

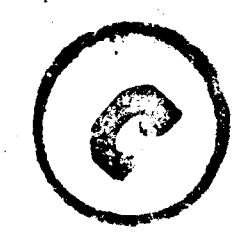
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Indian Journal of  
Otolaryngology

VOL - V  
V

SEP  
DEC / 1953

NO. 3  
4



**Indian Journal of**  
**296 OTOLARYNGOLOGY**

296  
A-53

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Vol. V

SEPTEMBER 1953

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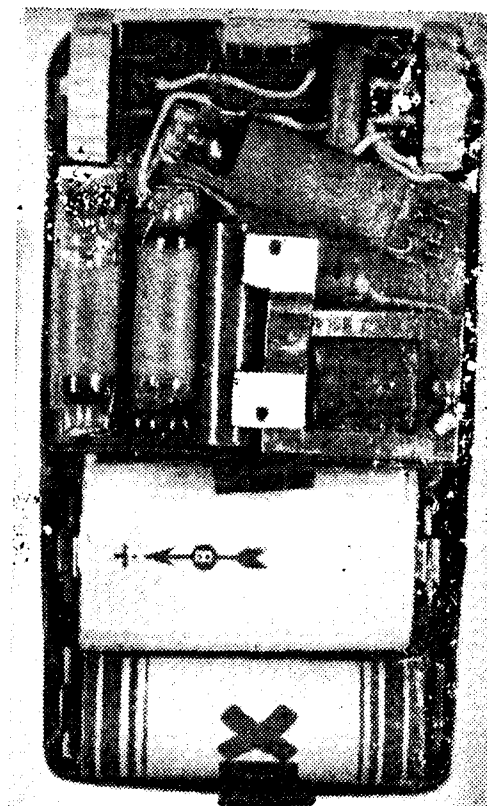
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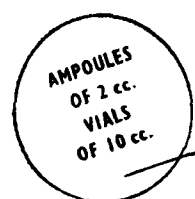
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# INDIAN JOURNAL OF OTOLARYNGOLOGY

Official organ of  
 THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Vol. V

SEPTEMBER 1953

No 3

## Ultra-Sound Treatment in Oto-Rhino-Laryngology

BY

MM. GEORGES PORTMANN

(Professor of O. R. L. of the Faculty of Medicine of Bordeaux)

AND

MICHEL PORTMANN, M.D. and J. L. BARBE, M.D.

Bordeaux, France.

For many years the audiology laboratory of the University of Bordeaux has been doing continuous research on the therapeutic treatments by ultra-sound on physical, biological and medical grounds.

Therapeutics of the sound need a high frequency above 500,000 a second, for under such a frequency one cannot direct the beam of ultra-sounds which diffuses in all directions.

In our research we have made use of the frequency of an electric generator of great power (1 kw : h) capable of producing ultra sounds of 968,400 per second by excitation of a piezo electric quartz three millimeters thick which can give a power of 100 acoustical watts with a tension varying between 0 and 500 volts.

### RESEARCH IN PHYSICS

This apparatus has enabled the verification of the classical properties of ultra-sounds and revealed a certain number of facts so far unknown. For example they provoke a sono-luminescence going as far as the ultraviolet spectrum up to 3500 Å°.

Barbe verified this phenomenon in living tissues : In a dark room, laparotomy is performed on a guinea-pig ; an acrylite is introduced in the opening under the petitoneum. Ultraviolet filters are superposed in the chase, masking an orthochromatic film. The opening is closed and the animal is immersed in a bath

of water with a beam of ultra-sounds going through it so that the axis of the latter is perpendicular to the film. The photographs obtained in this way show the sonoluminescence in the visible spectrum.

On the other hand the high frequency of the ultra-sounds does not spread in the air; the intimate contact with the skin is obtained by a column of water 3 or 4 centimeters high. Barbe takes a cylinder open at both ends and of a larger diameter than that of the quartz transmitter. He lets the cylinder contact the skin and makes it impermeable with a special paste. The quartz is introduced in the cylinder in which water is poured until the bottom part of the quartz is brought into contact with it.

This method permits to demonstrate the linear intratissular propagation of ultra-sounds. Moreover by chemical methods we have been able to measure the percentage of penetration: in the learning matter, the decrease of intensity (5) of radiation at two given points,  $x$  and  $y$ , is inversely proportional to the square of the distance between these points and the transmitter.

$$\frac{dx}{dy} = \frac{y^2}{x^2}$$

#### RESEARCH IN BIOLOGY.

Having analysed the penetration of ultra-sounds, we have examined their action on the various layers of tissues they penetrate. In the blood hemolysis was always obtained "in vitro". From the chemical point of view a decrease of 30 to 40% of cholesterol was found in the blood of the patient.

On the other hand fifty animals, rats, rabbits guinea-pigs, were ultra-sonized with various intensities (from 0,5 to 10 watts) for ten minutes by the external meatus of the ear. The quartz transmitter was introduced in the cylinder described above, the lower end being held fast to the ear speculum. To ensure irradiation the cylinder and the speculum were filled with water according to the above-mentioned procedure.

(1°) **Physio-pathological effect.**—The doses of 1,4 cm<sup>2</sup> and more create on the animals a vestibular hypho valency: the higher the dose, the more persistent the effect. The audition was tested by the prior reflex. Audiograms were done on 30 animals, before, immediately after, a day after and five days after the experiments.

Ultra-sounds do not create any functional trouble for 0,5 and 1 watt. More intense doses, 2 watts and above, cause auditive losses whose intensity is proportional to the dose.

(2°)—**Morphological effect.**—The histological study showed the following injuries:

First stage: Hyperaemia, stage of reversibility (0,5 watts/cm<sup>2</sup>).

Second stage: Capillar fragility: sanguine extravasation, heamorrhage, transudation, oedema, more or less dissecting injury.

Third stage: Immediate necrosis for intense doses (8 watts/cm<sup>2</sup>), secondary for less intense doses (3 watts/cm<sup>2</sup>).

All these injuries are situated in various regions but generally localized between tissues of different intensities: interphasis.

All these experiments have allowed the exact definition of various points:

(a) The technique of application must always be done by the intermediary of a column of water;

(b) The doses cannot be exceeded, in order to avoid functional or morphological disorders. In the speciality of O.R.L. the intensity must never exceed 1 watt/cm<sup>2</sup>.

(c) The mechanism of action of ultra-sounds: in fact they act by micro-massage, giving an increase of permeability of the cellular membrane, an increase of the potential of exido-reduction for small doses carrying a cellular hyper-function action on the neuro-vegetative system: inhibition of the irradiated nerves, finally sono-luminescence spread upon the ultraviolet spectrum accelerating the cellular metabolism.

All these properties explain the filmolitic properties of tissular reviviscence, anti-inflammatory, analgesic, anti-spasmodic of the ultra-sounds which allow their utilisation in therapeutics.

#### RESEARCH IN THERAPEUTICS

The results are based upon observations among the principal are: ringing in the ear, hay fever, neuralgia, paresthesia, bronchial asthma. In otology, two sessions of 10 minutes duration each week, on principle, without exceeding 1 watt/cm<sup>2</sup> (generally from 0,3 to 0,7 watt/cm<sup>2</sup>); the patient then feels a sensation of heat or cold which increases with the dose and reaches to a sensation similar to that of a stab if the dose is exceeded.

(1) **Deafness.**—118-Deafness of the transmitting apparatus of mixed deafness (transmission of perception apparatus) have been treated. They correspond either to oto-sclerosis or to sequel of otitis or tubular obstruction.

35% good results 15 to 20 decibels on the audiogram) 23% fair results (10 decibels on the audiogram) 51% temporary or bad results.

(2) **Tinnitus.**—(a) In the above mentioned deafness tinnitus disappears in most cases even if audition is not improved.

(b) **Tinnitus without deafness.**—Tinnitus by vasodilation no results 0%. Tinnitus by vasoconstriction: excellent results in 85% of treated cases.

(3) **Meniere Disease.**—On 12 treated cases: 7 good results 2 fair results - 4 no result.

(4) **Hay Fever.**—The treatment consists of irradiations of the nasal sympathetic system by the lateral part of the nose and irradiations of the sphenopalatine ganglions. (Two sessions per week). on 36 cases treated: 22 clearly improved, 10 improved and 4 failures.

(5) **Neuralgia.**—(tri-germinal, occipital nerves) The irradiations are done at the point of emergence of the sick nerve. On 14 cases treated: 8 clearly improved, 2 improved in six months and 4 failures.

(6) **Bronchial asthma.**—The irradiations are done either on level with the stellar ganglions or on level with the thoracical sympathal system (by direct posterior approach or parasternal anterior approach. On 72 cases treated out of which 30 infantile asthma and 42 asthma cases in adults: 30 completely cured, 18 good results in adults, 13 cases improved in adults and 11 failures.

The more intricate the asthma, the less fair results.

From these researches it appears that:

(a) The ultra-sonic therapeutic can be applied only by well-trained practitioners for, in order to get good results one must give little doses at short intervals.

(b) It cannot be considered as a universal panacea; ultra-sounds, because of their physical and biological properties, have determined indications; these now can be stated precisely in oto-rhino-laryngology, particularly in cases of deafness, ringing in the ear, neuralgia and spasmodic neuro-vegetative illnesses. But such a treatment could not be thought of for (neoplasias) which are generally activated by ultra-sonization.

## Investigations and Treatment of Deafness Incidence and Frequency of Otosclerosis

BY

Dr. S. G. JOSHI, M.S. and Dr. S. R. RÉGE, M.B., D.L.O.

**Aim of the study** was to find the incidence of otosclerosis and allied deafnesses in patients attending the E. N. T. Department of K. E. M. Hospital. With facilities available we carried out the treatment of these patients and an attempt was made to improve their hearing. All patients were studied in a systematic way as shown in the following scheme. Special investigations were carried out in otosclerotic patients and in suitable cases we did Lempert's Fenestration operation.

### Methods of Study.—

1. Complete history of deafness with its origin, duration and progress.
2. History of past illnesses.
3. Familial history of deafness.
4. Thorough clinical examination of ear, nose and throat.
5. General systemic examination.
6. Tuning fork tests, tests for whisper and spoken voice.
7. Audiometric study (6 B. P. Wester Electric Audiometer). Before and after treatment as well as follow up for 6 months to 1 year.
8. Direct nasopharyngoscopic examination.
9. Caloric test.
10. Pathological investigations e.g. blood for Kahn, blood counts, etc.

**Results.**—Complete clinical examination and necessary investigations were carried out in a total of 307 patients for varying types of deafness. These patients can be grouped as shown below according to the aetiology of the deafness. Only those patients were studied when chance of improvement existed. Stone deaf cases are not included.

| No.   | AETIOLOGY OF DEAFNESS.             | INCIDENCE. | PERCENTAGE. |
|-------|------------------------------------|------------|-------------|
| 1.    | Otosclerosis                       | 55         | 17.9        |
| 2.    | Suppurative otitis media           | 74         | 24.1        |
| 3.    | Tubal occlusion                    | 59         | 19.2        |
| 4.    | Nerve deafness                     | 38         | 12.3        |
| 5.    | Deafness and Allergy               | 18         | 5.8         |
| 6.    | Mixed type deafness                | 21         | 6.8         |
| 7.    | Menier's Syndrome                  | 11         | 3.5         |
| 8.    | Chronic mastoiditis                | 16         | 5.2         |
| 9.    | Deaf-Mute (Congenital or Acquired) | 15         | 4.8         |
| Total |                                    | 307        |             |

Irradiation of nasopharynx with a monel metal 50 mgm. radium applicator was carried out in 142 patients with varying responses as shown below :—

| No. | DIAGNOSIS.                                          | No. OF CASES. | RESPONSE.                                                                                                                                                                   |
|-----|-----------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Chronic adhesive otitis media due to tubal blockage | 24            | 11 patients had very remarkable relief in hearing as tested by audiograms while 7 reported only 50% relief. Tinnitus was relieved to a very great extent in these patients. |
| 2.  | Nerve deafness                                      | 10            | Very poor response. Only one case reported some subjective improvement.                                                                                                     |
| 3.  | Mixed deafness                                      | 8             | Patients had improvement as far as freedom from tinnitus is concerned. Two patients were relieved to the extent 60% and one patient reported 40% relief from deafness.      |
| 4.  | Allergy and deafness                                | 6             | None relieved. One patient became worst after treatment.                                                                                                                    |
| 5.  | Suppurative otitis media                            | 60            | Ear (s) became dry in 15 patients with improvement in hearing upto 10-15 decibels. In two patients there was evidence of perforation healing.                               |
| 6.  | Menier's Syndrome                                   | 4             | Attacks of giddiness disappeared completely in one patient only but in this patient deafness and tinnitus became worst. Others did not report any relief from treatment.    |
| 7.  | Chronic mastoiditis                                 | 10            | Ear discharge has stopped in two patients. Rest are advised to undergo mastoid operation.                                                                                   |

| No.   | DIAGNOSIS.        | No. OF CASES. | RESPONSE.                                                                                                              |
|-------|-------------------|---------------|------------------------------------------------------------------------------------------------------------------------|
| 8.    | Asthmatic attacks | 5             | There was remarkable improvement seen in this group. No asthmatic attacks for last 6 months since last radium sitting. |
| 9.    | Otosclerosis      | 15            | No change.                                                                                                             |
| Total |                   | 142           | Only 31.7 had relief after radium treatment.                                                                           |

The hospital does not possess any radium applicator. The monel metal radium applicator was offered for purposes of treatment by Dr. S. G. Joshi throughout this work and later Dr. J. V. DeSa also offered his applicator for some time. In the absence of these, irradiation of nasopharynx could not have been possible.

**Comments.**—We have found radium irradiation to be very useful in alleviation of tinnitus, in chronic catarrhal otitis media and mixed deafness. The improvement was noticeable after two sittings of radium. In suppurative otitis media in a small percentage of cases we were really surprised to see otorrhoea stop after 2 or 3 sittings. In 5 cases in this series granulations were seen in the middle ear and at the end of the course not only the granulations had disappeared but there was a definite decrease in the size of the drum perforation. We had contemplated to do a mastoid operation in these patients but patience has been very aptly rewarded. We advise as a routine a course of irradiation in those cases of S. O. M. where any obvious focus of infection has been adequately treated and inspite otorrhoea persists; same applies to otorrhoea persisting after mastoid operations. Asthmatic attacks in children find a unique place in treatment with monel metal radium applicator. Our results have been utmost gratifying in this group. Radium was found to be not useful in treating patients of nerve deafness and those due to otosclerosis. Radium was used in otosclerosis with the hope that whatever loss in hearing, lymphoid tissue obstruction might cause, may be relieved after irradiation. Most of such cases did not much benefit by irradiation. Almost all of these cases were subjected to irradiation before we started doing fenestration operation for want of another line of treatment. Now only selected cases are subjected to irradiation to be followed by fenestration operation.

**Otosclerosis.**—Julius Lempert's Fenestration operation was done in 25 cadavers. Later on this operation was carried out in 14 living subjects. Out of these 10 were males and 4 females. The average age of the patient was 28, the youngest being 22 and the oldest 38. Unfortunately many of the selected cases were not willing to get operated out of fear. The operation was carried out under nitrous oxide and other anaesthesia after preliminary induction with pentothal sodium.

Immediate results of this operation have been very good and patients' hearing has been improved on an average from a loss of 60-75 decibels to neighbourhood of 35-40 decibels. The patients themselves report very good hearing for conversational purposes. The psychological effect on the patients has been remarkably good. Time interval after the operation has been very short indeed. We have followed these cases now only for 6 to 12 months. It requires at least two years follow up of hearing acuity to finally evaluate the good results of the operation.

The equipment and necessary instrumentarium was offered by Dr. S. G. Joshi for carrying out the Fenestration operation.

