rio de Janeiro, August 1958, in occasion of the Pan American Congress, the presidency embraces that of the Latin American Congress Clinical degree of stage of the lesion:

1. Lesion limited to a superficial zone, no infiltration of the tissues, which conserve their mobility.
2. Lesion occupying more than one zone of the same region or other regions of the same organ, it infiltrates and fixes the tissues.
3. Lesion reaches a near organ or infiltrates one whole part of the organ.
4. Lesion extends to one or more near organs or fixes the organ where it was born to one or more other organs of the region.

Adenopathy:

1. Not palpable.
2. Palpable node in the territory of the primitive lesion.
3. Hard, palpable nodes, although still movable.
4. Fixed nodes.

Distant metastasis—4.

The final stage or degree shall be the largest number among the partial numbers.

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Ear Loupes with 2½ magnification.
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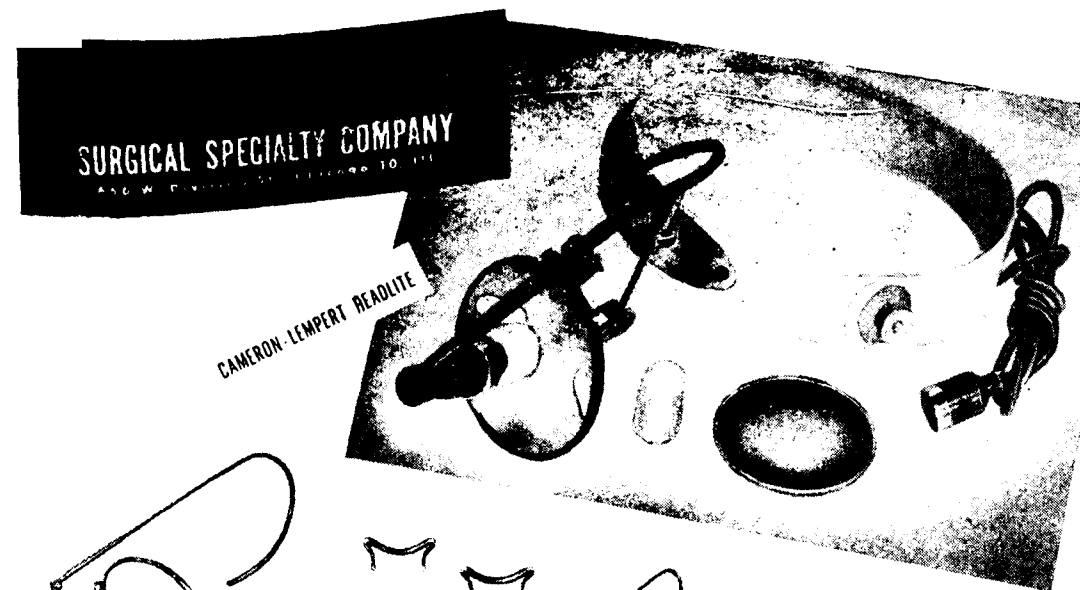
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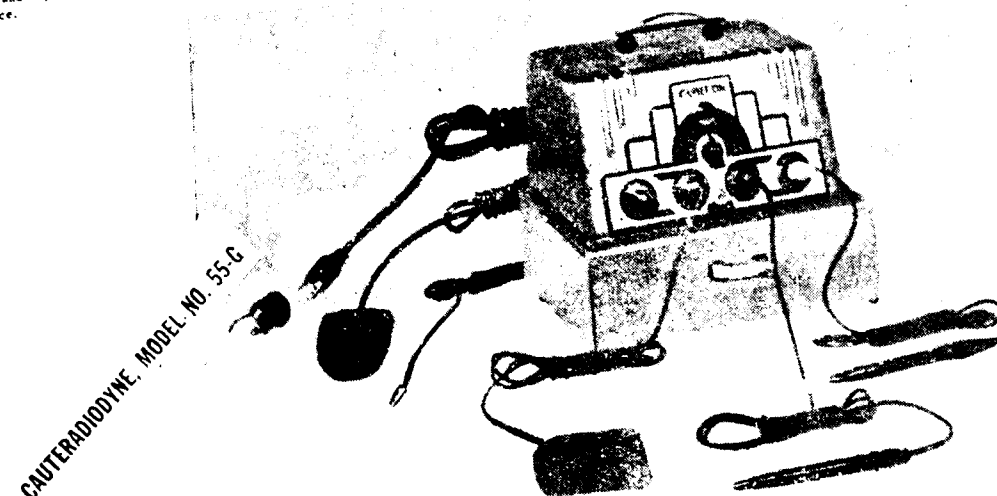
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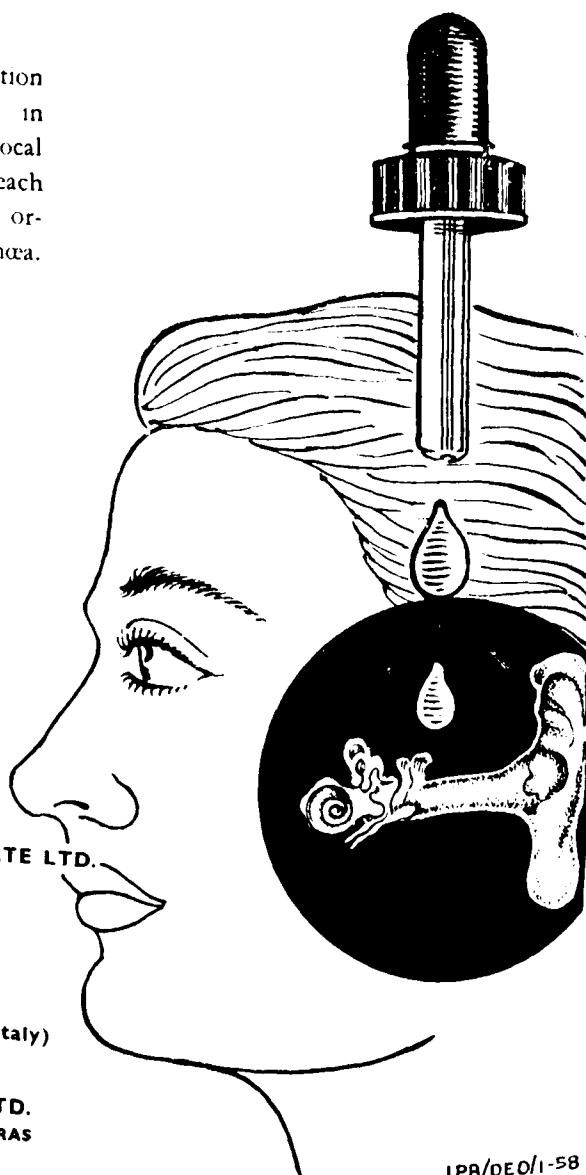
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Speech Audiometry

(with observations on 344 tested ears of 196 cases
in different otological lesions.)

BY

Dr. R. A. F. COOPER, M.S.

AND

Dr. N. R. MERCHANT, M.S., D.O.R.L.

INTRODUCTION

Deaf People in a Noisy World.....

Talking and listening to one's fellow men, from music to warning signals, is an everyday necessity of modern civilisation. Since understanding the spoken word is the principal use to which the sense of hearing is put, the greatest handicap of the hard of hearing is in understanding the spoken word. Socially and economically the patient becomes inadequate and unless he compensates for his deafness, a day will dawn when he will retire into himself, become introspective and full of self-pity and suspicion.

The otologist in his blessed duty of helping them and in all his dealings with care and guidance of his deaf patients, however faces a problem. The problem is to elucidate what difficulty the hard of hearing has in understanding normal conversation.

The time-honoured way of measuring deafness was to find out the distance at which the examiner's spoken and whispered voice was heard and compare it to a standard of 20 feet. But then, the test and the standard were only rough measures, was appreciated by many.

With the introduction of Pure Tone Audiometer some 30 years ago and through its subsequent development it became possible to deliver a standard speech through a calibrated measuring system as a speech stimulus. Thus the ability to hear speech gained an important place in the functional tests of hearing.

The view is not new. Eminent German otologist Bezold wrote about it in 1897 and Macfarlan (4) gave further emphasis in 1940 that "Speech hearing can be tested only by use of speech as the test stimulus".

WHAT IS SPEECH AUDIOMETRY

Definition and how it differs from PTA

Speech audiometry then, is a method of evaluating hearing loss for speech. Carhart defines it as a technique wherein standardised samples of a language are presented through a calibrated system to measure some aspect of hearing ability (5).

It differs from PTA in two main aspects.

- (1) Test material used is speech and not pure tones.
- (2) Hearing is measured not only at threshold but at suprathreshold intensities (as in everyday speaking). Theodore Walsh adds a third and important difference that
- (3) In PTA, examiner relies on the patient to tell him whether or not the signal is heard. In speech audiometry he *knows* whether or not the signal is repeated correctly (1).

Thus there is increased validity of the test over pure tone audiogram. Here we test the patient's ability to hear speech with speech and do not translate his threshold for pure tones into his threshold for speech.

Pure tone tests appraise only the simplest aspects of the multicomponent function of hearing *viz.* threshold, frequency and loudness response. Speech tests on the other hand, yield information about the overall response of the auditory system in its entirety. All physiologic and psychologic factors entering the hearing function will influence the final outcome of the speech tests. (An exception would be the use of nonsense syllables where the problem of meaning is eliminated).

HISTORICAL

The evaluation from phonograph to modern speech audiometry has proceeded in many stages:

1876 Bell invented telephone.

1877 Edision invented phonograph.

1904 Bryant was apparently the first to employ Edision phonograph as a speech audiometer.

1920 Bell telephone laboratories laid the foundation of the modern speech audiometry.

1944 Medical Research Council Committee (MRC) on electro—Acoustics developed speech audiometry as a more realistic means of measuring deafness.