Our cases can be grouped as follows :—

| NO. | NAME.      | AGE. | SEX. | OCCUPATION.  | DURATION OF DEAFNESS. | REMARKS.                                                                                        |
|-----|------------|------|------|--------------|-----------------------|-------------------------------------------------------------------------------------------------|
| 1.  | M.R.       | 26   | M.   | Factory Hand | 3 years               | Patient did not benefit from operation—probably a bad selection.                                |
| 2.  | Dr. M.N.H. | 35   | M.   | Doctor       | 7 years               | Improvement; has 30 db. loss on Western Electric Audiometer.                                    |
| 3.  | G.K.       | 35   | M.   | Clerk        | 2½ years              | Improved; dc. 25 db.                                                                            |
| 4.  | S.N.       | 22   | M.   | Factory Hand | 5 years               | Improved; do. 40 db.                                                                            |
| 5.  | C.B.       | 33   | M.   | Shopkeeper   | 3 years               | Improved; do. 45 db.                                                                            |
| 6.  | S.M.M.     | 30   | F.   | Housewife    | 3 years               | Improved; do. 25 db.                                                                            |
| 7.  | P.G.M.     | 29   | M.   | Teacher      | 5 years               | Improved; do. 50 db.                                                                            |
| 8.  | A.S.R.     | 23   | F.   | Housewife    | 7 years               | Improved; has 25 db. loss on Western Electric Audiometer.                                       |
| 9.  | P.D.K.     | 28   | F.   | Housewife    | 12 years              | Improved; do. 50 db.                                                                            |
| 10. | S.N.       | 23   | M.   | Clerk        | 6 months              | Very good improvement, has only 20 db. loss now.                                                |
| 11. | M.K.       | 18   | M.   | Clerk        | 1 year                | Improvement; has 35 db. loss on audiometer.                                                     |
| 12. | Y.A.       | 30   | M.   | Millhand     | 2½ years              | Operation was abandoned as the flap was torn while separating from posterior meatal wall.       |
| 13. | A.V.       | 25   | F.   | Housewife    | 5 years               | Improvement; has 35 db. loss so far. Patient is now pregnant and will report after confinement. |
| 14. | P.P.       | 38   | M.   | Shopkeeper   | 7 years               | Improvement; has 40 db. loss in hearing now.                                                    |

**Comments.**—Our results of the Fenestration operation for Otosclerosis have been quite satisfactory though not excellent. Except for two cases our patients all claim varying type of improvement in hearing. One of the two failures was our first case. Here the hearing impairment was of the order of 75 db. in either ear. Bone conduction was fairly good and the failure was anticipated because we had also felt that patient would not benefit much after operation. However it was the first case done in the history of our Institution and the fact that we had started a new operation was much more than gratifying. The second failure was really an abandoning the operation where the flap was torn due to its extreme thinness although we had been very careful in separating the flap. This patient was called in January 1953 for completion. One of the patients who showed remarkable improvement belonged to the medical profession (Case No. 2.) Now he is able to use his stethoscope and is very confident about the murmurs in the heart or other chest sounds to which he was absolutely deaf before operation. Case Nos. 3, 6 and 10 also claimed very good results of the operation and have still maintained the good results after about a year. Patients having 50 db. loss level, although appear not to be much benefitted from the appearance of the curve on the audiometric chart, do not find much handicap for conversational hearing. Case No. 13 showed improvement in hearing but soon after operation reported she is pregnant and we will be able to follow her up as to how much change in hearing is due to pregnancy.

#### SUMMARY.

1. Incidence of varying types of deafness from point of view of aetiology is reported in 307 cases.
2. Incidence of otosclerosis works out to be 17.9%.
3. Irradiation of nasopharynx has benefitted only 31.7% cases out of 142 cases so treated.
4. Fenestration operation was done on 14 cases for otosclerosis. On an average patients have 36.5 db. loss as tested by Western Electric Audiometer post-operatively. There were two failures in the series.
5. Operation is done for the first time in the history of our Institution and more cases will be done in very near future.

Above work was done as late Dr. J. P. Padshah Fellowship holder for a period of two years from 15-9-50 to 14-9-52 in the Ear, Nose and Throat Department of the K. E. M. Hospital, Parel, Bombay 12.

## Experiences with Foreign Bodies in the Air Food passage

BY

Dr. A. F. DESMOND, M.B., F.S., D.L.O.

This paper presents a review of cases dealt with in the Christian Medical College Hospital, Vellore during a period of 18 months from May 1951 to October 1952. A great deal has been written in the foreign literature on Foreign Bodies, but so far I have come across only two case reports in the Indian Literature, and those were in the Indian Medical Gazette as far back as 1943<sup>1</sup> and 1944<sup>2</sup>. It is hoped that this report will be an incentive for others to write of their experiences. Being resident on the hospital compound I am usually the first to be called to deal with foreign bodies, and so although I have not removed all the foreign bodies, I have been present at the removal of nearly all of them. Foreign bodies are not necessarily emergencies, but we usually treat them as such since serious complications and even death may occur as a result of prolonged stay of foreign bodies in the oesophagus and bronchi. We have seen it happen in our service. Besides we get patients from all over South India, and they have often travelled long distances and been without food and sometimes even water, making dehydration an added danger in leaving the foreign body in any longer than absolutely necessary.

Most of what has to be said on foreign bodies has already been said, but I would like to re-emphasize certain points and express some of the things I have found helpful. The removal of foreign bodies requires a double skill, firstly the skill of endoscopy and the skill of removing the foreign body. It is a task that should not be undertaken by the inexperienced, without having an experienced person by his side. Prolonged efforts should not be made at removing foreign bodies especially from children. If the bronchoscope does not pass through with slight pressure, force should not be used, but a tracheostomy performed and the bronchoscope passed through the tracheostomy opening. After a few unsuccessful attempts its removal should either be postponed to a later date or accomplished by thoracotomy if suitable instruments are not available.

### OESOPHAGUS

**Diagnosis.**—The history is definitely important. If the patient feels that he has a foreign body, he is usually correct, even if the X-ray is negative. He will usually point to its approximate location; the upper part of the neck if in the pyriform sinus or cricopharyngeus; the lower part of the neck if at the thoracic inlet, where most of our foreign bodies were lodged; the sternum if at the level of the aortic arch. Most of our patients have complained that they are unable to swallow anything. Whenever possible a plain X-ray should be taken the posterior anterior view as a rule, but the lateral view also if indicated. A barium swallow should not be given<sup>3</sup>, it obscures the foreign body making removal difficult. In addition in a high obstruction there is always danger of overflow into the larynx, trachea and bronchi, and if there is a perforation the barium will leak into the mediastinum. If any swallow is indicated Lipiodal should be used. Even if the X-ray is negative as it often is with non-metallic foreign bodies, should one be suspected oesophagoscopy ought to be done. Fish bones are supposed to be radio-translucent but they occasionally show on the film.

### TREATMENT

**Anaesthesia.**—As premedication we use phenobarbitone gr. 2 for adults, and seconal sodium according to weight for children, an hour and a half before operation; and morphia and hyoscine or atropine for adults, and atropine for children one hour before operation. As a local anaesthetic we use a 1% Nupercaine spray, followed by 2% Anaethane on applicators to the pyriform sinuses. As a general anaesthetic we use Ethyl Chloride and Ether as a rule. Having used both local and general anaesthesia, I feel that general anaesthesia is the best for children and local anaesthesia for adults. There is no need to saturate the patient. I have found the 30 cm. × 9 mm. oesophagoscope (Jackson) the most useful size for the removal of foreign bodies both in children and in adults, and have even used it for two year olds in whom I have experienced no difficulty in passing it. It has the advantage in children of stretching out the folds, thus preventing them from overlapping the foreign body. Foreign bodies are sometimes missed because of these overlapping folds, and considerable damage has been done in search for the foreign body.

**Case 1.**—An elderly man of 65 years came with a history of swallowing a large piece of meat and bone following which he had retrosternal pain and inability to swallow anything.

A 30 cm.  $\times$  9 mm. oesophagoscope was passed under local anaesthesia. At about the level of the aortic arch a large mass considerably dilating the oesophagus was seen. Several attempts at removal failed because of the difficulty in getting it through the cricopharyngeal sphincter. Finally after maneuvering it very slowly through the sphincter it was removed and found to be the entire larynx of an adult goat, measuring  $2'' \times 1\frac{1}{2}'' \times 1\frac{1}{2}''$ .

**Case 2.**—A man of twenty three years came with a history of inability to swallow anything solid or liquid following the drinking of water with a piece of wood shaving in it. We gave him water to drink; he swallowed it and after a few seconds regurgitated it. Under local anaesthesia the 30 cm.  $\times$  9 mm. oesophagoscope was passed and on entering the oesophagus grains of rice were seen and aspirated. On reaching the level of the aortic arch a thin piece of wood shaving 1" long and  $\frac{1}{8}''$  wide was seen and removed; no other foreign body was found and the patient was relieved of his symptoms. The only explanation I can give for the obstruction is a spasm of the oesophagus due to irritation by the wood shaving.

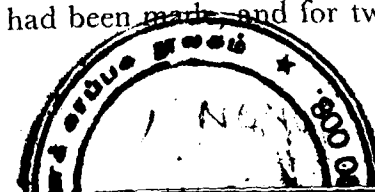
**Case 3.**—A child of four was brought with a history of having swallowed a tamarind seed 17 days prior to admission. Since then he was able to swallow only a little liquid with difficulty. The child was febrile and looked ill. A barium swallow showed an obstruction at T4, with only a thin trickle of barium passing by it. Under general anaesthesia a 35 cm.  $\times$  7 mm. oesophagoscope was passed, the oesophagus was full of barium which had to be aspirated. The seed was finally removed after prolonged and numerous attempts. The following morning when we saw the patient he complained of pain on swallowing and so a Ryle's tube was passed and nothing given by mouth. At 3 p.m. he suddenly expired. A postmortem revealed a perforation of the oesophagus at the site of the foreign body. This unfortunate occurrence was probably the result of impaction and swelling of the foreign body causing pressure necrosis and thinning of the oesophageal wall; this gave way after removing the foreign body. In retrospect one wonders whether this might not have been prevented by the introduction of a Ryle's tube immediately after the removal of the foreign body.

**Case 4.**—A man of twenty five years came with a history of having swallowed a piece of meat and bone 8 days previously. Since then he had retrosternal pain, and was able to take only liquids. The patient was sent from the Medical Out Patient Department for a barium swallow, and then sent with the report

to us. The report said—Foreign body at the level of T2. Under local anaesthesia, a 30 cm.  $\times$  9 mm. oesophagoscope was passed. On entering the oesophagus the first thing encountered was pus and on aspirating this ulceration of the oesophageal wall was seen around the foreign body at about T2. The foreign body was removed piecemeal, no bone being encountered. All the meat was not removed as there was difficulty in deciding whether we were removing meat or oesophageal wall because of a fair amount of bleeding. On reviewing the X-ray it was decided that what was formerly taken to be a foreign body was in reality extravasation of the barium into the mediastinum at the T2 level. The patient was again taken to the X-ray department and given a lipoidal swallow and screened. This screening corroborated the diagnosis of extravasation into the mediastinum on both sides. There appeared to be some obstruction at the lower end of the oesophagus probably a bit of the foreign body which had been gradually pushed down as we were removing it. A Ryle's tube was passed, nothing given by mouth for 9 days while the patient was put on Penicillin 200,000 units 4 hourly. After 9 days another lipoidal swallow showed only a small pocket of extravasation, no obstruction and no evidence of foreign body, the lesion having almost completely healed. The patient would not stay in hospital any longer, but is considered to have made a remarkable recovery from a perforation of the oesophagus.

**Nose.**—Only two cases are worth mentioning.

**Case 1.**—A child of six years came with a history of periodic bleeding and discharge from the right nostril of several months duration. A foreign body was suspected though he gave no history. Nothing could be seen on anterior rhinoscopy, and there was no nasal obstruction. A provisional diagnosis of adenoids was made and the child posted for operation. After inducing anaesthesia the nasopharynx was palpated and a hard object was felt protruding from the right choanae. A forceps was introduced through the anterior nares, but only two thirds of the foreign body was at first removed. We could not recognize it to begin with, but after removing two more small pieces and fitting them together, we discovered that it was a small safety pin thickly covered with a black deposit. The child made an uneventful recovery. I am reminded of a case I dealt with a few years ago in another hospital. A woman of about forty years of age with a history of left sided nasal discharge and periodic slight epistaxis of more than two years duration had some granulations on the floor of the nose about one inch from the anterior nares. A diagnosis of syphilis had been made, and for two years she had been



given anti-syphilitic and other treatment, but the trouble remained. When I arrived at the hospital she was presented to me as a problem case. I put in a probe and felt something hard below the granulations. I then put in a forceps and to the amazement of all removed a nose stud. The woman then recalled having lost a stud more than two years previously.

**Case 2.**—A child of two came with a history of a safety pin in the nose. They brought an X-ray showing a fairly large closed safety pin on the floor of the nose and protruding into the nasopharynx. Several attempts had been made to remove it elsewhere, one under general anaesthesia, but without success. We put the child under general anaesthesia but nothing could be felt in the nose or nasopharynx, and so the child was sent for another X-ray, the safety pin was found to be in the stomach.

These cases emphasize again the axiom that a child with a unilateral sanguinopurulent nasal discharge should be treated as a foreign body unless proved otherwise.

**Larynx.**—Two cases of foreign body in the larynx were dealt with.

**Case 1.**—A baby boy of nine months was sent to us from a distant hospital where six weeks earlier a high tracheostomy had been performed for acute laryngeal stridor for which the referring physician could find no cause. His repeated attempts at decanalisation had failed. After admission here direct laryngoscopy was done under general anaesthesia and a foreign body was visualised in the subglottic area. It was removed and found to be a piece of groundnut shell. Following this again decanalisation was attempted again without success. A week after removal a  $3\frac{1}{2}$  mm.  $\times$  cm. bronchoscope was passed and no other foreign body found. A revision of the tracheostomy was then done; the canula being lowered as much as possible. Eight days later the tracheostomy tube was fully corked and 48 hours after that it was removed and the baby discharged in good condition.

**Case 2.**—A girl aged seven years was sent to us from the same hospital as case (1) with the same history. In this case the child had become dyspnoeic while chewing betel-nut. Under local anaesthesia direct laryngoscopy was done and a foreign body seen in the sub-glottic area. It was removed with alligator forceps and the tracheostomy tube corked. There was no difficulty in breathing. The tracheostomy tube was removed 48 hours later, and the child discharged in good condition.

## TRACHEA AND BRONCHUS

**Diagnosis.**—The history is strikingly similar in most cases, the informant usually stating that the child has choked over something and since then he has had a cough or more serious symptoms. This history is almost diagnostic of a foreign body in the trachea or bronchus. Screening should always be done and an X-ray taken, the posterior-anterior view and the lateral if necessary. Only the radiopaque foreign body will show in the plate—in our series four out of fourteen cases. But usually there will be other evidence of the foreign body in the X-ray or screening. The sign of obstructive emphysema<sup>1</sup> should be made use of i.e. on screening the mediastinum will be found to move from the centre in inspiration, to the side opposite to the obstruction during expiration; the diaphragm on the affected side will be less mobile than on the normal side. This is diagnostic of partial obstruction. Three types of case can be met with:—(1) The foreign body does not cause enough obstruction to produce changes, e.g., half a tamarind seed. The X-ray may be negative in these cases. If the history warrants however diagnostic bronchoscopy should be done and the foreign body removed if present. (2) There is partial obstruction, enough to cause emphysema on the side of the foreign body with the mediastinum pushed to the other side during expiration, and the sign of obstructive emphysema present on screening. (3) There is complete obstruction, in which case there will be atelectasis of the whole or part of the lung according to the site of the foreign body. This type of case is not often seen.

## TREATMENT

**Anaesthesia.**—As a rule we have not given anaesthetic especially in infants, but occasionally general anaesthesia has been used, and it is probably a better procedure with metallic foreign bodies. In children (and all our foreign bodies have been in children) it is easiest to introduce the bronchoscope through the laryngoscope. For small children the  $3\frac{1}{2}$  mm. or 4 mm. bronchoscope is used, but even the  $3\frac{1}{2}$  mm. bronchoscope has caused trauma and edema of the larynx requiring tracheostomy, a few hours after the procedure in 3 cases of our series; but however some cases of edema following bronchoscopy or the endotracheal tube have recovered with conservative treatment. When the forceps is introduced into these scopes nothing can be seen and removal is entirely by feel. The blades should be passed over the foreign body during inspiration for that is when the bronchus dilates. Manipulating the foreign body through the larynx is often

a problem, the foreign body having reached this level only to slip out of the blades on trying to manouver it through the cords. The forceps should be turned so that the greatest diameter of the foreign body is in the anterior posterior diameter of the larynx, and the movement through the larynx should be made during inspiration, a difficult procedure in a struggling spasmodically breathing infant. In two cases the foreign bodies could not be removed through the bronchoscope due to the non-availability of suitable instruments, and they were successfully removed by Thoracotomy in the Department of Thoracic Surgery. One was a large oval glass bead, the other an open safety pin.

**Case 1.**—A male child of eight months came with a history of choking over a pepper corn. He brought with him an X-ray report which read "collapse of the right lung". This was my first attempt at removing a foreign body from the bronchus. Without anaesthesia a  $3\frac{1}{2}$  mm.  $\times$  30 cm. bronchoscope was passed into the right bronchus down to the openings of the lower lobe bronchi but no foreign body could be seen. I thought the child had coughed the pepper corn up, and as the child was struggling did not introduce the bronchoscope into the left bronchus. After removing the bronchoscope the child was taken for screening and X-ray. Screening showed that what appeared to be a collapse was the mediastinum pushed over to the right during expiration, emphysema of the left lung, the left diaphragm immobile, the right diaphragm freely mobile and the right lung clear. Bronchoscopy was done again and the pepper corn removed from the lower portion of the left bronchus. There were no complications and the child made a complete recovery.