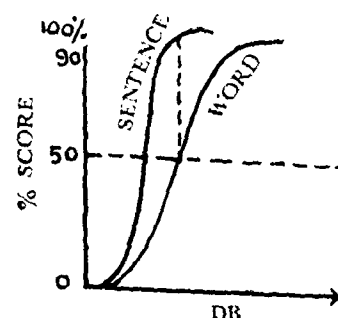
Psycho-Acoustic Laboratory at Harvard Originally assembled the Phonetically Balanced (PB) word lists.

1946 Walsh demonstrated that the shape of articulation function is correlated to type of hearing impairment.

BASIC PRINCIPLES

Average conversational speech ranges between 55 and 85 db and it is naturally of considerable practical value to investigate the hearing ability there. In speech audiometry use is made of articulation tests—either threshold or discrimination—according to their purpose.

Threshold Tests.—With threshold tests the hearing acuity is determined in a similar way to that in PTA. The aim is to measure the lowest level at which the patient can hear 50% of test material. At this level then, the listener should be able without perceptible effort, to obtain the meaning of almost every phrase of connected discourse read to him. 50% word level is selected because 50% score for single words corresponds to 90% sentence intelligibility. And above that level the sentence intelligibility improves very little, but below it, it falls steeply. This 50% level for word articulation is therefore a *Critical* one. (40% of older workers).

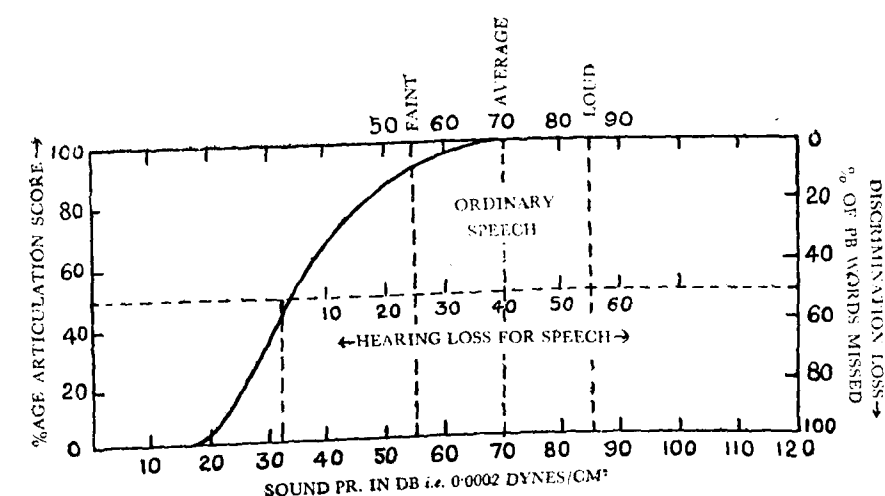


Discrimination Test: is designed to determine the ability to discriminate, recognise and hear various speech sounds correctly, and is carried out at an easily audible level. When the sound is so soft that nothing is perceived—the discrimination is zero; thereafter rising to 100% as intensity increases. The more difficult the words, more the sound intensity will have to be increased before everything is understood and the curve will have to be less steep.

The maximum discrimination score can be read on the plateau of the articulation curve *i.e.* that area where a further increase of sound intensity is not attended by any rise in discrimination. In normals and in conduction deafness it is about 100%. In perceptive deafness it is short of 100%.

Since in threshold and discrimination tests one is measuring in principle two different things, different test materials are often used for them.

NORMAL SPEECH AUDIOGRAM AND ITS INTERPRETATION



1. **Articulation Function.**—When speech is delivered to ear of a normal listener at gradually increasing intensities, he can hear and repeat correctly more of the speech as intensity increases, until all of the test material is heard and repeated correctly. The listener's responses are plotted and a curve is obtained. This is articulation function. The shape of this curve will vary to some extent with test material used *e.g.* sentences, numerals and di-syllabic words are easier than monosyllables and nonsense syllables. The curve for easier material is more steep.

2. **Threshold of Intelligibility (Speech):** is the intensity at which the subject hears and repeats correctly 50% of the test material. It is important to indicate what test materials were used because *e.g.* threshold for disyllabic words is 22 db while for monosyllabic words it is 33 db.

3. **Threshold of Detectability:** is the intensity at which a normal person could just detect the sound but not the meaning of about half the words. It is 19 db.

4. **Critical Level.**—It has been found that a 50% score (40% of earlier workers) for single words corresponds to a 90% sentence intelligibility. Above 50% sentence intelligibility improves very little but below it, it falls steeply. This 50% level for word articulation is therefore critical.

5. **Social Adequacy Index.**—It is necessary to know how much a person hears not only at threshold but also in suprathreshold conditions of everyday life. In other words, how much he hears of faint, average and loud speech. Average percentage of PB words heard at this levels of faint, normal and loud speech is the social adequacy index. (1) This index is comparable in hearing to I.Q. in education. The idea is further developed by Davis (6). Normally it is 33.

6. **Articulation Area.** - (Speech Span) : is the area within which a normal ear can hear speech. Lower limit is 19 db—words lower than this are not perceived. Upper limit is an intensity which yet does not cause pain but at which considerable discomfort may be felt—120 db. Hearing impairment of any kind causes a shift to the right (as in pure conduction deafness) and in others it narrows the articulation area (as in perceptive deafness).

7. **Discrimination Loss :** is the difference between the maximum score of the patient and the 100% level and is easily read at the right.

8. **Maximum discrimination score :** is the level beyond which a further increase in sound intensity is not attended by any rise in discrimination and in normals and conduction deafness it is 100%.

TECHNIQUE OF OBTAINING A SPEECH AUDIOGRAM

Speech audiometer consists of an amplifier and loud speaker coupled to a gramophone. Record of speech sounds can be reproduced through a range of amplification extending from threshold level to 120 db above threshold. The apparatus

used for the clinical investigations presented here is installed in a near-ideal sound-proof room at Dr. R. A. F. Cooper's rooms, Bombay, and the patient listened in this silent room to a recorded list of words delivered through the headphone. Alternatively, he may be made to listen over a loudspeaker fed by an amplifying system from an adjoining room. In the present series of cases the headphones were used. He repeated the words to an observer who checked them against a list and thus a curve is obtained. The list is divided into groups of five words and the sound pressure is diminished by 4 db after each group. The threshold of intelligibility is reached when the subject correctly repeats 50% of test words. The word list for discrimination was similarly delivered to the patient at 35 db above threshold and the score worked up.

TEST MATERIAL FOR SPEECH AUDIOMETRY

The test material used for the present series of cases consists of lists of single words, phonetically balanced and suitably arranged for intelligibility. These are at present the most favoured form of test material. The words are spondee *i.e.* two-syllable words with an equal ascent on each syllable *e.g.* Rail-Road. The following is the test material used in the present investigation :

5-B Spondaic Word List

Earthquake	Playground	Eyebrow	Beehive	Lightbulb
Whitewash	Sunset	Bloodhound	Outside	Cookbook
Birthday	Armchair	Wildcat	Sundown	Padlock
Northwest	Daylight	Baseball	Toothbrush	Starlight
Stairway	Shotgun	Doorway	Pancake	Housework
Doorstep	Churchbell	Iceberg	Scarecrow	Jackknife
Oatmeal	Firefly	Workshop	Woodchuck	Farewell
Blackboard	Railroad	Doormat	Blackout	Yardstick
Cowboy	Coughdrop	Platform	Highway	Daybreak
Sidewalk	Headlight	Wayside	Toyshop	Hotdog
Airplane	Hardware	Horseshoe	Footstool	Icebox
Backbone P	Playmate	Lifeboat	Schoolhouse	
Lookout	Eardrum	Schoolboy	Shipwreck	Rainbow
Greyhound	Grandson	Grandson	Mousetrap	Dugout
Washboard	Mushroom			

Word list Scrambling No. 4

HARK	DITCH	SIR	LIP	GUESS
RING	DONE	COIN	VICE	RAY
BELL	THUMB	KICK	MADE	NO
LET	FEET	WAS	FAIR	SHIP
TEN	TOWN	BIT	TILL	JUT
NIECE	DIVE	SING	WOOD	SET
ROOM	WHERE	HEAD	ROAST	

The other test materials from the literature are :

1. Simple questions in which words are repeated. These are favoured by many but have the drawback that the whole sentence can be repeated or the question answered, only if one key word is heard. For instance, "Where do you *live*?" "How *old* are you?" "What is your *name*?"—to mention three of the most commonly used questions.

2. The easiest test material should be numbers. But these have the rather serious drawback that only a small number of speech sounds is tested. On the other hand numbers are readily understood by all ages and degrees of intelligence.

3. One way of overcoming the objection to numbers without decreasing intelligibility is to combine numbers with letters of alphabet. In this way the number of speech sounds available is greatly increased, guessing and doubtful answers are reduced to a minimum and the basic intelligibility if the test material is such that it can be used for children down to the age of six years *viz.* X2C, 4AZ, 6BN, MT3 (2).