**Case 2.**—A male child, two and a half years old, was admitted with a vague history of choking over a peanut fifteen days before admission. The child was admitted with dyspnoea, cough, high temperature, and evidence of pneumonia. Examination even with a sedative was extremely difficult. The X-ray report was "lungs clear." The child was put on Penicillin, the temperature came down to normal and the dyspnoea was relieved. Further clinical examination showed that there were diminished breath sounds on the left side, and re-examination of the X-ray showed that the left lung was more translucent than the right, evidence of emphysema. Without anaesthesia a 4 mm. bronchoscope was passed and a piece of groundnut removed from the left main bronchus. During the night the child developed sever stridor which gradually got worse necessitating a tracheostomy. The child was decanulated after eighteen days, and made a complete recovery.

**Case 3.**—This is the one death we had in the series. A female child of seven years was admitted with a history of having three months previously choked over a half toe ring  $1" \times \frac{1}{2}" \times \frac{1}{4}"$  in size. At the onset there had been no symptoms, no cough, no difficulty in breathing, but a few days prior to admission the child started having pain in the lower part of the neck; this made the parents remember the toe ring and they brought the child to the hospital. On examination there was no evidence of stridor, but an X-ray showed the toe ring in the upper part of the trachea. A general anaesthetic was given. On introducing the laryngoscope no movement of the cords was seen, respiration had suddenly ceased and the pulse was found to be absent. The foreign body was removed to allow endotracheal artificial respiration, but all resuscitative measures failed. It was felt that this was probably a case of reflex cardiac arrest and it was later suggested that immediate cardiac massage might have restored the child.

TABLE - I.

Oesophagus. Total 30. Children below 12 - 17. Adults - 13.

Sex : Below 12 - Males 13 ; Females 4 ; Adults - Males 10 ; Females 3.

Age - ranged between 6 months and 65 years.

Duration - from a few hours to 17 days.

|                                     | Crico-pharyngeus. | Thoracic Inlet. | Arch of Aorta. | Lower Third. | Total. |
|-------------------------------------|-------------------|-----------------|----------------|--------------|--------|
| Coins-below 12                      | ...               | 9               | ...            | ...          | 9      |
| Meat-below 12                       | ...               | 1               | ...            | 1            | 2      |
| above 12                            | ...               | 2               | 2              | ...          | 4      |
| Chicken-below 12                    | ...               | 1               | ...            | ...          | 1      |
| above 12                            | 1                 | 1               | ...            | ...          | 2      |
| Mutton Bone-above 12                | 2                 | ...             | ...            | ...          | 2      |
| Fish bone-above 12                  | 3                 | ...             | ...            | ...          | 3      |
| Gold ring-below 12                  | ...               | 1               | ...            | ...          | 1      |
| Open safety pin-below 12            | 1                 | ...             | ...            | ...          | 1      |
| Tamarind seed-below 12              | ...               | ...             | 1              | ...          | 1      |
| Larynx of goat-above 12             | ...               | ...             | 1              | ...          | 1      |
| $\frac{1}{2}$ a mango seed-above 12 | 1                 | ...             | ...            | ...          | 1      |
| Wood shaving-above 12               | ...               | ...             | 1              | ...          | 1      |
| Piece of citrous fruit-below 12     | ...               | 1               | ...            | ...          | 1      |
| Total                               | 8                 | 16              | 5              | 1            | 30     |

From this table it can be seen that in all the types of foreign body males predominated in children 13 to 5, and in adults 10 to 3. The sites varied as follows:—27% at the cricopharyngeus, 53% at the thoracic inlet and 20% in the thoracic part of the oesophagus.

TABLE - II.

Trachea and Bronchus Total - 14.

Age - all between 8 months and 10 years.

Sex - Males - 10 ; females - 4.

| Location.       | Trachea. | Rt. Main Bronchus. | Rt. upper Lobe Bronchus. | Lt. Main Bronchus. | Lt. Upper Lobe Bronchus. | Lobe Lt. Lower Bronchus. |
|-----------------|----------|--------------------|--------------------------|--------------------|--------------------------|--------------------------|
| Peanuts         | ...      | 4                  | ...                      | 1                  | ...                      | ...                      |
| Seeds           | 1        | 1                  | ...                      | 1                  | ...                      | ...                      |
| Betel-nut       | 1        | ...                | ...                      | ...                | ...                      | 1                        |
| Glass bead      | ...      | 1                  | ...                      | ...                | ...                      | ...                      |
| Metallic cap    | ...      | ...                | ...                      | ...                | 1                        | ...                      |
| Open safety pin | ...      | ...                | 1                        | ...                | ...                      | ...                      |
| Half a toe ring | 1        | ...                | ...                      | ...                | ...                      | ...                      |
| Total           | 3        | 6                  | 1                        | 2                  | 1                        | 1                        |

## SUMMARY

Our experiences with a series of forty six foreign bodies in the oesophagus, larynx, trachea and bronchi has been reviewed; in addition two interesting nasal foreign bodies have been presented. Some of the more interesting cases have been outlined, methods of diagnosis stressed, and possibilities as to the cause of complications suggested. My thanks are due to Dr. B. Siebers DeValois and Dr. R. H. Betts for help in preparing this paper.

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## Study of Medical Mycology with a Report of a Case of Mycotic Infection of Tonsils

BY

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## INTRODUCTION

1. It is not the rarity of mycotic infection but the rarity of laboratory investigation for human mycotic infection in India that has prompted the necessity of reporting the case. No need probably was felt of developing this branch as a speciality in our medical institutions. It was possibly expected that section of Bacteriology or Clinical Pathology could undertake investigations when specially needed. It is obvious that medical mycology has, therefore, remained neglected in our diagnostic armaments. It is not uncommon experience that laboratory would have cases few and far between directed for mycotic infections or investigation of a case is postponed till all probable diagnosis and therapy is exhausted with no improvement in the clinical condition of the case. Neither Procedure is satisfactory in a laboratory without a section of mycology. Situated as we are at present, the same personalle have to get familiar with fungi as they appear in microscopic and cultural material for diagnostic purposes and therefore, it is necessary to know the minimum<sup>2,9</sup> diagnostic procedures to classify the etiological agent of mycosis. If this speciality were to develop in our larger medical institutions, several infections would be revealed with fungi as primary agents or as secondary agents vitally affecting the pathology of the primary disease.

2. Following procedure has been adopted according to the clinical condition :—

(a) Microscopic examination of material with and without soaking in 40% KOH to detect spores and mycelia in their natural relation to cells and tissues. (b) Smears stained by Gram, Ziehl-Neelsen's and Albert's method, for pathogens such as A.F.B., or C. diphtheria and get the idea of general bacterial

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flora in the material if present. (c) In culturing, the material is to be submitted for both mycological and bacteriological culture media. (d) When material is mainly meant for mycotic infection and is mixed up with several organisms as in sputum or ulcers, the use of antibiotic such as penicillin 20 Units per c.c. of the medium is used. (e) Histological technique is often used for presence of fungus in the tissues so as to prove its relation to tissues and to study type of reaction. (f) Skin test—to detect sensitivity to suspected fungal antigen. (g) Animal inoculation when necessary.

Absence of known bacterial pathogen and continued presence of fungus along with radiological evidence of lung condition and histological evidence is helpful in incriminating the fungus as the etiological agent in particular condition, particularly because saprophytic fungi often play pathogenic role. Cases<sup>13, 14</sup> of systemic and visceral mycotic infections in India have been reported. It is not always possible to decide the role of fungus in the disease since one or more of the evidence is lacking in final identity either of the fungus or its relation to disease.

3. The author (Sr.) had a case referred to her some months back—patient was ambulatory in type with complaints referring to lungs and with positive X-ray findings and negative bacteriological evidence for tuberculosis. The microscopic examination of unstained specimen of sputum showed spores as described from *Blastomyces*. When compared with sputa of other cases, this specimen of sputum contained several other spores especially of *Aspergillus niger*. Cultures on Littman's medium were overgrown by *Aspergillus niger* and no *Blastomyces* could be isolated. At subsequent examination of the sputum, no spores of *Blastomyces* were seen nor were other forms of spores. In between intradermal skin test with 0.1 c.c. of *Blastomycin* and *Histoplasmin* were carried out on the forearm. There was definite erythema over the injection of *Blastomycin*. Wheal was definite within ten minutes, but the redness was masked by the darkness of the skin. This case has (1) clinical (2) radiological (3) microscopic (4) skin test evidence of *Blastomycosis* of the respiratory tract. It was thus reported to the clinician. The patient now is at his work much improved with no evidence of fungus spores in the sputum. It will be noted in the investigation of the above case, there are still some gaps to be fulfilled to confirm the microscopic finding.

4. The case presented below has been studied from several aspects and therefore, its presentation may turn out useful.

### CASE REPORT

Patient R.L.A., young male about 23, final year medical student from Gwalior, complained of some white granulations over the tonsils with clinical diagnosis of Actinomycosis or Keratosis. Patient directed by Dr. Amesur. Present and past history—The history of the present and the past complaint is stated below in patient's own words "accidentally on the morning of 22nd December 1952, I saw my throat in the mirror for the evidence of pharyngitis as I was having irritating cough since one week. Thick, flat yellowish granules were noticed on both the tonsils. It was shown to E.N.T. specialist at Gwalior and in the light of past history, he suspected it to be Actinomycosis. By examination of smears, it was declared as Actinomycosis. An extensive treatment with penicillin and Pot. Iodide was given for six weeks. Penicillin 100,000, B.D. with 90 grains of Pot. Iodide daily. There was no change in the granules, therefore, I consulted Dr. Amesur at Bombay on 6th March 1953, the day I was examined by you at the Pathology School, G. M. College. I have taken no treatment since then. To this date (7th April 1953) I have visible granules on the right tonsils. During all this time I have no symptoms or complaints of any sort."

5. Past history—"On 7th July 1950 I had a root abscess of lower last molar right side. It developed into a swelling of 4" at the angle of the jaw. On 10th July, an X-ray was taken which showed apical abscess and impaction of the last molar. After nearly a month, it formed a big abscess and it was incised from outside and tooth was taken out but the sinus persisted and was untreated in the expectation of a natural cure. In July 1951 I noticed some yellow granules in the pus. It was examined and reported as mycelial threads with clubs at the end—suspected to be Actinomycosis. A course of penicillin and Pot. Iodide for two months completely cured the lesions.

6. Material and Methods.—(a) Naked eye examination of the throat showed about four nodules 3 to 4 mm. in size, white cauliflower like, present only on left side. Tonsils were shrunk. (b) Granules were more easily seen when left fauceal ridge was pressed aside. Couple of granules were extracted with sterile forceps after simple saline mouth wash. The granules were friable. There was no bleeding. (1) Primary cultures were made in two sets of dextrose agar medium Fig. I (3). (2) Glucose broth and (3) Blood-agar Fig. I (4). (c) Portion of it was put in 40% KOH.

Cover slip preparations were made from granules directly and smears stained by Gram's, Ziehl-neelsen and Albert's and H. E. method. (d) After diluting the suspension of the culture, subcultures were made from 7 b 1 on Sabouraud's medium and blood-agar Fig. I (5) and Dextrose-agar Fig. 7 and 5, 6. No changes were observed in glucose broth medium on continuation of culture. Preparation of Sabouraud's medium was found unsatisfactory. (e) One set of cultures was put at 37°C and other at room temperature. Cultures were observed and microscopic preparations were made day to day. (f) Microphotographs of the smears direct from culture and sections are described and photographs of growth characters in the tube are given. (g) Guinea pig was inoculated I. P. (6—3—53) with suspension of granular material in 0.5 ccs amount. Similar quantity of saline used as diluent was inoculated into another guinea pig for control, P.M. on 30—3—53 i.e. 24 days.

7. **Microscopic.**—(1) Unstained preparation showed large free spores. Spores were yeast like varying in shape and size mostly oval or round approximately 5 to 15  $\mu$ . Their presence in clusters reminded one of picture of *H. capsulatum* and *Coccidioides immitis*.

(2) They were stained uniform blue black by Gram's method as in Fig. II by H. & E. With Albert's method metachromatic granule was seen in the centre of some spores. Ziehl-neelsen method showed no acid fast organisms. With heat however, spores were distorted. None of the smears showed pus cells or epithelial cells. Shreds of pink stained material were seen. Stray bacilli were seen which did not grow in glucose broth.

(3) Haematoxylin and Eosin stained smears Fig. II and Section Fig. III, spores were rounded, arranged in honeycombed pattern intervened with mycelial filament. Spores had central deeply stained area separated from peripheral wall by an unstained area. Section showed similar picture with thick pink mass on either side of the fungus indicating necrotic tissue. No recognizable histological tissue seen.

8. **Study of Culture Tubes.**—There was no appreciable difference of growth on solid media at 37°C and at room temperature. For identification, study of growth at room temperature is advised and therefore the description refers to growth at room temperature only.

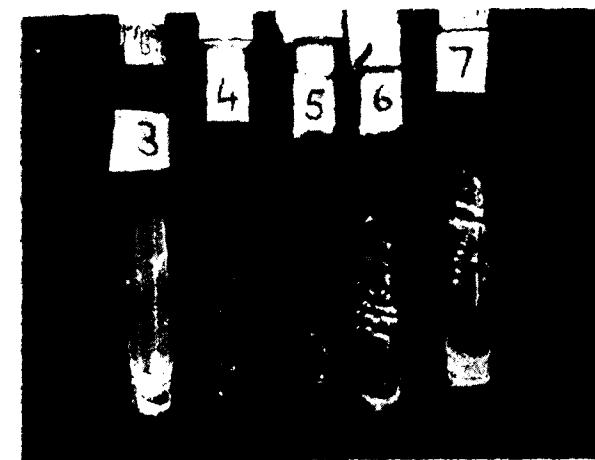


Fig. I.

3-Primary culture 9 days old on Dextrose-agar. Smooth, diffuse, whitish growth. 4-5. 24 hours and 4 days subcultures on Blood-agar. Staphylococcus like growth. 6-7, 6 & 8 days culture on Dextrose-agar. Buff coloured, wrinkled surface, raised centre, thin periphery, wavy edge.

Fig. II.

Direct smear from granule showing spores specially magnified from microphotograph in oil immersion. Spores with deeply stained centre with peripheral halo. The outer wall seem as thin blue line which is not seen in the microphotographs. H. & E. Method.

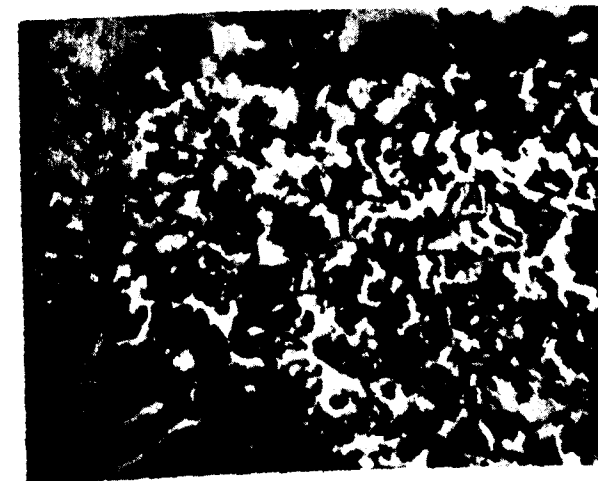


Fig. III.

Section of granules showing short hyphae with large no. of spores (A) seen between the homogenous necrotic mass, (B). H. & E. Method. Obj 2/3.

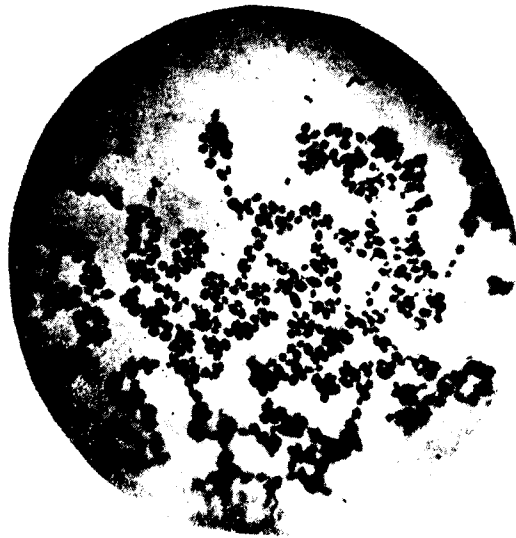


Fig. IV.  
Smear from Glucose broth 24 hrs. Yeast like spores of varying size and shape. Majority broad at one end narrow at another end. Gram's method. Obj. 1/12.

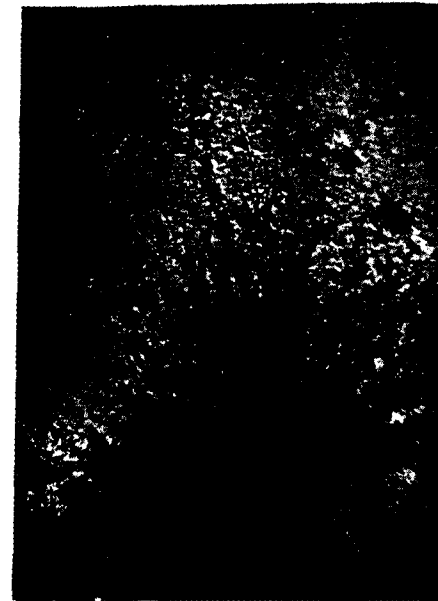


Fig. VII.  
Photo slide culture showing colony with hyphae and spores.  
(a) Obj. 2/3.

Fig. V.  
Smear from culture on Dextrose-agar 24 hrs. Obj. 1/12.

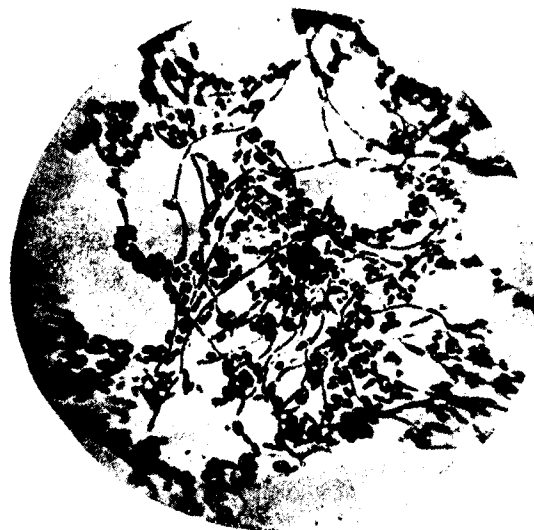


Fig. VI.  
Smear from colony on Dextrose-agar sub-culture 24 hours. Spores of varying in shape and size, with septate hyphae. Gram's method. Obj. 1/12.

Fig. VII.  
(b) Obj. 1/6.



9. In describing the species isolated from granules in this case, care has been taken to maintain the technique of study in respect of temperature, time of incubation and nature of medium. Following media used—

(a) (i) Dextrose-agar medium is used to eliminate bacterial growth. (ii) Glucose broth is used for the growth of these fungi which prefer neutrality or alkalinity of the medium e.g. *Actinomyces* group. The column of liquid medium with glucose is expected to supply microaerophilic or anaerobic conditions required by some fungi. This medium also facilitates growth of bacteria, if any. (iii) Blood-agar medium is used with a view to get rapid growth of aerobic species of actinomyces or any such which will not grow on dextrose-agar medium. It is also useful to study nature of bacteria if any. (b) Littman's<sup>12</sup> medium has been used for the past few months in this department. Following advantages are claimed by the author of this medium. This medium detects three times as many species of fungi and four times as many pathogenic fungi as does Sabouraud's medium. Preparation with dehydrated medium, stability and advantage of room temperature incubation are pointed out. With this medium, the diagnosis is less consuming of time and material. Early cultural diagnosis before tissue reaction has been obtained resulting in favourable prognosis of the cases. The author also has given the laboratory routine for fungus culture requiring minimum of time. In our hands it has failed to give growth of fungi when attempts were made to get growth from Dermatomycosis. We have yet to elucidate the reasons for failures. (c) These details regarding the isolation and identification of species are as important or perhaps more so than in bacterial species. If standardised conditions cannot be obtained at least the description should accompany the study. Basu<sup>1</sup> has brought out the importance of study of medical mycology in his article on Human Actinomycosis.

Fungi can mainly be identified by the type and arrangement of their spores. Hence the staining methods though essential in routine technique, are not helpful in identification. We had to examine unstained preparation of the direct and cultural material of different ages.

10. **Discussions.**—It will be noted that in direct smears gram positive stray bacilli were seen but in none of the cultures bacterium was seen. Pure growth of single fungus type obtained without use of antibiotics. Yeast like growth resembling staphylococcus colony is obtained. Young cultures showed branching septate



Fig. VIII.

Reproduction of Microphotograph "Bacterial and Mycotic Infection of Man" by Dubos, R. J. p. 613, Fig. 65. *Histoplasma capsulatum*, section of gum showing intracellular bodies. X 1012.

hyphae bearing smooth, round to pyriform spores on short pedicels. Absence of tissue cells in biopsy material failed to reveal their relationship to tonsillar tissue. P. M. on guinea pig after 24 days of I. P. injection showed no naked eye microscopic or cultural evidence of mycosis.

In the differential diagnosis we are chiefly concerned with those fungi which are transitional between moulds and yeasts and in which yeasts like cells are formed regularly and form prominent part of the microscopic picture. Their colonies are chiefly yeast like i.e. soft and bacterial like with superficial budding forms and also of hyphae in the deeper portion. Cultures had yeast like odour.

(a) *Actinomyces bovis* is commonly present in the normal mouth and throat and becomes pathogenic only under extraordinary conditions. Emmons<sup>4,5</sup> examined 200 pairs of unselected tonsils from routine tonsilectomies. Species of *Actinomyces* not distinguishable from *A. bovis* was isolated by him in 37% of the pairs. It was obtained in pure cultures from 11 persons. None of the patients had Actinomycosis. It is obvious that tonsillar crypts serve as an important reservoir for the saprophytic phase of these pathogenic fungi. In the present case there is no direct or histological or cultural evidence of *Actinomyces*. At one stage of early culture on solid media, conidia with fine stem probably could be mistaken for club forms of *Actinomyces*. Fig. IV. (b) In U. S. A.<sup>7,8,16</sup> current practice of Roentgenological survey of populations has resulted in the demonstrations of pulmonary lesions in many individuals not clinically ill. In the absence of clinical and laboratory indications of tuberculosis in these cases, it is suspected that lesions may be mycotic in origin. Author had an opportunity of seeing the work done in this direction at N. I. H. Since then in the investigation, of systemic mycosis she has been on the look out for Histoplasmosis. Skin test with Histoplasmin have been done in large series of population in U. S. A. in areas where there is known to be a high rate of non-tuberculous pulmonary calcification as determined by negative tuberculin test. If the skin tests prove to be specific it would indicate by its spread primary benign Histoplasmosis in certain areas of United States. Specificity of the test is however not yet finalised since cross reaction with antigens prepared from other fungi causing pulmonary mycosis have been demonstrated. We have not been able to do this test on our patient. We do not think it necessary in this particular case. Histoplasmosis has temperate and subtropical distribution with the majority of the cases so

far reported from U.S.A. Though proved, Histoplasmosis is relatively rare and always fatal, mild, form of the disease associated with pulmonary calcification has been detected. Animal reservoirs such as dogs and rodents have been detected. *H. capsulatum* has been isolated from soil indicating its independent saprophytic existence in nature. Like many others it appears to be non-contagious, sporadic and world wide in distribution. Source of human infective agent and the mode of human infections are not definitely proved (c) In the present case we have no X-ray picture of pulmonary lesion, if any. To one not familiar with Mycology, the microscopic appearance of spores in direct smears and biopsy material both stained by H. & E. would suggest *H. capsulatum* bodies as seen in Fig. VIII. *H. capsulatum* in older cultures contain large round to pyriform, thick walled spores covered finger like projections. The tuberculate spores are characteristic and diagnostic with of *H. capsulatum*. Designations applied to these spores vary—some called clamydospores. Vuillamin's terminology "Aleurio-spores" is upheld by many. When spores are small, they are smooth pitted or spiny, when large they have definite finger like projections, though there is great variation in size, shape and spacing of these structure. Our cultures have not revealed this, to this date, though the cultures old and new are being examined from time to time since 7—3—53 to this day 16—4—53. The presence of hyphae in tissue is a point against the usual description of yeast like form of *Histoplasma* cysts in tissues. There is necrosis of tissue as is present in lesions caused by most fungi. The absence of tissue reaction in the section may only mean that the granule was superficial and examination of tonsils when removed would show the exact relationship of spores and tissue—whether they are intracellular in R.E. cells and whether there is or there is not any reaction to this fungus. (d) Blastomycosis<sup>10,11</sup> was considered in the differential diagnosis since the fungus *B. dermatitidis* causing this condition also has yeast like spores in tissues though they have characteristic double contoured wall and has yeast like culture. Growth on blood agar is often delayed. In our case it was 24 hours. It did not have cotton appearance as described for Blastomycosis nor the microscopic preparation from culture have any semblance to *B. dermatitidis*. Blastomycosis like tuberculosis spares no tissues. (e) The cryptococcus is ruled out readily by the fact that it forms no mycelium. (f) *Coccidioides immitis* was thought of owing to collection of spores but there was no definite spherule i.e. spherical thick walled endospores filled organisms as is present in

tissues. No arthrospores were seen in culture (g) Slide culture examined with low power microscopically made one think of *Sporotrichum schenkii* because colonies had delicate branching hyphae that bear oval, round pyriform spores laterally or in flower like groupings. The clinical picture is not of *Sporotrichosis*. In the body tissues and exudate the parasite appears as small single celled, spindle shaped organisms within the polymorphs. They are the only structure formed in the body, no mycelium developed.

**Diagnosis.**—Had it been usual throat swabs received for diagnosis of *C. diphtheria*? The diagnosis would have been no *C. diphtheria* like organisms seen. Yeast like spores present—which one usually takes them to be of *Candida albicans* commonly described as *Monilia albicans*. *Candida albicans* is the only species to which the both systemic and superficial infections may be attributed. The slide culture in Dextrose-agar medium was examined day to day. Microscopic appearance was like *Candida* Fig. VII.

**Summary.**—The history of the case, the lesion unlike thrush in granular form on tonsils, the prolonged treatment, the recurrence and the worry it caused to the patient were the features indicating detailed investigations on the material which is presented. The peculiar collection of yeast like spores in stained and unstained material from direct culture is discussed and differentiated from fungi imperfecti with yeast like spores and yeast like or staphylococcus like growth of *Histoplasma*, *Blastomyces*, *Sporotrichum*, *Coccidioides*, *Cryptococcus*.

In view of otherwise healthy state of the individual concerned, the role of *Candida albicans* which is isolated from granule on tonsils remains sub judice till further investigations are carried out and photographs and microphotographs of cultures smears and sections are given. The fungus appears to belong to Genus—*Monilia*, species—*albicans* commonly known as *Candida albicans*.

I am indebted to Dr. Amesur for directing the case to us and to patient for giving detailed account of his condition. Thanks are due to College Artist for illustration.

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## Association Notes

### THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Provisional Programme of the Sixth Annual Conference—Hyderabad Session December 1953.

Monday 21st December 1953

Governing body meeting at Dr. R. Venkat Rao's bungalow, followed by dinner.

Tuesday 22nd December 1953

- |                   |                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8-00 a.m.         | Breakfast in University campus for the resident delegates.                                                                                                                        |
| 8-30 a.m.         | Registration of delegates in the Osmania University campus.                                                                                                                       |
| 9-20 a.m.         | Group photograph of the members of the Association.                                                                                                                               |
| 10-00 a.m.        | Chairman of the Reception Committee's address.<br>Opening of the Conference.<br>Inauguration of the Scientific Session.<br>Presidential Address by Dr. D. Ram.<br>Vote of thanks. |
| 1-00 to 2-00 p.m. | Lunch.                                                                                                                                                                            |
| 2-00 to 4-30 p.m. | Scientific papers.                                                                                                                                                                |
| 4-30 to 5-30 p.m. | Tea.                                                                                                                                                                              |
| 5-30 to 7-30 p.m. | Scientific papers (short).                                                                                                                                                        |
| 8-30 p.m.         | Dinner by the President of the Conference.                                                                                                                                        |

Wednesday 23rd December 1953

- |                   |                                      |
|-------------------|--------------------------------------|
| 8-00 a.m.         | Breakfast.                           |
| 9-00 to 1-00 p.m. | Scientific papers.                   |
| 1-00 to 2-00 p.m. | Lunch.                               |
| 2-00 to 4-00 p.m. | Scientific papers.                   |
| 4-00 to 5-00 p.m. | Visit to Sarojini Devi Hospital—Tea. |
| 5-00 p.m.         | Visit to Golconda Fort and Tombs.    |
| 9-00 p.m.         | Association subscription Dinner.     |

Thursday 24th December 1953

- |                    |                                                            |
|--------------------|------------------------------------------------------------|
| 8-00 a.m.          | Breakfast.                                                 |
| 9-00 to 11-30 a.m. | Business meeting.                                          |
| 11-30 to 1-00 p.m. | Visit Secunderabad, Osmania Hospital and Salarjung Museum. |
| 1-00 to 2-00 p.m.  | Lunch.                                                     |
| 2-00 to 5-00 p.m.  | Visit to various hospitals.                                |
| 5-30 p.m.          | Leave for Aurangabad on a trip to Ajanta and Ellora caves. |

### PROGRAMME OF THE SIXTH ANNUAL CONFERENCE

121

Aurangabad is 320 miles by Railway from Hyderabad.

Ajanta caves are 65 miles from Aurangabad (by Bus).

Ellora caves are 20 miles from Aurangabad (by Bus).

Therefore, the trip involves 640 miles by train, and 170 miles by bus. Two days will be required for the trip. Travel by III class and bus will cost about Rs. 30/- by II Class Rs. 66/- and by 1st Class much more. Food for two days will cost Rs. 20/- per head.

Detailed programme will be intimated to you within a week's time.

Due notice should be sent to the Secretary, Local Branch, before 1st November 1953 to reserve accommodation.

Rs. 10/- (I. G.) per day, per member, will be charged for this arrangement which includes morning tea, breakfast, lunch, evening tea and dinner. Delegates staying with friends will be charged at Rs. 2/- (I. G.) per meal.

All communications, with correct addresses, may be addressed to Dr. R. Venkata Rao, 823, Himayathnagar Main Road, Hyderabad-Deccan.

Chairman Reception Committee ... Dr. S. K. Jatar.

Hon. General Secretaries ... Dr. R. Venkata Rao.  
Dr. K. Keshav Kumar.  
Dr. C. V. C. Rao.

Members are requested to inform the Hyderabad Deccan Secretary and myself immediately what papers they wish to read at the Conference and to send the manuscript by the registered post on 1st November 1953, to the Hyderabad-Deccan Secretary.

The Local Secretary would further like to know how many of you are coming, including the members of your family, whether vegetarian or not. Dr. Venkata Rao will send you the authority slip for Railway concession in any class (single fare for return journey) provided you attend the opening meeting of the I. M. A. which follows our conference. Please also let me know:

- (i) Whether you want him to make arrangements for your lodging and boarding?
- (ii) How many attending?
- (iii) Coming by air or rail and the time of arrival.

The Honorary Treasurer reminds me that some of you have not yet paid your current year's subscription in spite of his two reminders, and third from myself by registered post. If we do not receive your subscription in a fortnight after the posting the journal to you, it will hurt me to put your names under our rules before the Governing Body for removal. Please hurry up and co-operate with us.

L. HIRANANDANI,

Honorary Secretary.

## HYDERABAD STATE BRANCH

The local branch was organised on 4-12-1952 with Dr. S. K. Jatar as President and Dr. R. Venkat Rao as Honorary Secretary.

The special feature of the local branch is that Physicians, Surgeons, Radiologists, Pathologists, Ophthalmologists and other medical men have been enrolled as Associate members, who can participate in all the activities of the local association without any voting right in the internal management of the Association.

There are eight full members and nine Associate members on the rolls. Due to unavoidable circumstances the formal inauguration had to take place on 11-6-1953. The Hon'ble Nawab Mehdi Nawaj Jung Bahadur, Minister for Medicine and Public Health, inaugurated the association at the Sarojini Devi Hospital, when he exhorted the association to improve and maintain a very high standard of proficiency in the speciality.

On 23-6-1953, the first clinical meeting was held in Sarojini Devi Hospital, when interesting cases of a closed method of fenestration for Otosclerosis and (ii) dysphagia due to Tubercular caries of thoracic vertebrae were demonstrated by Dr. R. Venkat Rao. Dr. P. Rama Raju demonstrated a case of retropharyngeal growth. Dr. K. Keshav Kumar demonstrated a case of facial palsy due to trauma and spontaneous recovery and a case of laryngeal obstruction due to cicatricial stenosis.

On 31-7-1953, the second clinical meeting was held in Sarojini Devi Hospital, when Dr. R. Venkat Rao demonstrated three cases of Cholesteatoma of the mastoid producing (i) meningitis, temporo-sphenoidal lobe abscess, operation and recovery and encysted pachymeningitis, 6 months later giving rise to increased intracranial pressure; (ii) meningitis, facial palsy, operation and recovery of facial palsy; (iii) meningitis, operation and death.