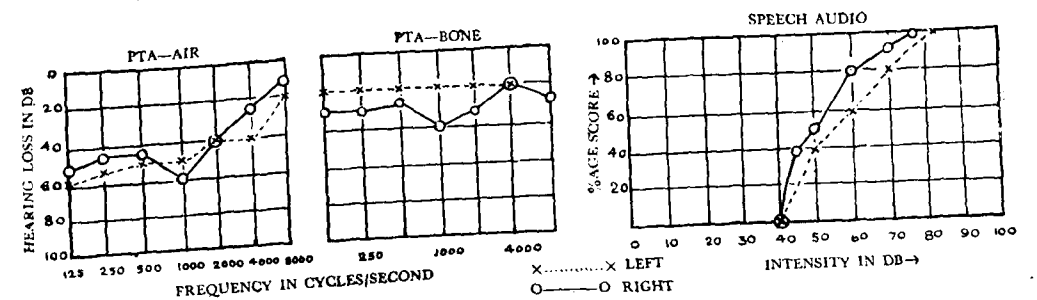
SPEECH AUDIOGRAM IN DISEASE

Effect of Different Otological Lesions on Speech Intelligibility in the present series

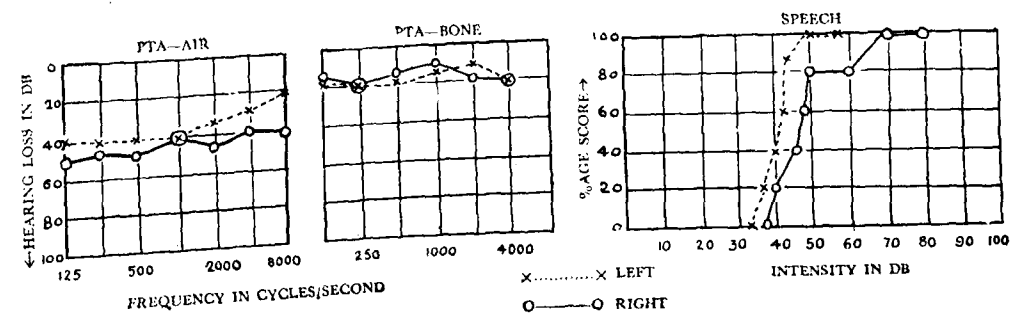
Conduction Deafness.—114 ears in 62 cases of pure conduction deafness were studied. The group included cases of tympanic membrane rupture, tympanoscleritis, acute otitis media and some type cases of chronic otitis and otosclerosis

(without cochlear involvement). In all the cases studied, the entire articulation curve was found to be shifted to right, indicating the degree of hearing loss that was present. The shape of the curve is more or less normal and discrimination reaches 100% (though with amplification) indicating an adequate cochlear reserve.

The following are two of the typical cases :



Mrs. S. S. K. age 32 yrs.—deafness both ears—started 6½ yrs. ago—gradually getting worse—Present hearing tete-a-tete—Tinnitus both ears and fluctuating—Voice tone soft low pitched—Drum membrane and Eus. tube normal—Rinne's -ve both—Bilateral otosclerosis.

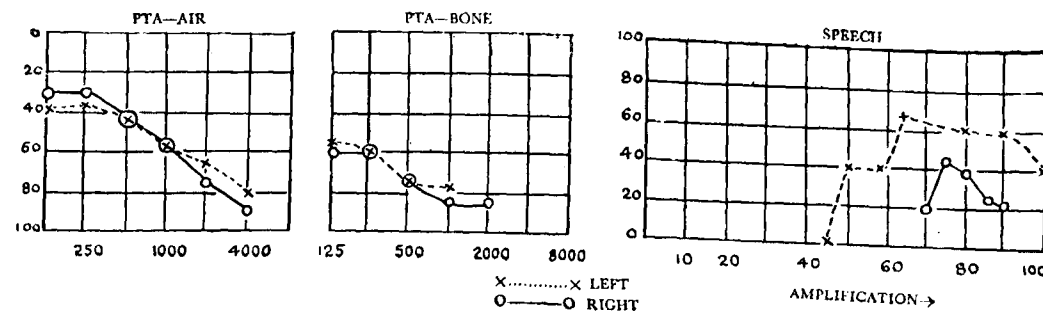


Mr. M. K. J. age 40—deafness both ears—first noticed at the age of about 7 yrs. with discharge from both ears—course about the same till age of 27 yrs.—slowly getting worse after that—worse after colds—present hearing tete-a-tete—paracusis ++—Tinnitus rt ++ Lt. + Lt. drum indrawn with evidence of old healed perforation—Rt. drum dull with marginal calcified

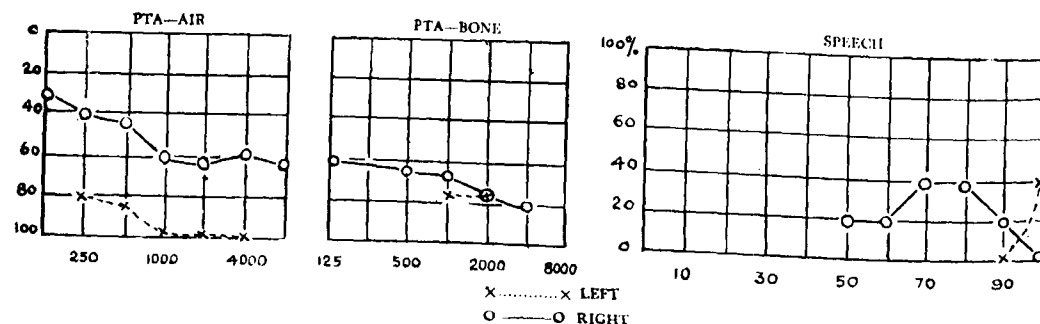
area—Rt. Eus. Tube blocked—Rinne -ve both—Bilateral conduction deafness because of fibrotic adhesions in middle ear due to old infection.

Perceptive Deafness.—Common to all these cases is that PTA is of the falling type, gradually or abruptly and the air-bone gap is minimal. The series comprised 60 cases without any vestibular lesion on a caloric test. A total of 115 ears was studied. The speech audiogram revealed that:

1. The curve rises to a certain level and remains stationary with amplification.
2. The curve may be hump-backed. It rises steeply to a maximum intelligibility (which is below the normal 100%) and beyond this point increasing amplification results in a rapid falling of intelligibility.

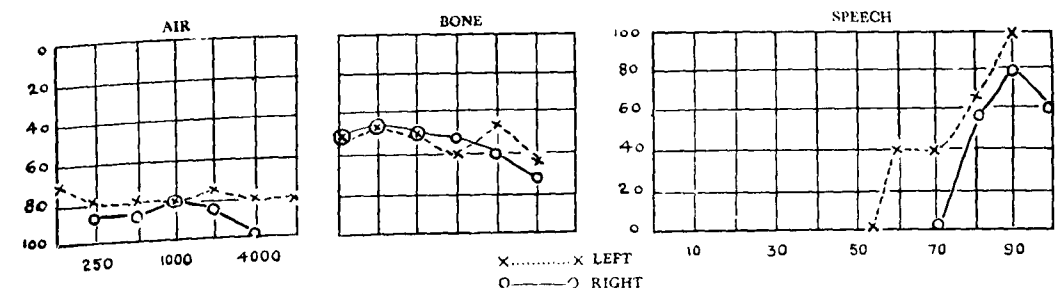


Mr. P. J. age 87 yrs.—started 20 yrs. ago with right side—gradually both and getting worse—present hearing raised voice at 2 ft.—drum and Eus. tube normal—Rinne's +ve both—marked loss with ABC in speech frequency—Bilateral nerve deafness.



Mr. S. N. M. age 75 yrs.—deafness both ears—first noticed in Lt. ear 4 yrs. ago—a year latter in Rt.—progressive—worse for last 4 months—present hearing raised voice about 8 ft. away—H/O. Antifebrin 18 yrs. ago—Irgapyrin Ing. 3 yrs. ago made hearing worse.—Drum and Eus. tube Normal—Rinne's +ve both—ABC marked loss in speech frequencies—Bilateral Nerve deafness.

Mixed Deafness.—This group of combined hearing impairment included cases of subacute and chronic otitis media and otosclerosis with cochlear involvement. 83 tested ears of 45 cases were classified on their bone conduction into groups. To group B were assigned cases in which the bone conduction reached 35—40 db for one or two frequencies. Group C were cases with substantially reduced bone conduction. Group B showed good articulation scores regardless of the basis of classification. The incipient nerve degeneration present in Group B was thus reflected in only very slightly poorer articulation scores. Group C averaged greater discrimination loss. In general the shape of the curve and the discrimination loss could be said to vary with the severity of concomitant nerve degeneration but nevertheless the groups were found to overlap each other. Since the maximum hearing loss in purely conduction deafness is not likely to exceed 55-60 db (Davis 6), loss values of 70 db always denote a certain degree of nerve degeneration. On the other hand, there is nothing to prevent such damage appearing in even fairly slight hearing impairment. In the figure below we find a good PB score notwithstanding the presence of marked BC loss.



Mr. M. R. G. age 47—started in both ears in 1931 following typhoid of 3 weeks duration—gradually getting

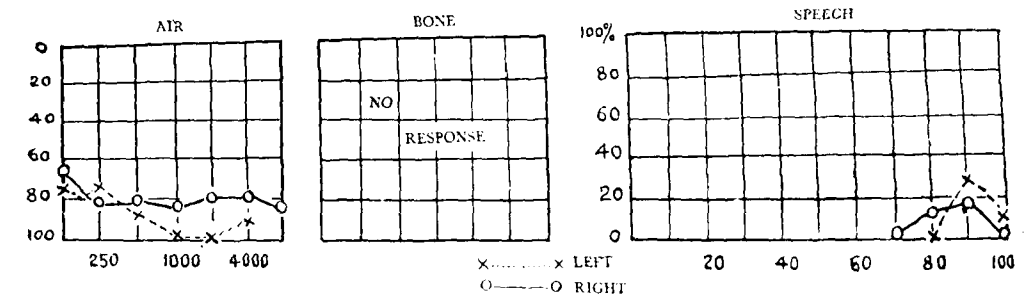
worse—worse after colds paracusis ++ Rt tinnitus ++ H/O Quinine in large doses in 1931—has diabetes also. Drums and Eus. tubes normal—Rinne's -ve in all speech frequencies—ABC lost in 512 and 1024 and marked loss in both sides—Bilateral mixed deafness.

Meneier's Disease, Recruitment and Canal Paresis.

Mygind (7) has called attention to the fact that although the bone conduction in this condition is impaired and often coincides with the air conduction, deafness of the nerve type need not necessarily be present. The perilymph and endolymph constitute part of the conduction mechanism of the ear and in fixation of the fenestra due to an increased intralabyrinthine pressure we find an impaired bone conduction more for the low than for the high tones. Mygind therefore suggests that these conditions should be classified primarily as an inner ear deafness of conductive type. As long as the nerve elements themselves are intact, the hearing impairment may be reversible, but a chronically elevated endolymphatic pressure in due course produces compression associated with degeneration of the organ of Corti. This would result in an irreversible perceptive impairment (Arnvig 8). Langenbeck 1953 (10) reported a case of Meneier's Disease in which he demonstrated inner ear conduction deafness without concomitant recruitment, the patient recovering after dehydration treatment.