Dr. Keshav Kumar demonstrated a case of submucous fibrosis of palate, pharynx and larynx.

Dr. P. Rama Raju, demonstrated a case of Bezold's abscess.

At this meeting the members of the local association resolved to hold the 6th Annual Conference on 27th, 28th and 29th December, 1953, along with that of the Indian Medical Association.

## Abstracts

## Selection of Patients for Surgical Procedures in Chronic Suppurative Otitis Media.

By Kensey M. SIMONTON, M.D.

(Rochester Minn. J. A. M. A. Oct. 4, 1952, Vol. 150, No. 5, Pages 461-464.)

This article offers a plea for selection of cases for surgical procedures in chronic otitis media. A classification as followed by Lillie in 1928 and Williams in 1936 in the Mayo Clinic is re-iterated below:—

Group 1.—Cases with mucoid discharge from the Eustachian tube.

Group 2.—Mucoid and purulent discharge with foul odor; polypus may be present, with necrosing ossicles.

Group 3.—There is a perforation in the attic region, with granulations. This group shows border line surgical cases.

Group 4.—This may be dubbed the Surgical Group. In addition to the findings of the first three groups, the discharge is foul, purulent and persistent. It may be small in quantity. Cholesteatoma are detected clinically and by x-rays. Polypi may be outstanding. When the case has labyrinthine, intracranial or septic complications, it is immediately classified in group 4. The first two groups and some cases from even the third group, can yield to non-surgical measures, especially in this age of antibiotics. The article in that sense is a definite damper on the enthusiasm of some who tend to resort to surgery too easily, to the utter neglect of the preliminary principles of healing a diseased area with medicinal and physical measures. The latter especially are in need of elaboration, to avoid surgery at least in the first 3 groups. Special point may be lent to the author's remarks on the possibility of treating sinus thrombosis conservatively. All surgeons claim excellent results from surgery, for all surgeons are good surgeons, almost. It would be worthwhile however to understand the patient's reasonable desire to limit surgical intervention to the minimum. On the other side, the author has shown due resilience in favour of draining the brain abscess rather than wait for encapsulation. Further, petrous pyramid lesions are the most difficult, and to Ramadier and latterly to J. Lempert goes the credit of evolving the mastoidotympano-apicectomy operation for the complete exenteration of the apical carotid portion of the petrous pyramid; and J. Lempert's article in the Archives would be worth a perusal. Lastly I may add here that G. Portmann of Bordeaux whom we had the pleasure and the privilege of having among us as a teacher, largely shares the views expressed in the article under review, as we recall to our minds his teachings.

R. P. MUNSHI, Bombay.

## Painful spasm of the Oesophagus ("Corkscrew" Oesophagus)

By G. ISMAY, M.B., M.R.C.P.

(B. M. J. Sept. 27, 1952, Pages 697-698)

In 1933 Schatzka suggested the term "Krauselung" or curling to this condition of alternating contractions and dilatations of the oesophagus from multiple segmental spasms affecting it below the level of the aortic arch. Teschendorf described the lower end of the oesophagus as "string of pearls".

The better known term for this condition is the "corkscrew oesophagus". The spasms may be completely circular or incompletely so, spontaneous, or brought about by distension with barium; more pronounced in the flat position if the spasm is persistent or evanescent. The oesophagus may be partially or completely occluded, resulting in stasis. Usually after middle age, the condition is known to occur even in the 2nd and 3rd decades. In older patients, the painful contractions are more pronounced. Males are more affected than females.

**Symptoms.**—There may be no symptoms, the condition being discovered by routine radiological studies. Pain severe or moderate on deglutition, progressive dysphagia, which may be complete, with post-prandial regurgitation. Pain may be in proportion to the severity of spasms. The symptoms may be of long duration.

**Pathology.**—Reflex spasm, fibrous scarifying medias tinnitus, para-oesophageal adhesions; association of duodenal ulcer; traction from oesophageal diverticula, achalasia of the cardia, carcinoma of the oesophagus. The most likely explanation seems to be an imbalance of the neuro muscular mechanism. The condition in some cases is suspected to be associated with Parkinsonism, when the extra pyramidal system concerned in the coordination of successive movements in deglutition is affected. Necropsy does not reveal much beyond slight mucosal thickening with fibrosis. The muscle wall is not affected. Oesophagoscopy reveals loose folds in the mucosa; a narrowing may be detected below the aortic arch. It is to be noted that so far no note is made of any change in the autonomic ganglion of Auerbach's plexus.

Treatment (a) Atropine sulphate 1/100 gr. (0.65 mg.) by injection four hourly for two to four doses. (b) Tinc. Belladonna 15 min (0.9 ml.) t.d.s. for 4 to 14 days. (c) Amphetamine sulphate 5 mg. orally, 4 hourly for 36 hours; and (d) amyl nitrite by inhalation. This treatment may relieve the symptoms or even abolish them.

**Remarks.**—This very uncommon condition is most likely due to a neuro muscular incoordination consequent on degeneration of autonomic plexus in the lower oesophageal wall. This degeneration is possibly from impaired blood supply due to arteriosclerosis (an analogous condition to "mesenteric angina").

**Innervation of the oesophagus.**—The main motor supply is from the vagi. The sympathetic nerve supply appears to be inhibitory in nature. Atropine presumably relieves the spasms by inhibiting the vagus and by its action on smooth muscle. Pentamethonium bromide probably acts by its ganglion-blocking effect. Amyl nitrite acts by relaxing smooth muscle.

R. P. MUNSHI, Bombay.

### The use of Dihydrogenated Ergot alkaloids in Otolaryngology A preliminary report

By J. R. ANDERSON, M.D. and W. RUBIN, M.D.

(New Orleans, La.; from the Laryngoscope, Vol. LXIII, Jan. 1953, No. 1, Pages 31-43.)

In this paper a new adrenergic-blocking agent, Hydergine, manufactured by Sandoz Chemical Co., is evaluated. This preparation is an equiproportional mixture of the three hydrogenated alkaloids of ergotoxine.

Ergotoxine, one of the alkaloids of ergot, is composed of ergocornine, ergocristine and ergokryptine. In the neutral state their vasoconstrictor action over-shadows their inhibitory effect on the sympathetic-Hydrogenation, however, causes the sympathetic-blocking action to become prominent the vasospastic action being virtually eliminated nervous system. Hydrogenation also eliminates their toxic reactions. The drug is used perenterally, and/or, sublingually by drops or tablets. Each sublingual tablet contains 0.167 mgms. of each of the 3 alkaloids. Each 1 c.c. ampoule and drops contain a like amount.

Certain E. N. T. disorders indicate that blocking of the sympathetic nerve supply to the area involved would be of therapeutic value. Hydergine is such a sympathetic inhibitor. Among the rare toxic manifestations from the use of this agent are nausea of a moderate degree, and weakness, slowing of the heart rate and headache with nausea. This latter trial is an indication for withdrawing its continued use.

Among the pharmacodynamic actions of the ergotoxine group in the neutral state are (i) depression of the Central Vasomotor centres, leading to vaso-dilatation and a fall in blood pressure;

(ii) Peripheral vasodilatation;

(iii) Central inhibition of pressor-receptor reflexes leading to vasoconstriction, and raised blood pressure;

(iv) Centrally induced bradycardia;

(v) Central sedation; also augmentation of barbiturate action.

and (vi) an adrenosympatholytic effect.

It may be repeated that these conflicting action of the neutral drug are adjusted after hydrogenation so that in hydergine the sympathetic-blocking action preponderates, and the vasospastic action is practically non-existent. The following are the otolaryngological disorders where Hydergine will be useful:—

(i) Vertigo, (ii) spontaneous hypertensive epistaxis, dryness of the mouth, (iv) glossodynia, (v) postnasal discharge; (vi) atrophic rhinitis, (vii) Bell's palsy.

Hydergine, in combination with Prostigmine Bromide is calculated to work better in some patients.

**Abstractor's note.**—The drug though not to be taken as a panacea, deserves a trial in suitable cases and conditions. It will have to be used in combination with established measures for the different ailments. Autonomic blockage by such adrenergic-blocking agent by oral and perenteral methods needs further elucidation, along with the much spoken of Stellate Ganglion block with Procaine now adopted for numerous and varied conditions by the surgeon and the E. N. T. Specialist.

R. P. MUNSHI, Bombay.

### Bilateral Anosmia as an early and manifestation of Olfactory-groove Meningioma

By FARGAS, et al.

(Abstract in A. M. A. Arch. Neural and Psychiat.)

Fargas et al report a case where bilateral anosmia existed for 3 years as the only symptom of an olfactory-groove meningioma which manifested itself in the 4th year by development of visual symptoms.

**Abstractor's remarks.**—Anosmia developing after a traumatic fracture of the skull-base may be due to a haematoma in and around the olfactory-groove. Anosmia persisting after recovery can be due to secondary adhesive fibrotic changes in the region.

R. P. MUNSHI, Bombay.

### Haemophilia—like disease after Pregnancy

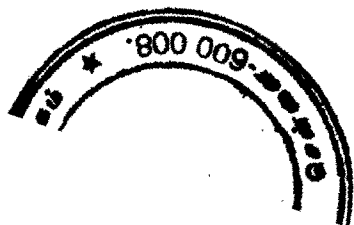
By Paul G. FRICK (Hinneapolis, Minnesota)

(The Lancet, Nov. 29, 52, P. 1064).

**Haemophilia.**—Like disease followed pregnancy, with transplacental transfer of an acquired circulating anti-coagulate. The disease appeared in a woman 3 months after a normal pregnancy, her first. The venous clotting time was markedly prolonged, and the prothrombin consumption was minimal. Bleeding time, prothrombin time, prothrombin concentration, tourniquet test, and plasma fibrinogen concentration were all within the normal range. There was no parenchymal liver dysfunction. The lack of response of the clotting abnormality to fresh blood or plasma led to suspicion of a circulating anti-coagulant, which was demonstrated by the delaying effect of the patients' blood on the coagulation time of normal blood. Cohn's fraction containing active antihæmophilic globulin had no effect on the patient's clotting mechanism. The anticoagulant was therefore believed to inhibit the action of the antihæmophilic globulin (thrombo-plastinogen), 15 months after the onset of the disease the patient delivered a second child, and the anti-coagulant was demonstrated in the baby's blood during the first 2½ months of its life. The disease was studied in this woman from the time of onset until recovery, 2½ years later, 16 months after sterilisation by X-rays. The findings strongly suggest an immunological mechanism in the development of the anti-coagulant.

**Abstractor's remarks.**—Attention is drawn to the markedly delayed clotting time, whereas bleeding-time was normal. Response of clotting delay to fresh blood or plasma, if lacking, should enable one to catch on occasional bleeder from this type of disease. Preoperative testing in this connection is stressed for E. N. T. work.

R. P. MUNSHI, Bombay.



Two antihistaminics of  
established value

## **Antistine** **Pyribenzamine**

Wide experience has shown that patients suffering from the same allergic disease do not always respond equally well to the same antihistaminic drug. Occasionally, a particular patient may fail to derive benefit from a preparation which is normally effective. In such cases the administration of another drug from the group of histamine antagonists frequently produces the desired result.

**Indications:** Urticaria, Vasomotor rhinitis, Pruritus, Serum sickness, Anaphylactic shock, Hypersensitivity to drugs, Allergic asthma, etc.

A new medical approach  
to nasal decongestion...

## **Antistine-Privine** **Nebulizer**

Contains 1:200 Antistine and 1:4000 Privine in aqueous isotonic solution. This new synergistic combination thus contains the effective antihistaminic, Antistine, to control allergic reactions, and the potent vasoconstrictor, Privine, to shrink the nasal mucosa or for decongestion of the conjunctiva.

**Indications:** Vasomotor rhinitis, Common cold, Hay fever, Allergic conjunctivitis, Spring catarrh, Eczema, Oedema of the eyelids, etc.

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conditions.

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cularly for ladies & children.

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Water soluble vitamins in Therapeutic  
dosage particularly useful in Diabetic  
neuritis, Typhoid and other toxic  
fevers and in post operative  
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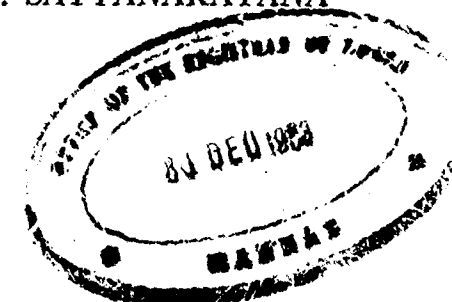
Printed by Mr. R. Ravaimanickam, at Raval & Sons, (Raval Press), 148, Big Street,  
Triplicane, Madras and Published by Dr. P. V. Cherian, 5, Victoria Crescent,  
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906

# Indian Journal of OTOLARYNGOLOGY

Editor:

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Vol. V

DECEMBER 1953

No. 4

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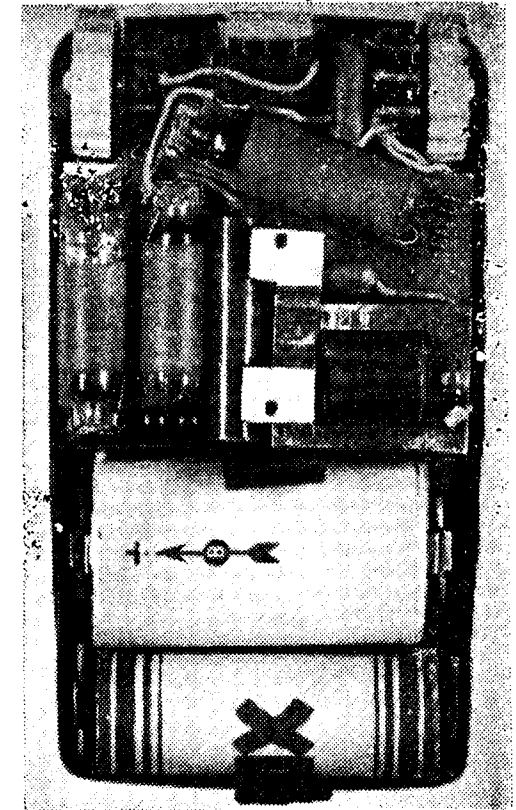
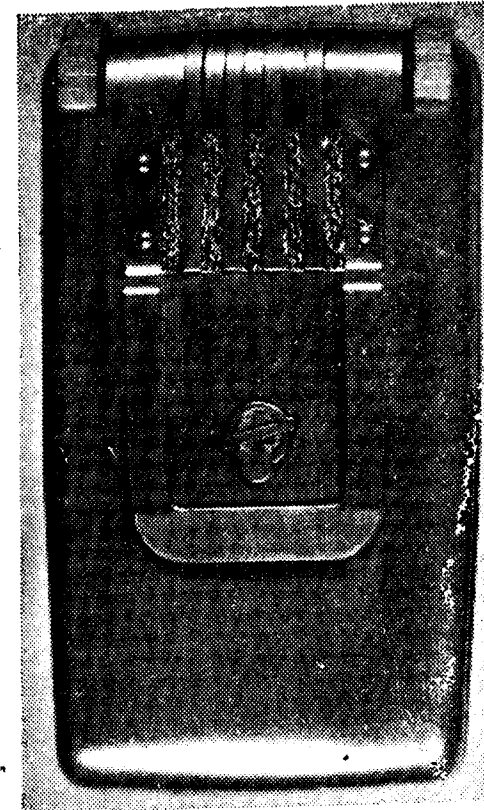
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# INDIAN JOURNAL OF OTOLARYNGOLOGY

Official organ of

THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Vol. V

DECEMBER 1953

No 4

## Objective Audiometry by the Psychogalvanic Reflex

BY

MICHEL PORTMANN (Chef de Clinique) M.D.

AND

CLAUDINE PORTMANN (Audiology Assistant) M.D.

Bordeaux, France.

Classical audiometry tests need patient's co-operation. That means first of all the necessary sufficient mental level and in the second place, the sincerity of the subject. This double condition excludes the possibility of examination in several cases:

- with very young children;
- with psychical deaf;
- lastly with simulators.

Electroencephalography for a time raised great hopes; however no method could be retained for the auditive functional test. It is by making use of the psychogalvanic reflex that Bordley and Hardy<sup>1</sup> succeeded at last in creating a technique capable of being used in current practice. Maspétol, Gougerot and Corinne<sup>2</sup> on one hand, Jacques Faure, Michel Portmann and Claudine Portmann<sup>3</sup> on another hand since then introduced this technique in Europe.