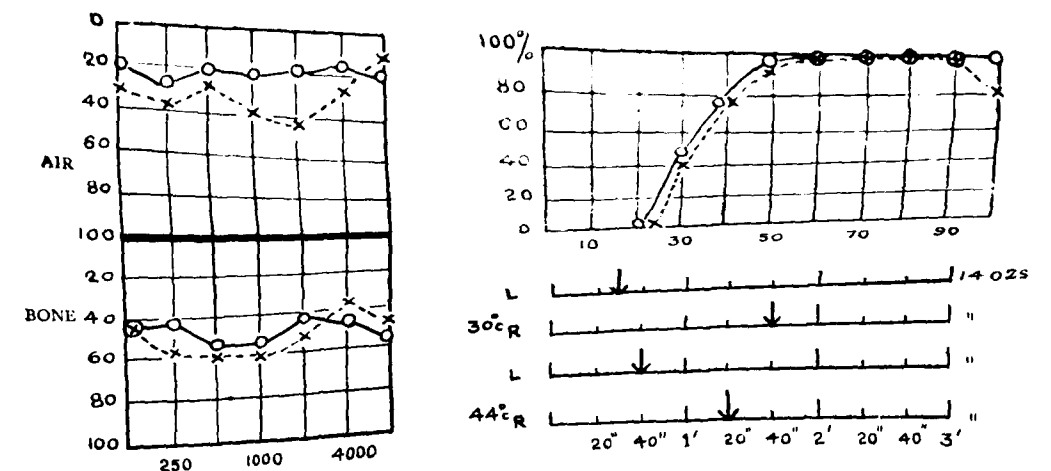
Our series consisted of 8 patients with Meneier's disease and 20 with canal paresis as revealed by Hallpike's hot and cold caloric tests.

(a) Of the 8 cases with Meneier's disease, only in two of them (HAK & ASD) the recruitment was complete and the intelligibility of speech was poor at loud intensities. The speech span was considerably narrowed and has a width of hardly 20 db in the case of HAK.



Mr. HAK age 54—deafness rt. ear started 8 yrs. ago—total loss in rt. ear in 6 months—Lt. ear 15 months worse for last 4 months—rapidly deteriorating—frequent attacks of vertigo last 15 months—4 to 5 attacks a week with frequent remissions—tinnitus + Lt. ear—voice loud high pitched—drums etc. normal—AC BC nil in 256, 512, 1024 in the Lt. ear—only AC + Lt. for 2048—Rt. ear AC for 256, 1024, 2048 but no BC—Bilat. Meneier's.

(b) In 13 out of the 20 cases with either rt. or lt. canal paresis, the maximum discrimination score ultimately reached 100%. This would indicate a good cochlear reserve. Mrs. JHM.



Mrs. JHM age 52—constant unsteady feeling for a long time—worse last 5 months—no vomiting—does not complain of deafness

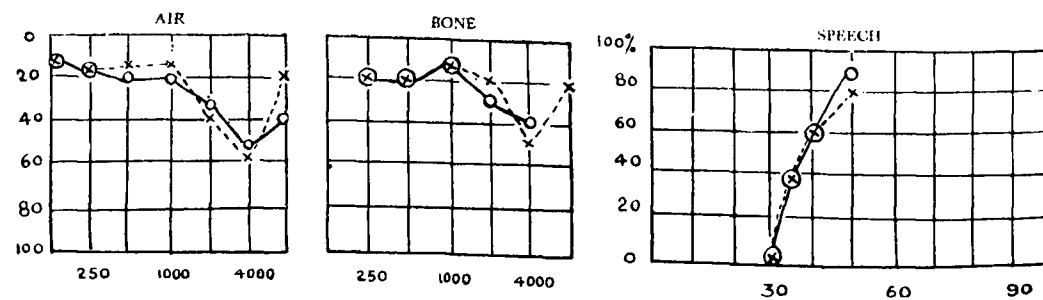
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Cooper & Merchant

—Tinnitus ++ and fluctuating—headache ++ Drum and Eus. tubes normal—Rinne's +ve ABC lost on Rt. Weber's lateralised to Lt.—Lt. canal paresis.

(c) In the remaining 7 of the 20 cases of canal paresis, the maximum discrimination score either remained short of 100% or was falling with increase in intensity. This should suggest a cochlear involvement.

Acoustic Trauma (End-organ deafness). Mr. C. S. age 38 (an air radio operator) complains of deafness in Lt. ear of 2 yrs. duration. PTA shows a dip at 4000 c.p.s. in both air and bone. But speech audiogram reveals good discrimination.



SPEECH AUDIOMETRY AND FENESTRATION/MOBILIZATION OR HEARING AID

In clinical otosclerosis that the surgeon has difficulty in predicting the outcome of surgery on PTA only is generally recognised. This is particularly true when BC in PTA shows a loss of 30 db and more in cases of mixed deafness. Moreover opinion is gathering that the pure tones are unreliable in evaluating the outcome of surgery. Speech audiometry and social adequacy index in these cases would solve the problem.

RELATION BETWEEN PTA AND SPEECH AUDIOGRAM

1. A close relation is obtained in all cases of pure conduction deafness. As Cawthorne has stated (3) it is possible to predict the hearing for speech from PTA.
2. In mixed deafness the relation is definite but not so close as in conduction deafness.
3. In perceptive deafness the relation is so little and particularly unreliable in end-organ deafness. (Meneier's and Traumatic deafness). In fact, as Cawthorne puts it, it would be fair to say that examination of patient with perceptive deafness is incomplete without a test of his hearing for speech (3).

CLINICAL APPLICATION AND USES

1. In selecting Hearing aids and in evaluating the benefit therefrom.
2. In selecting cases for stapes mobilisation or fenestration.
3. In determining the post-surgical improvement.
4. To know if Recruitment is present and to evaluate its degree from the shape of articulation curve.
5. To investigate those who can hear sound but cannot understand speech.

CONCLUSION

Speech audiometry is of great practical importance. Various aspects of auditory function can be illuminated to deepen our knowledge of the nature of hearing impairments. The possibilities of understanding and resolving the patient's hearing problems are also enlightened. Speech audiometry will assume the same significance in the field of audiology as that of PTA today, and for routine use, these two methods should form the foundation on which our conception of patient's handicap is based, as said by Gunner (9).

SUMMARY

196 cases with different otological lesions bearing a total of 344 ears, were studied in terms of a speech audiogram. This humble attempt is made with a view to introduce Speech Audiometry in routine clinical practice. Typical cases in each group are illustrated and the literature is reviewed.

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Keratositis Obturans

BY

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AND

Dr. R. N. MISRA, M.S., D.L.O. (Lond.)

DEFINITION

This is the disease of the external auditory meatus ; and has been described as a condition comprising of presence of Keratotic mass in the external auditory canal. This mass of examination is revealed in the form of cast of the deep meatus often with imprints of the annulus tympanicus and malleus on it. It consists of cerumen, debris and desquamated epithelium.

HISTORY AND REVIEW OF LITERATURE

It was in the year 1850 that Toyenbee first described this condition under the title of "Specimen of Moolluscum contagiosum developed in the external auditory meatus" which he discovered at an autopsy. (Green 1933).

Wreden in 1874 gave the title of Keratositis Obturans to this condition.

Bezold (1906) found this condition with Otomycosis consisting of a cast of external meatus composed of felted mycelia and desquamated cells. (Morrison 1956).

Green (1933) presented three cases and attributed persisting hyperaemia of the skin of the external auditory canal as the underlying factor as put forward by Wreden earlier. According to him the processes like Otitis media, furunculosis and inflammation of adjacent structure or infection of nose were responsible for this hyperaemia.

Eggston & Wolff (1947) has classified this disease process as a chronic inflammatory condition caused by an unknown parasite organism.

Harpman (1951) observed abnormal keratinization of the deeper meatus and the surface of the tympanic membrane resulting in keratosis obturans, in many cases with bronchiectasis and sinusitis. He suggested that there is one common underlying defect responsible for all the three conditions of sinusitis, bronchiectasis and keratosis obturans.

As quoted by Green, Scholefield described cholesteatoma of the external canal caused by a foreign body whereas Schwartz thought it to be initiated by Seborrhoea.

Biber thought this condition as secondary to primary cholesteatoma while Tumarkin believed in the occurrence of primary cholesteatoma of external auditory canal itself (Morrison 1956).

Fried published a case due to desquamative otitis externa.

Otto Mayer has distinguished the Cholesteatoma of the external auditory canal from the condition of Keratosis Obturans on histological grounds as follows :

- (i) Cholesteatoma being found embedded in the bone wall and lined with epidermis and filled with squames like dermoids while ;
- (ii) epidermis plugs of keratosis obturans consists of accumulation of desquamated epithelium.

Morrison (1956) studied the association of sinusitis and bronchiectasis with this disease as observed in his cases and proposed a very interesting hypothesis for the causation of this disease. He suggested that the sequence of events start with bronchial dilatation; the presence of pus stimulates vagal afferents from the tracheo bronchial tree producing cough and reflex secretion of cerumen. Thus mechanical obstruction of the meatus caused by accumulation of cerumen, is followed by an initiation of a desquamative process, which results in an epithelial plug. When this plug exerts pressure on the meatal

walls, it results in absorption of bone, expansion of ear canal and ulceration. Once ulceration is established it is followed by inflammation and repair which may result in granulation in the canal.

The pathology of the condition is, that the epidermis atrophic while stratum corneum is thickened and infiltrated with small round cells.

The present discussion is based on a study of 10 cases of Keratosis obturans undertaken in Otolaryngological department of Gandhi Memorial and Associated Hospitals, Lucknow.

The cases were studied regarding their clinical features, age, sex and seasonal incidence, predisposing factors and treatment.