1. Bordley (J.E.) and Hardy (W.F.) The Annals of O.R.L. 58. 1949-43 FS1.
2. Maspétol, Gougerot & Corinne. Semaine des Hopitaux de Paris Oct. 1951, No 73, P. 2867.
3. J. Faure, M. Portmann, F. Dutertre, B. Bramerie: Revue de Laryngologie, Janvier 1952, No 12, P. 66

### TECHNIQUE

We use a double chamber of silence, necessary in our opinion, to obtain the curves closest to the real threshold of the patient: in one of them we place the loud speaker and the patient to be tested; in the other we place the experimentator, the command table of the loud speaker and a psychogalvanometer with constant current and a recorder (Faure-Portmann type).

After fixing with rubber suction cups both electrodes of the galvanic current on the sole of one of the patient's feet, previously cleaned with ether, the electrodes of the faradaic current are placed on the opposite leg. If it is a child being tested, it should be sitting at a table, with a nurse present in the box keeping him interested with toys during the test. If the patient is an adult, he should lie down and keep motionless.

This reflex consists in the fact that the cutaneous resistance (R. C.) varies under the passage of a current, under the influence of various causes: affective, sensory, electrical etc. It depends directly upon the activity of the sweat-glands, themselves commanded by incitations of a sympathetic order.

The finding of such a variation of resistance by an auditive stimulus permits therefore to state that the latter has really been registered by the cochleary system. But this response happens only when the intensities are at least 45 decibels above the threshold of audibility, and in a very variable way, for it is due to the effect of surprise. To sensibilise it, it is therefore necessary to condition it with the aid of another stimulus (a faradaic excitation) more constantly efficient (Bordley and Hardy).

The measurement of resistance of the skin is done with the aid of a galvanometer set on a bridge of Whatstone one of which branches is linked to the subject's skin. A low and constant galvanic current is delivered in the skin, and the balance between the resistances of the bridge is broken. The value of the resistance necessary to re-establish this balance gives the measure of the cutaneous resistance (R. C.). The conditions being thus maintained stable, any transitory modifications of the electrical state of the skin occurred on the occasion of faradaic or auditive excitation disturbs the balance transiently and the needle of the galvanometer deviates and permits to know that the sound has really been registered by the ear.

The variations of R. C. being reduced by the fall of temperature in the foot, this is regularly warmed up during the length of the test with an infra red rays lamp.

Each frequency is then studied in the following way: a sound of intensity superior to the supposed threshold is being emitted for two to three seconds: the galvanometer records a variation of the R. C. Three to five seconds later a stimulus of conditioning is emitted, inducing an answer from R. P. G.

Next the intensity of the sonorous stimulus is reduced by ten decibels at a time near the presumed threshold, by fives, even sometimes by two decibels, while conditioning the reflex by a faradic stimulus sent a few seconds later. When, in spite of several testings the sound determines no longer the variations of R. C. it can be said that one has gone down beyond the minimum threshold for the questioned frequency.

The effect of the faradaic current sometimes wearing itself out, it is necessary to make its rythm and intensity vary from time to time.

The same research is then done for other frequencies and this will allow to establish a complete audiometric curve of the aerial threshold of the patient.

**Results.**—The results depend essentially on the capability of the patient to present variations of his cutaneous resistance. Each individual, effectively, reacts on this point in a personal way. However, when one is used to this method it is hardly ever that one finds a patient not able to give answers of some value. These results work on three groups of facts:

- the psychical;
- the simulators;
- children under four years.

**I. The Psychical:**—It is surprising to note, with this method, the number of patients presenting partially psychic deafness. All the same one should be careful with the results obtained and always integrate the patient's answers in a neurologic and electroencephalographic context. The disturbing factor determining an effect on the hearing can, in fact, determine an effect on R. P. G., disturbing also the results.

The R. P. G. is considered as an answer of the vegetative system. Now it appears, according to research on modern physiology that :

1° — the central region of global control of the sympathetic is situated on a level with the reticulated substance of the hypothalamus, of the subthalamus, of the tegmentum, of the mesencephalon (Hodes et Magoun 1942, Dell 1952).

2° — the non specific afferences, somatic and vegetative, cluster at the junction of the mesencephalon and the diencephalon. Another region, secondary but large and important occupies the anterior part of the brain, especially the caudate nucleus (1951—1952).

3° — the global activity of these formations is controlled by two regulating systems which seem to impose upon the brain temporary conditions. These two systems are formed by a desynchroniser system reticulo-bulbo-mesencephalo-hypothalamic and a synchroniser system reticulo-intra-laminary of the thalamus. It is from the harmony existing between these two systems that is supposed to result the general activity of the brain. The lack of balance could on the contrary, interfere with the vegetative mechanisms and in particular with the R.P.G., so that it would be in the same measure difficult to appreciate the audiometric results it makes use of. This brief recall equally shows that probably there would not only be one center responsible for the R.P.G. In spite of these restrictions the R.P.G. is greatly useful in the appreciation of cases of psychic deafness, as show the following observations :

#### OBSERVATION No. 1.—(n° 587—91.533)

On May 6, 1952, M. M...(Arthur) comes to be put under observation. This patient who accuses intense asthenia and dizziness and especially during his stay in the hospital, behaves himself like an hypochondriac.

The neurologic examination and X-ray photography of the skull give normal results. In order to complete the observation, an audiometric test is made which shows from the subjective point of view a bilateral "hypoacusie" with a type of perception more accused on the right than on the left. The tests of intelligibility fitting perfectly with the tonal proofs absolutely do not permit to think of possible simulation. The

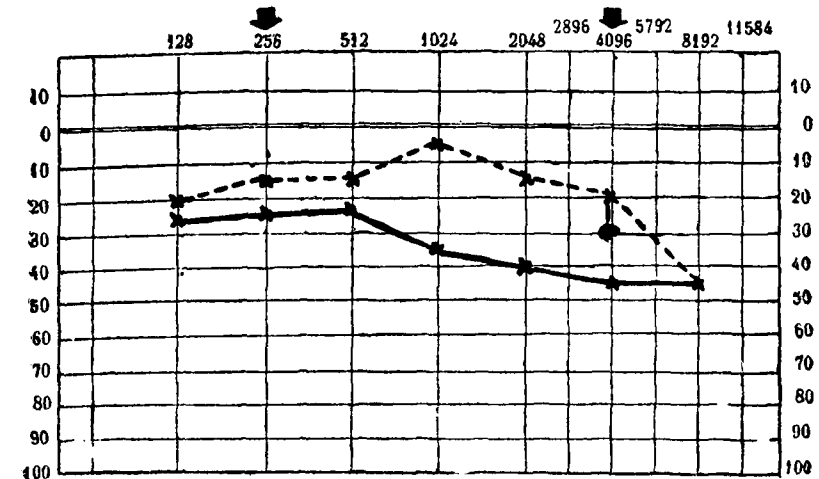


Fig. 1—Observation n° 587 (91.533).

x ——— x courbe tonale subjective.  
x - - - - x courbe tonale au R.P.G.

patient moreover has no social reason to simulate deafness. On the request of the neurologists however, objective tests are made with the psychogalvanic reflex and they show in bilateral hearing a much better curve than the subjective curve of the less affected ear. According to the neurologic, clinic and audiometric context, such a discrepancy seems to be the fact of a psychic participation to the "hypoacusie" of this man. (Fig. 1).

#### OBSERVATION No. 2.—(n° 536)

(Subjective Syndrome of a traumatised skull)

It is the case of a 58 year-old man affected with the post traumatic subjective syndrome of people traumatised in the skull in the 1914—1918 war, who shows deafness and nervous fits of a suspicious appearance. There is total deafness on the left ; in the right ear the subjective audiometry suggest simulation (possible, for he is a military pensioner, unsatisfied ; ) the curves of tonal audiometry show a more considerable loss than the curves of intelligibility. Effectively at 55 db. above the threshold the patient understands 50% of the words, whereas he accuses a considerable loss of pur sounds ; only an islet between 80 and 100 is manifested for the frequencies 512, 1024, 2048. Such a discrepancy can only be the fact of a simulator, a psychical or of a patient who did not understand the tonal test.

But the same test made in town by another specialist (Professor J. Despons) gives exactly the same results, found once more when a third subjective test is again carried out at the laboratory.

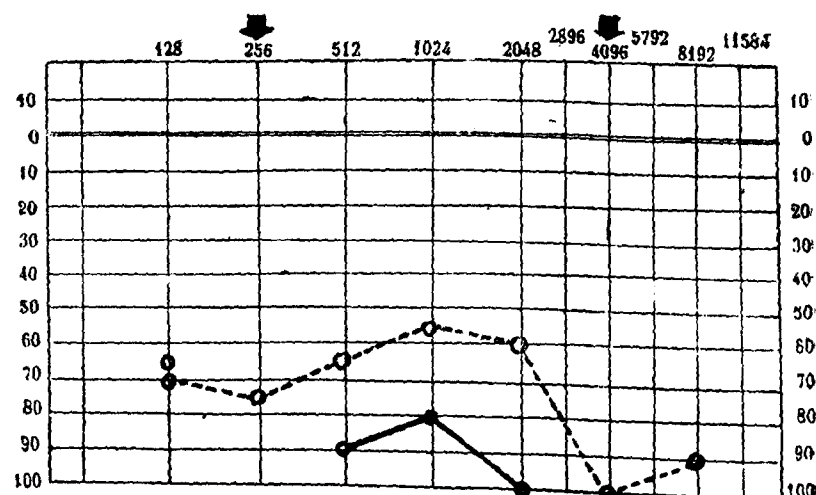


Fig. 2

BELOW: test of intelligibility showing a coherent curve whose index is 55.

ABOVE: o ——— o subjective tonal curve not in accordance with the index to the vocal curve;

o - - - - - o tonal curve at the RPG better than the previous one, but whose level does not yet explain the vocal index of 55.

The patient summoned for objective tests (RPG), the RPGs show variable from one test to another in their threshold, in their form, but always abnormal, with a very long time of latency, very slow incline and a great amplitude. The best of

these curves reaches 75 dbs. for the 256, 65 dbs. for the 512, 55 dbs. for the 1024, 0 dbs. for the 2048, 100 dbs. for the 4096, level, consequently, equally insufficient to explain 50% of the words at 55 dbs. at the time of the vocal test.

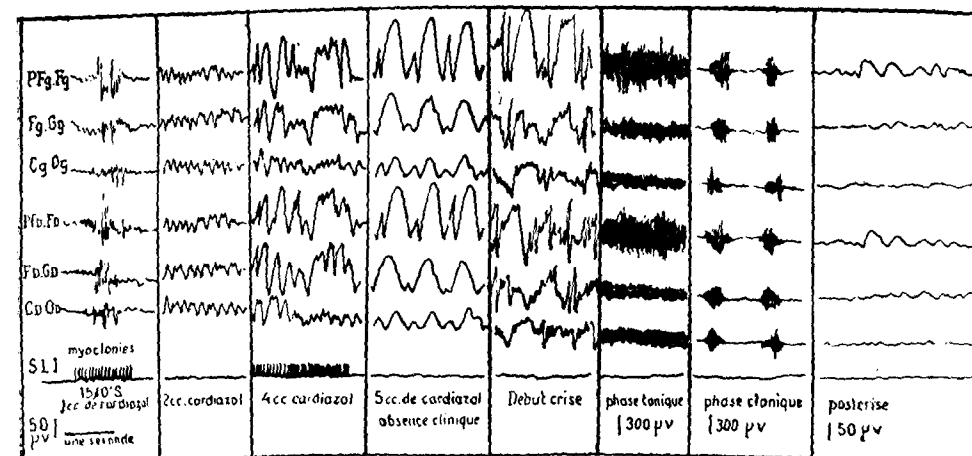


Fig. 3

Test of the photocardiogram showing that the matter is together a camouflaged and a neurotic "comital". The comparison of this test with the audiometric chart explains the anomalies of form and the "threshold" of the psychogalvanic answer.

The whole of this audiometric survey already allows us to suppose that:

(a) This patient is not a simulator in spite of appearances: same subjective curves in different tests; coherent vocal curves and no straying of the points on the graphic of intelligibility. (Fig. 2).

(b) This man has to a certain degree an organic deafness whose level is given by the vocal curve only, since even the RPG accuses more pessimistic results;

(c) He is affected, moreover, with a psychic deafness bearing exclusively on pure sounds;

(d) The RPG, with this patient, is probably perturbed in its central mechanism since the objective curve obtained is not sufficient to explain the auditory possibilities revealed by the vocal curve and that the galvanometric answer is abnormal in its latency, speed and amplitude.

These conclusions seem to be confirmed when compared with the neurologic and electro-encephalographic observation.

The EEG (Fig. 8) discloses effectively a low generalised amplitude with superimposed rapid rhythm. The test of the photocardiozol sets off from the first cc<sup>3</sup> of card ozol, and for 15 lightnings by second a myoclonic answer (1.5 milligram by kilo of weight of the body). For 3 milligr. by kilo of weight of the body, slow waves and peak-waves of 3 and 2 cycles by second (C/S) appear, (preceded by discharges of rhythmic waves at 7 and 4 c/s) with a clinical absence, then a great clinical and electrical crisis develops although the luminous stimulation has been interrupted with the absence.

The matter is therefore at the same time a camouflaged and neurotic "comitial".

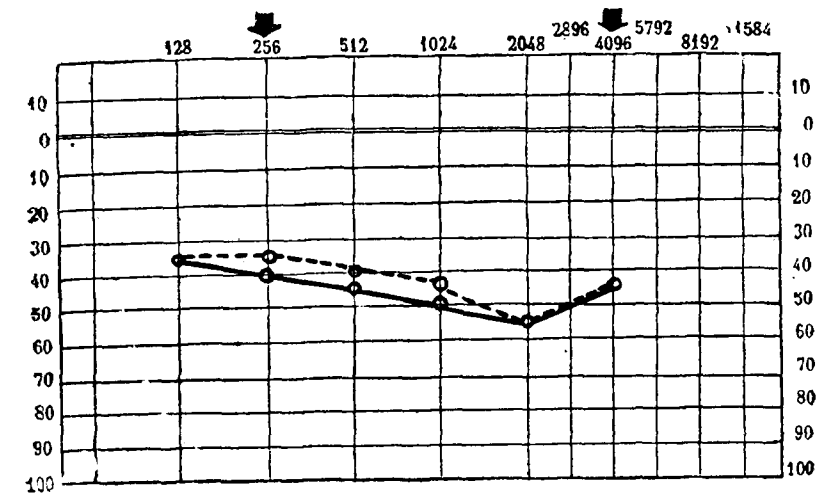
The test of the photocardiozol shows thus an obvious lack of balance between the desynchroniser system and the synchroniser system the importance of which has been seen for the genesis of the RPG, which explains the abnormal aspect of the latter under the auditory stimulation and permits to understand that the "objective" audiometric curve should be, in fact, erroneous and more pessimistic than the reality whose approximative level is given here by the possibilities of intelligibility in the vocal test.

II. The Simulators.—Simulation is more and more frequent, due to the fact of modern legislation (legislation of labor, legislation of fighting men and war veterans, legislation of accidents of common law). In spite of the various audiometric and acoumetric tests existing, it is sometimes necessary to resort to RPG in order to get the real curve of a patient who does not wish to give it, as show the following observation.

#### OBSERVATION No. 3—(636-108.971)

M. F....24 years old comes to the medical consultation for audiologic survey. A mason, he suffered a traumatism of the skull on the right side in a labor accident.

Clinic and radiologic examinations do not reveal anything.



EPREUVE D'INTELLIGIBILITE.

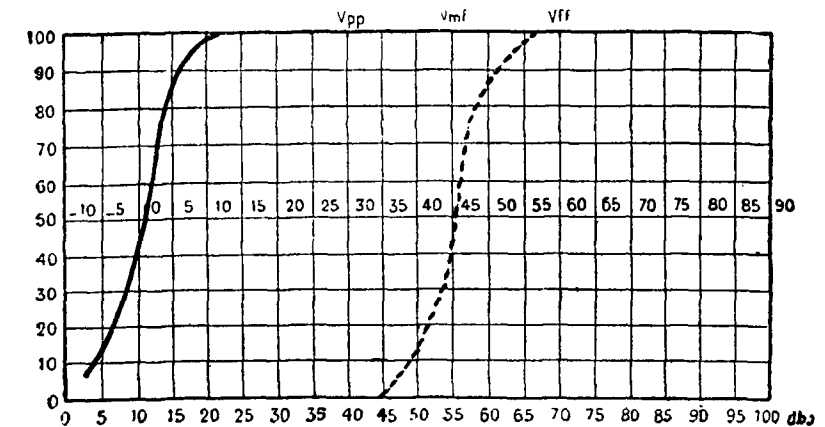


Fig. 4

Curves of ear pretended totally deaf at the time of a previous examination :

o ——— o tonal curve obtained with psychogalvanic reflex;

o - - - - o subjective tonal curve and curve of intelligibility ( - - - - ) obtained after showing the patient the results of RPG test.

#### AUDIOLOGY :

First examination on June 4, 1952.— Subjective audiometry.

Left Ear : not simulated ; vocal and tonal curves agree.

Right Ear : accuses total deafness.

**Second examination on June 9.**—(Fig. 4) — (a) Psychogalvanic audiometry (outside consciousness) Right Ear - curve between 30 and 50 dbs.

(b) New subjective audiometric examination: a new subjective test is done after showing to the patient results of psychogalvanometry.

Right Ear: then gives within 5 dbs. psychogalvanic tonal curve; level confirmed by ulterior vocal test.

We are thus well aware of an exaggeration of a right unilateral "hypoacusie". The objective test (psychogalvanometry) gave us very rapidly the exact value of his hearing.

III. **Children.**—The possibilities of functional examination depend essentially on the child's mental age.

—Above 7 years old as mental age, tests applied to adults: tonal and vocal audiometry can be done with success, on condition that patience and understanding should be used, for a child is not able to concentrate; he is sometimes absent-minded, often contradicts himself; is rapidly tired. However an experienced audiologist easily obtains precise curves of hearing at that age.

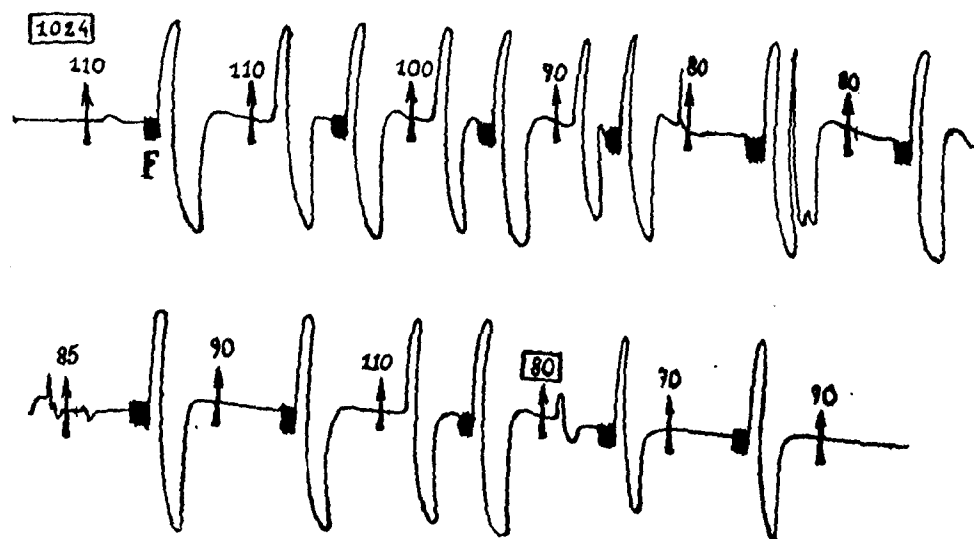


Fig. 5

Observation n° 1248—Example of audiogram made by R.P.G.

Answers of the cutaneous resistance to the sonorous (1024 of 110 at 70 db.) and faradaic (F) stimulus in hearing examination of the child L.V., 3 years of age. The easy reading is noticeable, the R.P.Gs. being two-phase and conspicuous: threshold of hearing at 80 db. (recording done with Psycho-galvanometer of J. Faure and M. Portmann (1).

(1) Apparatus industrially built by Société RACIA, of Bordeaux (France).

—Between 7 and 3 of mental age, sonorous stimulus is not sufficient to retain the attention of the young patient. The existence of a reaction is evidently the proof that the stimulus is perceived, but the absence of perception can be interpreted either as an absence of reaction, or as an absence of interest for the sound, especially if it has no meaning for the child. It is then necessary to make him co-operate to the test by sustaining the sonorous incitation by a stimulus of conditioning such as a simple luminous "spot" turned on simultaneously or even better, a childish picture in a miniature theatre as in the "peep-show" process. Again it is possible to take away consciousness in the answer by using the method of the psychogalvanic reflex.

—From one to 3.—At this age the diagnosis of an important deafness can be made by the simple observation of the child's deportment towards his mother's calling; this is the way one can assert a severe "hypoacusie" when the patient does not answer when his mummy calls his name in a loud voice. Precise particulars could be obtained by the use of sonorous toys graduated in frequency and approximately in intensity, such as trumpet, drum, xylophone etc. Unless he is extremely deaf, the patient reacts to sonorous instruments, thus permitting to have some idea of his hearing field.

All these tests, even in particularly qualified hands, are still uncertain. On another hand, the ordinary audiometry even with the help of visual conditioning does not permit any longer to obtain whatsoever result in order to have a precise audiogram, it is necessary to resort to the only objective audiometry (psychogalvanic reflex) absolutely not involving any more the patient's consciousness in the answer. (Fig. 5.)

The psychogalvanic reflex is so much the less neat that the patient is younger, so that it is really exceptional to come across big children giving such poor answers that they do not permit to trace an audiogram whereas under 2½ years it is more usual to see extremely trifling variations making the test difficult to interpret, to read.

If the tester places himself under good conditions, it is rare, even with tiny children, that this mode of investigation should not give useful information. Briefly, the precision obtained is of the order of 5 dbs. in regard to the normal "threshold" for the big child, of 10 dbs. for child from 3 to 7, up to 15 and 20 dbs. under the normal threshold for the child 2 to 3 years old, up to 20 and 30 dbs. under the real threshold for children under two.

In skilled hands, this mode of investigation fails only in about 10% of the cases. It is however necessary every time it is possible, to check up the level of hearing obtained by other methods, the one giving the best result at this age is the "reaction to calling the name". The child is called by his own name with the intermediary of a loud speaker at intensities known in decibels. It is possible thus to have some idea of the lower level of intensity at which the child reacts. The few following observations show the great interest the psychogalvanic reflex offers for it permits a precise diagnostic and, associated with the study of the mental level, it secures the information necessary to guide the future re-education and use, if possible what remains of hearing to the child's hearing by electroacoustic amplification.

## OBSERVATION No. 4 (Fig. 6)

Beginning of streptomycin deafness disclosed in a child 25 month-old, treated for six months as "granulie" and tuberculous meningitis.

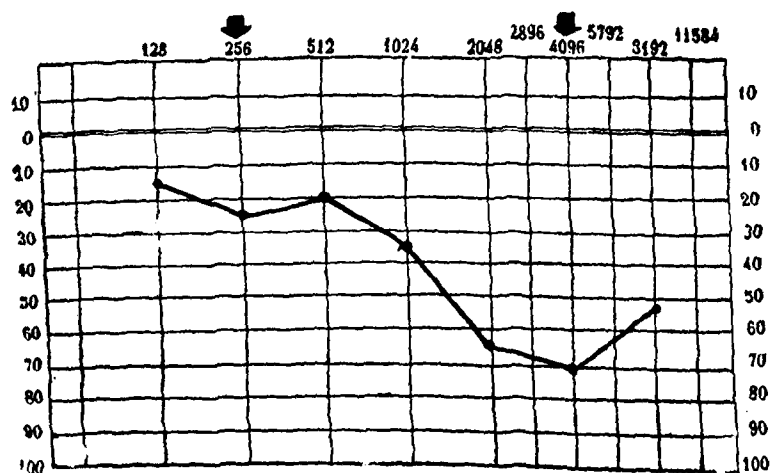


Fig. 6

One notices: a normal threshold for low frequencies (our experience having shown us that under 2½ years old the curved obtained is about 20 to 25 db. beneath the real threshold); a manifest drop for high frequencies.

## OBSERVATION No. 5—(Fig. 7)

Deafness by bilateral imperforation of the external auditory duct. Curve established on a child 2½ years old.

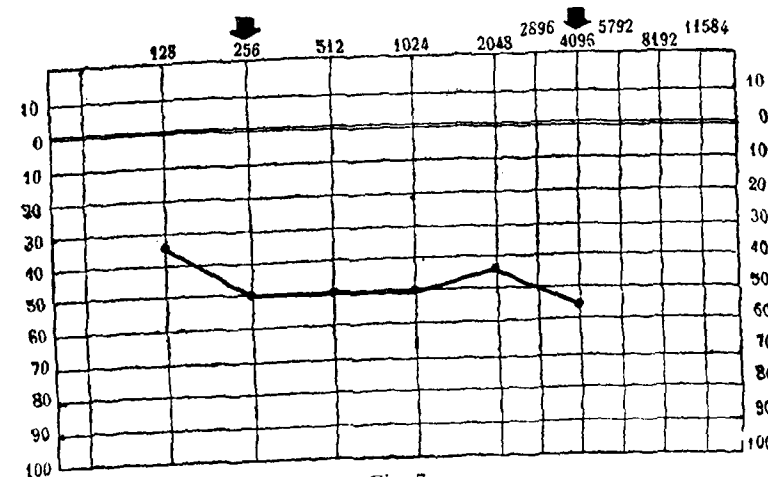


Fig. 7

## OBSERVATION No. 6—(Fig. 8)

Rhesus child, 3 years old, saved an hour after birth by blood transfusion, presenting actually important motory after-effects, anomalies of development, mental back-wardness in acquiring language.

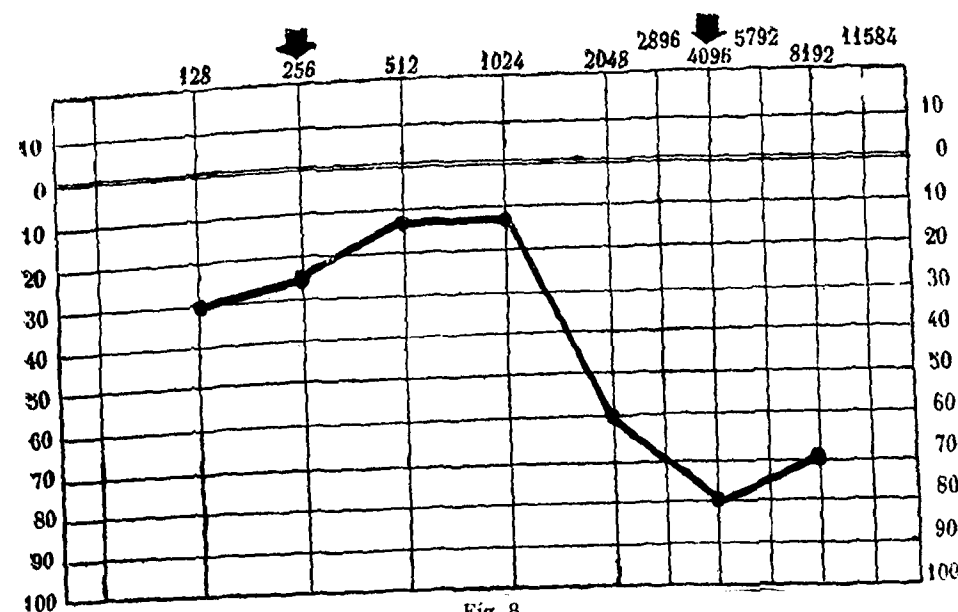


Fig. 8

The psychogalvanic test shows a slight "hypoacousie" for deep sounds and an intense one for high-pitched sounds, the hearing of middle frequencies being more or less normal.

In conclusion, the RPG has transformed the possibilities of the audiologist every time the patient cannot co-operate voluntarily to the test. In cases of psychic deafness the neurologic and psychiatric study is indispensable, for the RPG could itself be perturbed by the processes that perturb the hearing. This mode of investigation however has permitted to go further ahead in the knowledge of psychic deafness. It is unnecessary to insist on the interest presented by such a method concerning simulation. Lastly, with children, joined to other techniques of infantile audiometry, it brings a precious help to secure a precocious diagnostic of deafness and consequently to apply as from the first infancy the modern methods of electro-acoustical re-education of the deaf-and-dumb.

## Variations of the Sigmoid Sinus in Indian Temporal Bone

BY

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

The close relationship of the various venous sinuses especially the sigmoid sinus to the petrous temporal bone has been an interesting subject to the aural surgeon. The relation of the sigmoid sinus to the mastoid antrum is important during radical mastoid operation, fenestration and Portmann's decompression operation on the saccus endo-lymphaticus.

The sigmoid sinus is developed from two components :

- (a) Upper part from supra-otic venous channel connecting middle and posterior stem tributaries.
- (b) Lower part from distal part of posterior stem tributary.

An attempt has been made to illustrate some variations of the sigmoid sinus by photographs of the posterior surface of petrous temporals. The impression of the sigmoid sinus has been outlined by a dark lines. It is generally found that sigmoid sinus and internal jugular vein are more developed on one side, usually the right side.

**Fig. 1.**—It shows posterior surface of the left temporal bone. The sigmoid sinus causes a shallow groove flush with the surface of the endolymphatic fossa which lies medial to it. Prof. Georges Portmann demonstrated that decompression operation is easy in such a case.

**Fig. 2.**—It shows a deep sigmoid fossa separated from the endolymphatic fossa by a ridge of bone. The anterior wall sigmoid sinus lies close to posterior wall of the bony part of external auditory canal thus the antral cells are very few. Such a case requires lot of skill and patience during a radical mastoidectomy and Portmann's operation.

Fig. 3.—The upper part of sigmoid sinus is lying in an antero-posterior direction under the tegmen tympani hence its close relationship with the dura matter of middle cranial fossa. This is rather a rare variation.

Fig. 4.—This shows the sigmoid sinus draining into the mastoid emissary vein via its foramen. The foramen for the internal jugular vein was found to be very small as the internal jugular vein is also small.

The supra-otic venous channel does take part in the development of the sigmoid sinus.

Fig. 5.—This specimen shows not only that the groove for the sigmoid sinus is deep but the sinus lies inferior to the endolymphatic fossa and the internal auditory meatus is related to the bulb of the internal jugular vein.

Fig. 6.—This is one of the most rarely anomaly where the sigmoid sinus receives blood from the occipital sinus to form the internal jugular vein. The unusual big occipital sinus is the remnant of the upper part of the posterior stem tributary.

It is not possible to say whether the incidence of otosclerosis is more in those persons where the temporal bone is surrounded by tortuous venous sinuses, as a routine post-mortem pathological examination of temporal bone would be necessary to substantiate Whitmack's theory of venous stasis as an aetiological factor.

I thank Dr. D. P. Sethna, F.R.C.S.E., Principal, Grant Medical College, and Superintendent, J. J. Group of Hospitals, Bombay, for allowing me to report on these specimens from the Anatomy Museum, where I have been doing the research on the variations of the various bones from the applied anatomy point of view.



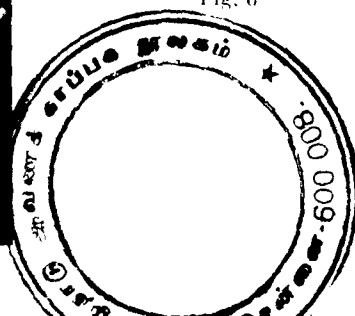


Fig. 6

## Laryngectomy Purse-String Suture in

BY

Dr. C. A. AMESUR, Bombay.

Laryngectomy by interrupted sutures was done by Dr. C. A. Amesur at Karachi in 1930 and at Bombay in 1936. Late Dr. Gandhi did at Bombay in 1932, Dr. Cherian at Madras in 1942, Dr. Joshi at Bombay in 1943, Dr. Thirumal Rao at Visakhapatnam in 1945, Dr. Satyanarayana at Madras in 1948, Dr. Hiranandani at Bombay in 1949 and Dr. Narayanan at Jaipur in 1952.

Repair of the pharyngo-oesophageal opening by purse string suture was performed in Spain about four years ago, which was seen by Prof. G. Portmann. The Professor came to Bombay with W. H. O. team this year and showed the suture to us in March, both at Madras and Bombay. I did my cases by this type of repair in July 1953. I report the following case for the benefit of the colleagues who did not see the Professor at his beautiful work either at Madras or Bombay.

It can be done both under local and general intratracheal anaesthesia. I usually give penicillin before the operation and penicillin with streptomycin twice a day for five days after the operation. At the time of operation I give two pints of blood transfusion.

Incision, skeletonization of the larynx and its ablation from the trachea is as in ordinary cases. Thereafter test a very thick catgut and try to break between your hands. If it does not break this will do. Then put the purse string suture as is shown in the figure so that the final strings come out of the skin in the midline below the chin. Draw the sutures gradually to see how the opening gates narrowed and finally closed; tie by reefknots; the closure of the skin is as usual.

This catgut suture dissolves in about fourteen days time. Till then nasal feeds should be given. Thereafter a little Milk by mouth to see if there is any fistula specially near the upper end of the tracheal stroma. If present a little silver nitrate fussed on a silver probe may be applied. Nasal tube removed and semisolids

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given gradually. Enclose photographs are of a female patient operated by me at the J. J. Hospital. Biopsy showed carcinoma, garde II. This case was demonstrated before the Bombay branch's clinical meeting in September 1953.