The investigations carried out in this series were :—

- (i) smear examination of aural discharge ;
- (ii) culture examination of the aural discharge ;
- (iii) Histopathological examination of the Keratotic masses.

The study of these cases can be detailed as follows :—

Clinical Forms—Table I

<i>Sub. Clinical Categories</i>	<i>No. of Cases</i>
1. Keratosis obturans	... 2
2. Keratosis obturans with furunculosis	... 4
3. Keratosis obturans with otitis externa granulosa.	4
4. Keratosis obturans with ulceration of external auditory canal	... 4
5. Keratosis with otomycosis	... 3

N.B. : One case was common in groups 2 & 3.

SEX INCIDENCE

Morrison (1956) found the condition more often in males in his series. In the present series also the males preponderated, over females as there were 7 males and 3 females thus constituting 7 : 3 of the total.

Table II—Age Incidence

Age group	No. of Cases
Below 10 years of age	...
Between 11 years and 20 years	2
Between 21 years and 30 years	5
Between 31 years and 40 years	1
Above 50 years	1
	...
Total	10

Thus out of 10 cases in the present study, seven have been observed below 20 years of age. Morrison (1956) observed the condition to be more oftener in first two decades.

Table III— Predisposing Factors

Predisposing factor	Positive	Negative
1. Swimming	...	5
2. Picking (ear)	...	5
3. Toilet	...	10

Thus incidence is equal in swimmers and non-swimmers. All the cases lacked in clean toilet habits.

CLINICAL FEATURES

The presenting complaints were pain, deafness, pruritus of varying duration in all the cases. Tinnitus was present in seven cases.

Aural examination revealed simple Keratotic plugs consisting of foul smelling masses cast in the form of the meatus and composed of wax with brown desquamated scales. Furuncles were observed in four cases. In four cases granulating condition of external ear canal was met with associated with Keratotic masses.

INVESTIGATIONS

- Smear examination of aural discharge.
- Culture examination of aural discharge.
- Histopathological examination.

The results observed were as follows :—

Staphylococcus albus	...	3 cases
Staphylococcus aureus	...	1 case
P. Pyocyaneus	...	1 case
Klebsiella	...	1 case
Gram positive spore bearing bacillus	...	1 case
Total		7 cases

Out of these 5 were pure cultures while one was mixed and one sterile.

Histopathological examination revealed —

- Simple Keratinised material in simple cases.
- Keratinised material with chronic inflammatory polyp in cases where associated granulating condition was encountered.
- Sun ray appearances with Keratinised material in cases where otomycosis was found associated. The fungus was identified as *Apergillus niger* in these cases which on section showed numerous filaments and spores and heads in which spores were arranged radially.

DISCUSSION

Out of the ten cases eight were observed in the rainy season while only two were seen in summer. This frequency of the condition in rainy season can be accounted by a simple explanation *viz.* that in the rainy season the wax lying in the meatus can swell in the presence of moisture in the atmosphere or by its coming in contact with actual water during swimming. This swollen wax exerts pressure on the meatal walls which under the influence of this pressure starts desquamating. This process is marked in the deeper part of the meatus where the superficial layers of skin are thin and loosely attached and so can be easily teased in the form of epithelial pellicles (Collins 1951).

The process gradually leads to a formation of a mass in the external auditory canal. Macroscopically the plug is found to be composed of wax covered with brownish desquamated scales on its outer side cast in the form of the external auditory canal. Wax was found to be a constant feature of the Keratotic mass in seven cases of the present series. Thus the histogenesis of simple cases of Keratosis obturans as classified in groups one Table I is explained.

The cases where the Keratotic masses were observed with granulating condition or ulceration of the external auditory canal need further clarification. As suggested by Morrison (1956), it is possible that the process of desquamation if continued would ultimately lead to ulceration under the impact of pressure exerted by the plug formed as explained above.

Once the ulceration occurs, inflammation will set in and with that also the process of repair shall start to cover the denuded areas resulting in a granulating condition of the meatus.

Cases of Keratosis obturans with furunculosis can be explained very simply, as picking the ear with an attempt at removal of this obstructing mass or even otherwise as a part of habit can cause introduction of infection by abrading the surface skin and thus resulting in infection of pilosebaceous follicle and resulting in furunculosis.

Otomycosis was observed with Keratotic masses in three cases of the present series. As mentioned earlier Bezold (1906) has observed such like association in his cases. This association has been denied by Daggett (Scott, Brown) but the authors have observed such an association as observed by Bezold. The condition of formation of Keratosis with Otomycosis can again be explained on the lines similar to that with the wax; the fungus mass formed in the meatus causes exfoliation and desquamation of epithelium which would cover the fungus mass. The fungus observed in the present series was *Aspergillus niger*.

As regards association with sinusitis or bronchiectasis no case showed any evidence of such a lesion in this series of cases.

TREATMENT

Treatment employed in these cases consisted of :—

- (i) Removal of the Keratotic plug and thorough cleansing of the external auditory canal followed by application of 3% boric spirit.
- (ii) Polypus or granulations were either removed under local or general anaesthesia.
- (iii) Trichloroacetic acid cautery was employed in one and found beneficial, where the small granulations were present.

SUMMARY AND CONCLUSION

A summary of ten cases of Keratosis Obturans studied in the E. N. T. department of M. G. M. and Associated Hospitals, Lucknow, is submitted with a discussion regarding its aetiology, pathology, clinical features and treatment. That collection of wax or fungus masses in the external auditory canal with rainy season predisposes to formation of Keratotic masses, which is a desquamating response of the external auditory canal skin, which if continued may lead to associated granulating condition of the meatus. Treatment consisting of removal of the Keratotic masses and polypi followed by proper aural toilet gives satisfactory result. No association with sinusitis or bronchiectasis was observed in the present series.

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Sensitisation reactions in Ear, Nose and Throat practice

BY

Dr. N. K. APTE, M.S., D.L.O.

All ear, nose and throat specialists have some time or other come across untoward reactions to drugs in their practice. The list of drugs known to cause allergic response is growing rapidly and the real importance has been emphasized recently due to serious and fatal reactions in some cases.

It is not possible to enumerate all the allergic phenomena but it was thought worth while to report on forty cases personally seen in practice who had allergic reactions to different drugs.

It is important to differentiate the terms toxic reactions, drug intolerance and allergic reactions. Toxic reactions are as a result of pharmacological properties of drug and are either due to too frequent administration or excess dosage. No hypersensitivity is involved. Some persons show intolerance to drug *e.g.* aspirin and quinine etc. in usual dosage with such symptoms as dizziness, tinnitus and temporary deafness. Allergic reactions to drugs occur in a limited number of patients after they receive a type of quantity of drug which ordinarily would not elicit any untoward reactions in most persons. This response is a manifestation of hypersensitivity to drug and not due to pharmacological action.

All allergic drug reactions occur only subsequent to previous exposure to specific chemicals. Many substances act as partial antigens or haptens. Drugs in pure form are unlikely to cause sensitivity reactions. In vivo drug molecules with serum protein form complete allergens which can act antigenetically. After the development of sensitivity to this hapten protein combination, the hapten could then react with Antibodies

and produce allergic response. This individual might become hypersensitive to the chemical alone; on the other hand some drugs may act as complete allergens without the aid of the serum proteins. Sensitization develops after an incubation period varying from a few days to weeks. With the use of different proprietary preparations persons become sensitive to specific drug components in these remedies and are unaware of the therapeutic agent in producing these allergic symptoms.

TYPES OF REACTIONS

Drugs can cause any known kind of reaction. Certain drugs are more prone to produce particular symptoms *e.g.* penicillin causes urticaria and angioneurotic oedema, Aspirin causes asthma, Novocaine causes vomiting, convulsions.

The less severe allergic reactions are—fever, lymphadenopathy leucocytosis, Arthralgia rhinitis Abdominal cramps, headaches Skin rashes pruritus, exfoliative dermatitis. The severe reactions are asthma agranulocytosis, thrombocytopenic purpura. In rare instances death have been reported due to respiratory or circulatory failure.

Two types of allergic reactions are seen under local anaesthesia—The immediate reaction is due to direct depression of heart due to fall of B.P. and the cessation of heart before respiratory function is abolished. Death occurs within a minute. The delayed reaction begins in 3-15 minutes. It is characterized by pallor, excessive sweat sighing, shallow breathing tremors progressing to convulsions ending in respiratory arrest before circulatory failure.

Use of Adrenaline as a Vasoconstrictor in Local Anaesthesia—It may produce minor disagreeable effects *e.g.* pallor, giddiness, palpitation. Adrenaline shock is severe in some cases. Not more than 7 drops of 1: 1000 of Adrenaline in 100 c.c. of 1% Novocaine should be used in local anaesthesia.

It is liable to cause cardiac arrhythmia, in some causes.

TREATMENT

Prevention is possible by a detailed history by specific interrogation. The patch and intracutaneous testing have been advocated by some but are not reliable. A negative response does not exclude a possibility of probable reaction. It is better to avoid repetition of drugs or intermittent use. Systemic administration is better than topical application of antibiotics.

The habit of reading the label on all phials presented to the physician should be a rule. Procaine solution deteriorates on keeping and for reliable results, should be freshly prepared.

The vasomotor depression is treated by :

1. Tilting the head of patient of not more than 10°.
2. I. V. Fluids.
3. Methedrine 10 c.c. I. V.

The antihistamine preparations are very useful. In intractable cases intravenous procaine, nicotinic acid have been advocated. Cortisone and ACTH have also been found of immense value. The reactions after local anaesthesia are sometimes convulsions which should be controlled by I.V. Inj. of 5 c.c. of 25% sodium pentothal and maintenance of an air way by an endotracheal tube connected to a respiratory bag by a skilled anaesthetist.

Short acting barbiturates must be given I. V. in hypotie doses to control convulsions and not to depress respiratory or vasomotor centres.

The following table gives a report of forty cases who had drug reactions. It includes cases seen at different hospitals under different surgeons. Four patients had fatal reaction. It is unfortunate that many a time severe reactions are not reported by doctors.

REPORT OF 40 CASES

Name of Allergen	No. of cases	Procedure when reaction occurred	Type of reaction	Manifestations	Treatment	Progress
Penicillin	4	Injection Procaine	Mild	Vomiting, pallor, giddiness	Adrenaline Inj.	Recovery
	2	Dicystein Inj	Severe	Cerebral depression, drowsiness—20 min.	Synopen Inj.	Recovery
	1	Inj. Penicillin (Cryst/Sodium)	Severe	Collapse after inj. of person (Old) for Ac. sinusitis Fr.	Goramine and other treatment.	Death
Streptomycin	2	Inj. for T. B. Glands and Laryngitis	Severe	Severe Vertigo, deafness (Pt. Bed ridden) due to giddiness.	Chordotympanic Nerve Section...	Relief for giddiness in one case
Sulfa	2	1 Pravin Cilazol Nasal Drops.	Mild	Vomiting, Abd. Cramps	Omitting of drug.	Recovery
	1	Orally given to Child for recurrent cold by his family doctor (Intermittently) for 2 months	Severe	Fever, Agranulocytosis	Penicillin Inj. (Blood Transfusion).	Death after 1 week
Aspirin	2	For postoperative pain	Severe	Asthma	Cortisone and Symptomatic	Recovery
Arsenic	2	Injection of acylarsan for eosinophilia	Mild	Fever, rash lymphadenopathy.	Symptomatic	Recovery
Iodine Compd's	1	Pot. Iodide orally	Mild	Swelling over sinuses and joints	Omitting	Recovery
	1	Lipidal for Bronchography	Severe	Convulsions, cyanosis Death in X-Ray room	Not known	Death
Sera and Vaccine	2	Antidiphtheria Serum	Mild	Rash, joint swellings	Synopen Inj.	Recovery
Anaesthetics Local...	1	Local spray for direct laryngoscopy by 1% Anethaine.	Severe	Convulsions, resp. and then cardiac arrest	Pentothal Inj. Intubation and O ₂ .	Death

Name of Allergen	No. of cases	Procedure when reaction occurred	Type of reaction	Manifestations	Treatment	Progress
Novocaine 1%	2	Direct Laryngoscopy by spray of 1% Anethaine	Severe	Tremors, convulsions	Oxygenation after Pentothal Intubation	Recovery
	1	During Tonsil Operation	Severe	Convulsions, for 2 min, Retrosternal and Lumbar pain 48 hours	Synopen Luminal Inj.	Recovery
General Anaesthesia	2	Ether—'T' Operation	Mild	Convulsion	Substitution N ₂ and O ₂	Recovery
		Ether—Mastoid Operation...	Mild	Convulsion	...	...
Antihistamines	7	3 Antistin	Mild	Nausea, Vomiting, Headache	Drug stopped	Recovery
		4 Benadryl	Mild	Headache, drowsiness	Drug	Recovery
Vit. B-Complex	1	Inj. 1	Severe	Asthma	Hospitalization Oxygen	Recovery
Hydrocortisone Inj...	1	Submucous in the nose for Allergic Rhinitis	Moderate	Sweating, pallor palpitation, lumbar and chest pain	Synopen inj.	Recovery
Post Pituitary	1	Herpes of Opth. division of V. N.	Severe	Retrosternal pain pallor ? Collapse	Synopen inj.	Recovery
Blood Transfusion...	4	3 Post operative	Mild	Rigor, urticaria,	Antistin Inj.	Recovery
		1 During Operation of (nasopharynx)	Severe	Convulsion, Respy. and then arrest	Antistin Inj. Pentothal Inj. cortisone Inj. etc.	Death
Inject Bite	1	After Mastoid Operation	Mild	Oedema face and neck	Removal of pack and dressings	Recovery

Type of Reaction	No. of Cases
Mild	22
Severe	14
Fatal	4
Total	40

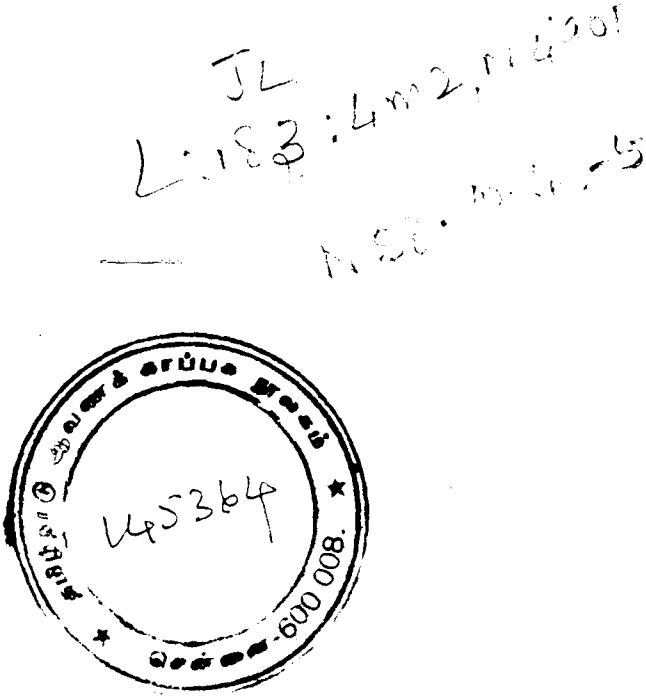
Acknowledgement.—I thank Dr. R. A. F. Cooper, M.S. and Dr. J. G. Parekh, M.R.C.P. for giving me valuable guidance in reading this paper.

SUMMARY

In view of the frequency of allergic and similar reactions and severe consequences arising therefrom including a high incidence of fatality it is incumbent on the part of medical men to be aware of the seriousness of this for all cases and take all precautions to avoid the same and meet with them properly when they occur.

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Ramsay-Hunt Syndrome (*Herpes Zoster Oticus*)

BY

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AND

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Korner (1896), a German, was first to describe blisters of the auricle along the distribution of sensory nerves together with a facial paralysis. But this symptom-complex was subject of extensive discussion by Ramsay Hunt (1906), an American.

Ramsay Hunt's chief postulation was that the syndrome followed a specific herpes zoster inflammation of the geniculate ganglion ('Geniculate Ganglionitis') with consequent swelling and palsy due to compression of the nerve. This view was presented without any pathological proof for nearly 40 years. Ramsay-Hunt failed to procure a post mortem in cases of the syndrome and histological changes suggestive of ganglionitis. The following clinical types have been referred to:

- (i) Herpes oticus with no neurological signs.
- (ii) Herpes oticus with facial paralysis.
- (iii) Herpes oticus with facial palsy and auditory symptoms.
- (iv) Herpes oticus with facial palsy with accompanying auditory and labyrinthine symptoms.

The following may be added to these groups:

- (a) Herpes oticus with herpes of glosso-palato-pharyngo-laryngeal distribution with involvement of ganglia of ix and x cranial nerves.
- (b) Cases with facial paralysis and cervical ganglionitis causing eruptions on posterior surface of the auricle and the adjoining regions of the neck.

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Dennis-Brown and his colleagues (1944) described a post mortem which altered the pathological concept of the syndrome. The case under investigation had facial paralysis and herpes of second cervical distribution involving the right occipital and post-auricular region with no definite eruption in Hunt's 'geniculate' zone (See illustration, Fig. 1). At autopsy the geniculate ganglion was normal but the facial nerve was infiltrated throughout its course, and the second cervical ganglion was destroyed by virus, the third cervical ganglion was partially intact.

The two views as to pathogenesis of Herpes Zoster Oticus as understood are:—

- (i) It is a result of geniculate ganglionitis primarily leading on to compression of the facial nerve and facial palsy.
- (ii) It is a result of herpetic ganglionitis of the cervical ganglia causing neuritis of the facial nerve and resultant facial palsy.

From what has been said above, it will appear that the term 'Ramsay Hunt syndrome' ought to be restricted to cases of facial palsy in which herpetic eruption are limited to the conchal zone. Other cases of facial palsy with herpetic eruption at sites other than the concha, *i.e.* with eruption in distribution of cervical dermatomes be referred to as 'Herpes Zoster Oticus'.

CASE REPORT

D. S. a Hindu Male, aged 42 presented for the first time on 28th May 1958 with the following complaints:—

- (i) Vesicular eruption on the left pinna, the side of the neck and back of the head on the same side since 21st May 1958.
- (ii) Pain in the left ear since 25th May 1958.
- (iii) Asymmetry of the face since 26th May 1958.

History of illness.—The patient was reported to be in perfect health until 21-5-58, when some *eruption* were noted at the sites mentioned above by an onlooker who drew the patient's attention to them. Four days later *pain* developed in the left ear and this was followed by asymmetry of the face and inability to close the left eye. There was no episode of dizziness or vomiting. There was a history of contact with cases of chicken pox prior to the illness but no definite history of exposure to cold.

On examination.—(On 9th June 1958)—A lower motor neurone type of left facial palsy was noted (Fig. 2). There were extensive pigmented scar at the sites of the eruption involving :

- (i) The left auricle ;
- (ii) The preauricular region ;
- (iii) The side of the face ;
- (iv) The left side of the neck reaching the mid-line in the lower part ;
- (v) The supraclavicular region and
- (vi) Backwards as far back as the nape of the neck. But all the eruption were strictly confined to the left side. The scars were brownish-dark in colour, multiple and patch in distribution (Fig. 3).

Ear.—In *left* external meatus there were disquamated epithelial debris over the posterior wall. Slight congestion was present over the superior meatal wall and the adjoining part of the tympanic membrane. The tympanic membrane was intact though lustureless. In the *right* ear there was no remarkable change.

Hearing: no abnormality was noticed in either ear.

Fistula sign: was negative in both ears. Rombergism was absent, nose and throat—no significant change was noticed.

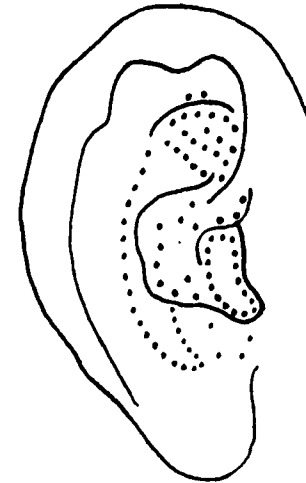


Fig. 1
'Zoster zone' of Hunt.



Fig. 2



Fig. 3

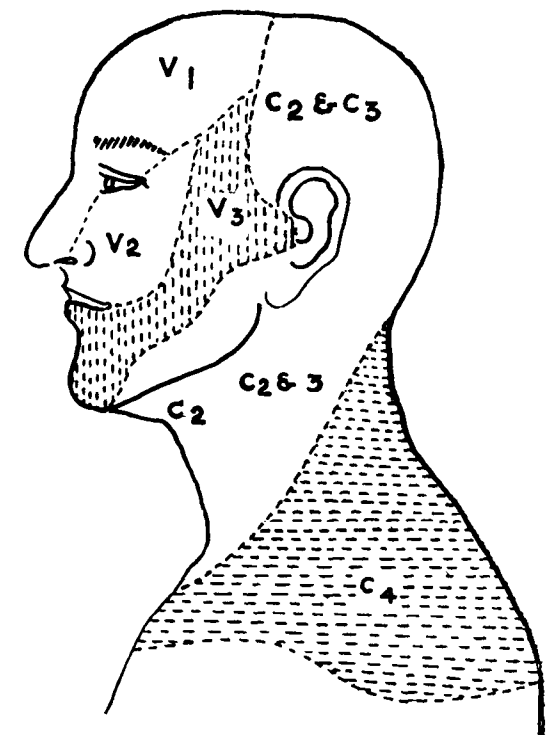


Fig. 4

Diagrammatic representation of the cutaneous nerve-supply of the face, scalp and neck (Dermatomes).

Neck—Skin sensation was intact. Taste—was unaffected over both half of the tongue. Cranial nerve—1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, were intact on both sides. Other Investigation done :—

Blood counts—Total and differential	} No significant abnormality was noticed.
Audiometry—	
C. S. F. Exam. Cytology and chemical examination	

Comments.—The following features of the case under report deserve special mention :—

1. There was complete absence of all prodromal symptoms.

2. **Pain**—was noted as a belated symptom. It followed the eruption and not preceded them as usual. The pain was not of any severe degree, much unlike the neuralgic pain that precedes Herpes Zoster Ophthalmicus which is often regarded as a diagnostic feature. Up to date there is no suggestion that there is any possibility of post-herpetic pain arising in the present case.

3. **Eruption.**—The eruption involved the area of supply of Dermtomes C₂ and C₃ (Fig. 4). There was no eruption in Hunt's 'Geniculate Zone'. The external meatal skin had the appearance of congestion with disquamation of epithelial debris.

4. **Facial paralysis.**—Followed the classical course of the disease.

5. **Sensation of taste.**—Remained unaffected.

6. **Deafness and Vertigo** - were absent throughout the course of the disease.

DISCUSSION

In herpes zoster the lesion is in the posterior root ganglion of spinal nerves or corresponding ganglion of the cranial nerves. In case of herpes zoster oticus, the lesion would appear to affect the cervical ganglion (*e.g.* C₂ and/or C₃) and spread to affect the corresponding ramifications of the cervical nerves. Through the anastomosis between the cervical nerves and the branches of the facial nerve the facial nerve itself is affected.

The result is a neuritis and consequent palsy of the facial nerve.

However the possibility remains that a geniculate ganglionitis could also spread to involve the cervical nerves and ganglia. But the fact that there was only limited involvement of the facial nerve *Viz.* (*i.e.* chorda tympani intact), and absence of hyperacusis (*i.e.* nerve to stapedius unaffected) and the sequence of events in the case under report (eruption-pain-facial paralysis) would tend to support the view that the facial nerve was secondarily involved. As to the skin lesions it is generally agreed that they are due to antidromic impulses liberating histamine bodies and the spread of the Vasodilatation may well be due to axon-reflexes. It has also been agreed that the disease is caused by a specific neurotropic virus, with definite serum reaction and antibody production. The antibody so produced has been found to be akin to that produced in chicken pox infection. Further, cases with herpetic eruption often give history of contact with patients suffering from chicken pox and evidence has been accumulating that the relationship is more than a mere coincidence. It has been suggested that possibly the same virus is responsible for herpes zoster in one group of patients while chicken pox in another group. It may account for the fact that herpes zoster (oticus or Ophthalmicus) is apt to occur in epidemics.

SUMMARY

- (1) A review of the views on pathogenesis of Herpes Zoster oticus is presented.

- (2) A plea is made:—

- (a) That the term 'Ramsay Hunt Syndrome' should be restricted for cases of facial paralysis with herpetic eruption in 'the zoster zone' of the auricle.
- (b) that the term 'Herpes Zoster Oticus' may be used only to refer to cases of facial paralysis with eruption extending over the auricle and the neck.

- (3) A case of Herpes Zoster Oticus is reported which had facial paralysis and skin eruptions over face and neck involving 2nd and 3rd cervical dermatomes.

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A Case of Fibroma of the tip of the Nose

BY

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Tumours of the nose in general are not common; and of these the innocent tumours are rarer than the malignant ones. There is no doubt that almost every variety of tumour may at times occur in these areas. Hence the nose and throat are regarded by the pathologists as the most fertile field for the study of neoplastic disease. It is well said that to know all the neoplastic conditions of the nose and throat is to know the diagnosis and pathology of tumours in general. It is estimated that about 0.2% of all the benign tumours in the body occur in the nose. Such being the rarity it is worth recording these cases. The case presented here is also remarkable for the size and situation of the tumour.

CASE NOTES

R. S. a female aged 15 yrs. was admitted into the E. N. T. wards of the Kurnool General Hospital on 18—1—58 with a tumour arising from the tip of the nose. This was present for the past 10 years. It started as a small nodule at the tip of the nose in her childhood and was progressively growing all these years. It attained the present size about two months ago. There is no pain or blocking of the nose.

General physical examination of the patient showed a normal well built girl of about 15 years age. Microscope and serological examination of the blood and examination of the urine normal. There is a smooth, soft, solid tumour of the size 3" cross section diameter and 4" long from tip of the tumour to the tip of the nose and attached to the tip of the nose by a broad pedicle. (pictures 1 & 2). Skin over the tumour is unhealthy. The nose is clear and the tumour is not involving the nasal cavity. (picture 3). Transillumination negative. Clinical diagnosis: fibroma.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

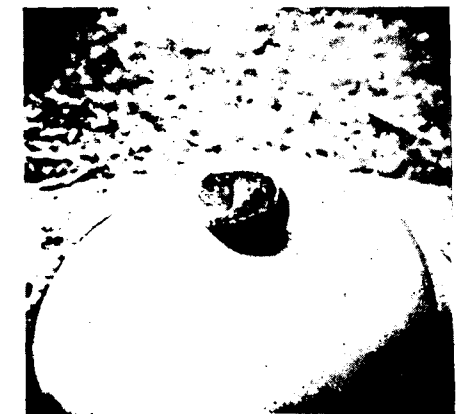
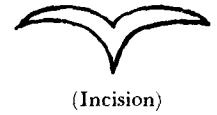


Fig. 5

Preliminary to operative removal the skin condition was treated with local application of aureomycin ointment. On 25—1—58 under general anaesthesia the tumour was excised through an incision designed to facilitate preserving the nasal contour, and the tip of the nose was reconstructed. Post operative course was uneventful.



The final picture at the time of discharge 15 days after the operation is seen in (picture 4). The tumour excised is shown in (picture 5). The cut section was smooth.

Pathology report.—Cellular fibroma.

Pure fibromas of the nose are rare. Usually they arise from the posterior ends of the turbinate or septum, and hang into the post nasal space. Occasionally they may also arise from the anterior portion of the septum, floor of the nose or in the sinuses. A tumour arising from the tip of the nose like the one reported is extremely rare.

I thank the Superintendent of the Kurnool General Hospital, Dr. K. R. Pai, M.S., F.R.C.S. for permitting me to publish the case from the hospital records.

Neurofibroma of the Larynx

BY

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Neuro Fibroma of the Larynx is a rare type of benign growth of the Larynx. Age incidence—It may occur at any age. Sex—May occur in both sexes but is said to be slightly more frequent in women.

Neurofibromata may be found in any part of the body. Two varieties are seen. (a) Solitary, (b) Generalised neurofibromatosis or Von Reckling hausen's disease.

In the Larynx the following types are described:—

- (1) Discrete encapsulated tumour.
- (2) Diffuse nodular involvement of the Larynx by neurofibromatous tissue.
- (3) Polypoid tumour of Vocal Cord, localised but not encapsulated.

Site.—Common sites are the aryepiglottic folds and the Ventricular bands. There have been reports of cases arising from the edge of the vocal cords also.

Symptoms.—Depend on the size and site of origin of the tumour. There may be no symptoms and growth is discovered only by accident during routine examination of larynx. Other patients may complain of discomfort in the Larynx and huskiness of voice. In still other cases the voice may be interfered with, only at times, due to displacement of a pedunculated growth, which interferes with movement of the Vocal cords. In large sized growths and multiple growths dyspnoea may occur. Stridor may be more marked on exertion. When inspiration is noisy and stridulous and expiration easier the growth is likely to be above the vocal cords, and *vice versa*. Dysphagia is sometimes present in large sized growths. All these symptoms are exaggerated when an attack of laryngitis supervenes, which itself may present more severe symptoms than those occurring in a normal larynx.

General Health of the patient is usually good.

Diagnosis.—Is by the clinical appearance and microscopic examination.

Case.—Name Y, Hindu, Male, age 27.

Complaints.—Hoarse voice on and off for the past four or five months. (2) Fever and cough for the last 10 days. (3) Difficulty in breathing for the last 3 days.

Patient was admitted in acute respiratory distress, and an emergency Tracheostomy was done.

Indirect Laryngoscopy showed generalised congestion of the larynx; movements of the vocal cords were normal. In the subglottic region, a smooth rounded pinkish growth was visible.

After 14 days, when the upper respiratory infection cleared up, the growth was removed by Laryngofissure. It was found to be arising from below the right vocal cord, and about the size of a marble. There was no induration or infiltration of the base. During removal there was brisk bleeding necessitating ligation at one point.

Biopsy Report.—The tumor consists of elongated cells with spindle shaped nuclei. These cells and their fibres are arranged in bundles cut in various directions. The regimentation of nuclei as in Neurilemmoma is not present. There is no evidence of malignancy—*Diagnosis: Neurofibroma.*

SUMMARY

A case of Neurofibroma arising in the subglottic region is described. The patient was first seen during an attack of upper respiratory infection, when acute dyspnoea supervened requiring Tracheostomy. Later the growth was removed by Laryngofissure.

ACKNOWLEDGEMENT

My thanks are due to Col. B. L. Taneja, Med. Supt., Irwin Hospital, for permission to use the Hospital Records.

REFERENCES

1. Pearlman, Friedman and Appel. Neurofibroma of Larynx. Arch. Otolaryng., July 1950.
2. F. A. Figi and David Stark. Neurofibroma of Larynx Laryngoscope, July 1953.
3. Diseases of Nose and Throat, St. Clair Thomson and Negus, 1955.

Case Report of Post-Septal Operation Saddle Nose Defect

(Treated By autogenous Bone Graft)

BY

Dr. R. J. MANEKSHA, F.R.C.S. (Eng.)

One of the common causes of saddle nose defect is overenthusiastic attempts at removal of a deviated septum. It is very necessary to leave the anterior portion of the septum intact or it is much better to do a conservative Goldman's operation where no part of the septum is removed.

Case Report, Mr. M. K.—This case in question had a septal operation some years ago, with resulting depressed lower two thirds of the nose and complete loss of tip support. It was decided to graft autogenous bone from the iliac crest. The shape of the graft when the tip is to be raised is L shaped either in 1 or 2 pieces. Absorption of the graft to about 20% has to be allowed and hence it is slightly overcorrected. Under general anaesthesia the graft is taken from the Right Iliac crest including one inch near the anterior superior spine. The incision for the nose is either midcolumellar or U shaped raising the whole columella. I prefer the later incision for better approach and easier insertion of the L shaped graft. The graft is immobilized at the nasion by forming a gutter in the nasal bones with a rasp. The bone graft is shaped and coated with Penicillin powder. Repeated withdrawal of the graft from the nose is avoided. Tearing of the mucosa near the columella or too much stretching of the mucosa by the graft with delayed tearing may infect the graft from the outside.

Discussion.—Autogenous bone is by far the ideal material for nasal grafting. Its main disadvantage is that the patient has



Fig. 1
Saddle Nose defect before bone grafting.



Fig. 2
After L shaped bone graft with a columella raising incision.



Fig. 3
Shows loss of tip support.



Fig. 4
Tip support restored.

to undergo two operations—a major one for the removal of the graft. I have done over six cases of homogenous grafting—the bone being used on the same day within a few hours for the second patient. Blood grouping is not necessary but the donor patient should be free from any infective condition. Ideally two cases of saddle nose defect are kept on the same day and the bone from the first operation used for the second case. The slight excess of bone removed from the first patient is in no way harmful to the patient. The graft is immobilized for ten days, either by plaster of paris mould on the nose or by elestoplast pressure dressing.

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Association Notes

ELEVENTH ALL-INDIA CONFERENCE OF OTOLARYNGOLOGISTS 1959

Office of the Conference Secretary,
Ear, Nose and Throat Section,
J. A. Group of Hospitals,
Gwalior (M. P.)

Dear Sir,

It has been decided to hold the Eleventh All-India Conference of Otolaryngologists of India at Gwalior on January 10th to 13th, 1959. You are cordially invited with your family to attend the Conference and make it a success.

Please fill in the accompanying form and send the same to me within five days of receipt of this letter.

The accommodation problem in Gwalior is very acute and it will be very necessary to reserve the accommodation well in advance.

*Name of Hotel	Single Room		Double Room	
	Lodge	Board	Lodge	Board
Gwalior Hotel ...	Rs. 7/-	Rs. 8/- per head	Rs. 10/-	Rs. 8/- per head
Lakshmi Hotel ...	Rs. 2/8/-	Rs. 3/- per head	Rs. 3/8/-	Rs. 3/- per head
Kailash Lodge ...	Rs. 2/8/-	Rs. 3/- per head	Rs. 3/8/-	Rs. 3/- per head

Hostel accommodation in college compound at Rs. 2-8-0 per head will be available.

Please let us know if you have any objection to be personal guest of a member of staff in this college.

The weather in Gwalior in these days is very cold and hence woollen clothes and heavy blankets are necessary.

The delegate fee is Rs. 10/- only.

Yours faithfully,

C. S. ANAND,
Secretary.

*Rates are nearest to approximate charges.

ELEVENTH ALL-INDIA CONFERENCE OF OTOLARYNGOLOGISTS 1959

Name (in Block letters).....

Address

1. Attending the Conference/Not attending
2. Number of persons including family and self
3. Exact date and time of arrival
4. Mode of arrival (Train or Car)
5. Date of departure of return journey
6. Details of return journey if reservation needed
7. Whether hotel accommodation required or not
8. Whether reading any paper or not
- (a) Title
- (b) Time required
- (c) Whether synopsis enclosed or not
9. Whether Vegetarian/Non-vegetarian.

Signature

Delegates proposing to stay in a hotel are requested to send 25% of the advance immediately.

Return journey reservation will only be arranged if advance payment is made.

Negotiation for the grant of Railway concession are in progress and forms will be sent as soon as they are ready to those who are desirous of attending.

**ELEVENTH ALL-INDIA CONFERENCE OF
OTOLARYNGOLOGISTS 1959**

14, J. A. Hospital Gwalior

"PROGRAMME OF THE CONFERENCE"

Dates.	Morning.	Afternoon.	Evening
Jan. '59 9th	---	---	Governing Body Meeting
10th	Inauguration	Symposium on Conductive Deafness.	---
11th	Scientific Papers	Scientific Papers.	---
12th	Gen. Body Meeting	Site-seeing Tours or Shopping.	---
13th	(for those who want to attend) Operative Demonstration, Morning & Afternoon session in "Surgery of Conductive Deafness".		

**There may be some modification in the last day's programme due to Dr. S. Rosen's visit.

**THE WILLIAM AND HARRIET GOULD FOUNDATION
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THE GOULD AWARD

The Gould Award is presented annually for outstanding research in laryngology to encourage and reward fundamental investigations in this field.

The International Committee for the Gould Award announces the selection of the recipient for the year 1958 :

Professor FUMIO NAKAMURA, M.D.,
Kyoto Prefectural Medical College,
Kyoto, Japan,

for his electrophysiologic studies of laryngeal function.

The International Committee for the Gould Award for 1959 will consist of Sir Victor Negus, 149 Harley St., London, W. 1; Professor Cotoji Satta, No. 111 Morikawa-cho, Bunkyo-ku, Tokyo; and Hans von Leden, M.D., Medical Director, The William and Harriet Gould Foundation, 30 North Michigan Avenue, Chicago 2, Illinois.

The amount of the Award has been increased to \$ 300.00.

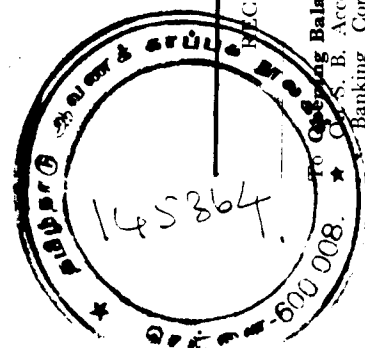
For further information please address the nearest member of the International Committee.

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Account of the Journal of the Association of Otolaryngologists of India
with the Honorary Treasurer at Madras

Receipts and Payments Account for the year ending 30-9-1958.

RECEIPTS		Rs.	nP.	PAYMENTS		Rs.	nP.
To Opening Balance :				By Printing Charges	...	2,652	13
On S. B. Account with Canara Banking Corporation Ltd. as on 1-10-1957				.. Establishment Charges	...	360	00
*Securities with Lloyds Bank Ltd. Bombay		3,257	65	.. Postage	...	159	12
Cheque of Head Office contribution to Journal		5,500	00	.. Bank Charges	...	10	38
Cash with Clerk (Contingencies Account)		660	00	.. Auditor's Honorarium	...	50	00
		20	73				
		9,438	38				
Closing Balance :				On S. B. Account with Canara Banking Corporation Ltd. as per pass Book as on 30-9-57	...	3,025	59
*Securities with Lloyds Bank Ltd. Bombay		1,761	75	.. *Securities with Lloyds Bank Ltd. Bombay	...	5,500	00
Interest :		359	00	Cheque Head Office Contribution to Journal	...	697	43
From Securities				Cash with clerk (Contingencies Account)	...	19	15
From Canara Banking Corporation		146	14				
Head Office Contribution		71	10				
		217	24				
		697	43				
Total		12,473	80	Total		9,242	17
						12,473	80

Examined and found correct.

Madras : P. N. SINHA, President. TULSI DAS, Hony. Chairman. C. M. LEELAVATHI, Hony. Treasurer. K. JOHN & CO., Chartered Accts. / Hony. Auditors.

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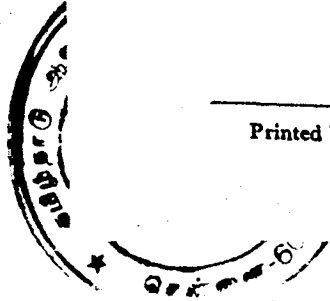
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Riboflavin	... 1.2 mg.
Nicotinic Acid	... 20 mg.
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