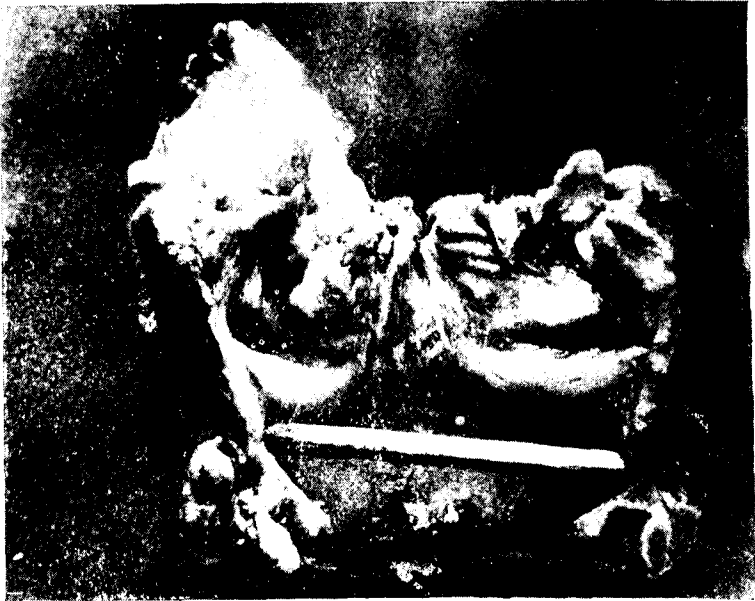
It will not be out of place to tabulate the incidence of carcinoma of the larynx in the various States of India :

| STATE. | INCIDENCE<br>REPORTED BY | PERCENTAGE. |
|--------|--------------------------|-------------|
| Andhra | Tirumal Rao              | ... 3       |
| Assam  | Sarma                    | ... 51      |
| Bombay | Amesur                   | ... 2       |
| Bengal | Ghosh                    | ... 3       |
| Madras | Cherian                  | ... 3       |
| "      | Satyanarayana            | ... 3       |
| Punjab | Tulsi Das                | ... 1       |
| India  | Khanolkar                | ... 12.5    |

The chiefs at the Hospitals of other States have not yet replied my questionnaire. Dr. D. Ram of Bihar says his figures will be misleading as people come from other States from India for cancer treatment by their Radium Institute. The figures at Bombay as reported by Dr. V. R. Khanolkar is 12.5 percent. This may be considered as the incidence of carcinoma of the larynx in India. Assam figures are very high and we request the Assam Colleagues to go in the details as to the reasons of this abnormality.



Patient after Laryngectomy.



Larynx removed.

# Professor Georges Portmann

BY

Dr. C. A. AMESUR.

Colleagues, I am grateful to you for allowing me the privilege of introducing to you a great World personality in the speciality of Ear, Nose and Throat Diseases in the person of Prof. Portmann, who is so wellknown that I will not be able to do justice in the introduction. Prof. Portmann is the Professor of Oto-Rhino-Laryngology at Bordeaux who succeeded Prof. Moure, who was the first Professor of Otolaryngology at Bordeaux. Prof. Portmann married daughter of Prof. Moure. We were pleased when the Government of India requested W.H.O./U.S.C. to send a team of Medical Scientists to India for two months. We were delighted to know that such an international authority as Prof. Portmann accepted this invitation at great personal sacrifice.

He qualified before the First World War and published his first scientific paper in July 1913, and the last one this month on Treatment of Vertigo in the Indian Journal of Otolaryngology. He has published more than Four hundred papers and fifteen books in English, French and Spanish.

He became the Associate Professor in Oto-Rhino-Laryngology, at Bordeaux in 1923 and succeeded his father-in-law Professor Moure to the Professorship in 1926, which position he holds this day. In his inaugural professorial speech he said that during the past twenty years (1906-26) the medical science has advanced so far, that even a gifted doctor cannot keep himself up-to-date in all the branches of medicine - hence the specialisation. The specialities began to prop up all over the World and he thought that Ear, Nose and Throat Speciality will have a permanent place in them. General Practitioner should have a broad vision on account of the modern medical research and some of them be prepared to specialise ; for in the ever changing world, " the old order changeth yielding place to new " all the time. He then compared G.P. to the wide base of a cone, whose apex is a specialist.

From his wide travels in Europe, England, Russia and America he came to the conclusion, that post-graduate training in the various medical specialities is a necessity for France, and therefore he promised to start the one for Ear, Nose and Throat at Bordeaux, in right earnest.

He is a great teacher for he gives all his lectures both to under and post-graduates from memory. His lucid exposition is further illustrated by multiple coloured diagrams on the black board and the French gestures. He finally illustrates his techniques by epidiascope, lantern slides and films. Two years ago his film on carcinoma of the base of the tongue got the first prize in scientific films of the year. (In Europe).

He has an excellent collection of anatomical specimens, some of which are of temporal bone and ethmoids, he has brought here for us to see. He gives a short undergraduate course, but one for specialisation is of eighteen months duration. His Perfection Course is given both in French and English, the former lasting a First fortnight of July and the latter is of five weeks duration. Vienna which used to be our constant place for learning, had to give way to his at Bordeaux. So many Americans have gone through his courses in France that they have formed themselves in Associations at Washington and elsewhere.

He has been a visiting Professor to 25 countries. Every year he goes to Washington to give a series of lectures for the University.

Most of the surgical operations he does beautifully under local anaesthesia. He not only demonstrates each step of the operation; but draws diagrams on the sterilized towel with the coloured cryons.

He has been a member of the French Parliament for over 15 years, being a Senator of Gironde Department. During this whole period he has been a member of the French Foreign Affairs Committee. He finally became a couple of years ago, a cabinet Minister with a port-folio of Information.

In 1939 he wrote "Germany in the trench of peace" in French. In this he argued and predicted the second World War. He thought that both Hitler and Stalin were driving the World to War.



DR. GEORGES PORTMANN,  
Professor of Oto-Rhino-Laryngology, University of Bordeaux, France.

He is not only the Dean of the Faculties of Medicine at Bordeaux and Dakar but also a member of 3 Academics, 12 French Societies and 25 Foreign Societies, including the Honorary Membership of the Association of Otolaryngologists of India. At present he is the President of the French National Oto-rhino-laryngological society.

He got many decorations including that of commandeur de la Legion d'honneur, four more at home and eight from foreign governments.

He is the President of the Vine grower's Association at Bordeaux; and as such he will be greatly interested in the Prohibition Experiments of Bombay, and Madras States, of the Indian Republic which he is visiting. He is going to visit Agra and Delhi during the week-end and has an appointment with the Prime Minister Shri Nehru, whom he considers as one of the greatest Statesman of the World.

Ladies and Gentleman I shall not take more of your time but request our worthy professor to inaugurate his 33 hours sessions of discussions of the problems that face us. This week he is giving us the lectures here, at Grant Medical College, the next week G. S. Medical College and in the final week at the Topiwalla National Medical College.

THANK YOU!

## Abstracts

### The use of Dihydrogenated Ergot alkaloids in Otolaryngology: (A preliminary report)

By J. R. ANDERSON M.D. & W. RUBIN, M.D.

(New Orleans, La.; from the Laryngoscope, Vol. LXIII, Jan. 53, No. 1, Pages 31-43.)

In this paper a new adrenergic-blocking agent, Hydergine, manufactured by Sandoz Chemical Co., is evaluated. This preparation is an equiproportional mixture of the three hydrogenated alkaloids of ergotoxine. Ergotoxine, one of the alkaloids of ergot, is composed of ergocornine, ergocristine and ergokryptine. In the neutral state their vasoconstrictor action over-shadows their inhibitory effect on the sympathetic nervous system. Hydergenation, however, causes the sympathetic-blocking action to become prominent, the vasospastic action being virtually eliminated. Hydrogenation also eliminates their toxic reactions. The drug is used perenterally, and/or, sublingually by drops or tablets. Each sublingual tablet contains 0.167 mgms. of each of the 3 alkaloids. Each 1 c.c. ampoule and drops contain a like amount.

Certain E. N. T. disorders indicate that blocking of the sympathetic nerve supply to the area involved would be of therapeutic value. Hydergine is such a sympathetic inhibitor. Among the rare toxic manifestations from the use of this agent are nausea of a moderate degree, and weakness, slowing of the heart rate and headache with nausea. This latter trial is an indication for withdrawing its continued use.

Among the pharmacodynamic actions of the ergotoxine group in the neutral state are (i) Depression of the Central Vasomotor centres, leading to vaso-dilatation and a fall in blood pressure; (ii) Peripheral vasodilatation; (iii) Central inhibition of pressor-receptor reflexes leading to vasoconstriction, and raised blood pressure; (iv) Centrally induced bradycardia; (v) Central sedation; also augmentation of barbiturate action and (vi) an adrenosympathicolytic effect.

It may be repeated that these conflicting actions of the neutral drug are adjusted after hydrogenation so that in hydergine the sympathetic blocking action preponderates, and the vasospastic action is practically non-existent. The following are the Otolaryngological disorders where Hydergine will be useful:—

(i) Vertigo, (i) spontaneous hypertensive epistaxis, (iii) dryness of the mouth, (iv) glossodynia, (v) postnasal discharge; (vi) atrophic rhinitis (ii) Bell's palsy.

Hydergine, in combination with Prostigmine Bromide is calculated to work better in some patients.

**Abstractor's note:**—The drug though not to be taken as a panacea, deserves a trial in suitable cases and conditions. It will have to be used in combination with established measures for the different ailments. Autonomic

blockage by such adrenergic-blocking agent by oral and perenteral methods needs further elucidation, along with the much spoken of Stellate Ganglion block with Procaine now adopted for numerous and varied conditions by the Surgeon and the E. N. T. Specialist.

R. P. MUNSHI, Bombay.

### Bilateral Anosmia as an early and sole manifestation of Olfactory-groove Meningioma

By FARGAS et al.

(Abstract in A.M.A. Arch. Neurol. & Psychiat.)

Fargas et al report a case where bilateral Anosmia existed for 3 years as the only symptom of an olfactory-groove Meningioma which manifested itself in the 4th year by development of visual symptoms.

**Abstractor's remarks:**—Anosmia developing after a traumatic fracture of the skull-base may be due to a hematoma in and around the olfactory-groove. Anosmia persisting after recovery can be due to secondary adhesive fibrotic changes in the region.

R. P. MUNSHI, Bombay.

### Haemophilia—like disease after Pregnancy

By Paul G. FRICK (Minneapolis, Minnesota)

(Lancet Nov. 29, 52 P. 1064)

**Haemophilia**—like disease followed pregnancy, with transplacental transfer of an acquired circulating anticoagulant. The disease appeared in a woman 3 months after a normal pregnancy, her first. The venous clotting time was markedly prolonged, and the prothrombin consumption was minimal. Bleeding time, prothrombin time, prothrombin concentration, tourniquet test, and plasma fibrinogen concentration were all within the normal range. There was no parenchymal liver dysfunction. The lack of response of the clotting abnormality to fresh blood or plasma led to suspicion of a circulating anti-coagulant, which was demonstrated by the delaying effect of the patients' blood on the coagulation time of normal blood. Cohn's fraction I containing active antihæmophilic globulin had no effect on the patient's clotting mechanism. The anticoagulant was therefore believed to inhibit the action of the antihæmophilic globulin (thrombo-plastinogen)—15 months after the onset of the disease the patient delivered a second child, and the anticoagulant was demonstrated in the baby's blood during the first 2½ months of its life. The disease was studied in this woman from the time of onset until recovery, 2½ year later, 16 months after sterilisation by X-rays. The findings strongly suggest an Immunological mechanism in the development of the anti-coagulant.

**Abstractor's remarks:**—Attention is drawn to the markedly delayed clotting time, whereas bleeding-time was normal. Response of clotting delay to fresh blood or plasma, if lacking, should enable one to catch an occasional bleeder from this type of disease. Preoperative testing in this connection is stressed for E. N. T. work.

R. P. MUNSHI, Bombay.

### Anaesthesia in the U. S. A.

By G. M. WYNANT & M. S. SADOWE.

(British Journal of Anaesthesia, Vol. XX, No. III, 4th Oct. 1951, Pages 210-233)

The authors survey the development of Anaesthesia in the English speaking countries, pointing out certain varying trends in the different centres. For instance, chloroform is rarely used in hospitals in England. It is hard even to find a bottle of this drug in the average American hospital. The pre-eminence of chloroform in Scotland stands out in bold relief vis a vis a very thorough study of re-evaluation of chloroform at the university of Wisconsin sometimes ago.

The subject is divided as under :—(i) Anaesthetic and auxiliary Agents (ii) Techniques (iii) Apparatus and Appliances (iv) Training and Qualifications (v) Personnel, status and scope of Anaesthesia (vi) Research and Recent Developments.

#### (i) ANAESTHETIC AND AUXILIARY AGENTS :

Nitrous oxide, ether, cyclopropane, vinyl, ether, ethyl chloride, thiopentone, bromethol, and the muscle relaxants are used alike in the U. K. and the U. S. A. Ethylene is a favourite in some parts of the U. S. A. But it is not used at all in the U. K. which prefers the less potent and less hazardous nitrous oxide from the point of inflammability and explosiveness. As it can be used with a high concentration of oxygen, the hypoxic hazard of nitrous oxide is reduced in the case of Ethylene. Britain has a fondness for Trichlor-Ethylene, which is rarely used in the U. S. A.

Chloroform is out of use in hospitals, but its use is still made in both countries in domiciliary midwifery in rural areas.

Cinchocaine is the long-acting spinal analgesic of choice in the U. K., whereas Anaethocaine (Decicaine, Pontocaine) is the favourite in the U. S. A. Carbondioxide is replaced by manual assistance of respiration or by temporarily excluding the soda-lime absorber from the anaesthetic system for purposes of assisting pulmonary ventilation when desired.

Helium once a favourite in both countries, is now less used in the U. K. Its chief use is for asthmatic patients and for labored breathing from other causes.

Intravenous Procaine is now established as a valuable aid in preventing cardiac arrhythmias during thoracic surgery, and also for suppressing harmful reflex activity. In some cases it assumes the role of a basal narcotic. This agent's status must evolve with time, however.

#### (ii) TECHNIQUES :

**Inhalation anaesthesia** :—This is administered alike in the U. K. and the U. S. A. by the closed, semi-closed, and open methods.

**Intravenous anaesthesia** :—This anaesthesia by the ultrashort-acting barbiturates by the continuous drip method is more used in the U. S. A., whereas Britain uses the fractional-dose technique. Concentration of

thiopentone for the drip varies between 0.1 and 0.5%, and occasionally a solution is used for induction. For single or fractional—dose injection the concentration never exceeds 2.5% in the U. S. A. The U. K. method ensures deeper anaesthesia, preventing laryngeal spasms, and also the possible inadvertent omission to discontinue or slow the drip when the desired level of narcosis is reached. The single or fractional dose is however attended by dangerous fall of blood pressure and respiratory depression in some cases.

**Continuous Spinal analgesia** :—This method is very popular in the U. S. A. presumably because operations tend to last so much longer than do the same procedures in the U. K. Quite often the American Surgeon needs the anaesthetists' help for 5, 6 or 7 hours, or even longer. In continuous spinal, procaine with its low toxicity can be injected in small doses from time to time as required, thus avoiding the large single dose. The catheter technique has replaced the malleable needle. Here also the ureteric catheter is now replaced by fine polyethylene and other plastic tubing. The spinal analgesia is prolonged by the addition of small amounts of adrenaline 1 in 1000, ephedrine, or a similar vaso-pressor to the spinal solution. The two-needle technique avoids spinal headache. A 24 or 25—gauge needle is used for lumbar puncture, and is introduced through a larger needle which serves as a guide and has been advanced down to the ligamentum flavum.

The time-consuming continuous caudal analgesia, popular in many places, is replaced by the subarchnoidal saddle-block, in obstetric practice. (The out-let forceps is used in the large majority of cases, irrespective of the analgesia being caudal or spinal).

Obstetrical analgesia with nitrous oxide and air is not practised in the U. S. A. Trichlorethylene is also rarely used. Tracheal Intubation is used in both countries for similar indications.

One of the striking features of anaesthesia in the United States is the tendency to use drugs in greater dilution than in Britain, and to employ smaller doses initially, repeating the dose if and when required ; or resorting to the continuous drip method. Apart from thiopentone, this is particularly noticeable in the case of muscle-relaxant drugs, and in the use of vaso-pressors and similar potent drugs. Premedication with morphine etc. is somewhat lighter than in Britain.

**Record taking** :—This is a universal feature of American anaesthesia. Blood pressure, pulse and respiration are taken every 5-10 minutes and charted. Additional data of preoperative medication and findings, observations and drugs given during operation, post operative conditions and complications, are all charted. This enables good statistical work, and compels the anaesthetist to be careful and attentive.

#### (iii) APPARATUS AND APPLIANCES :

**Machines** :—The chief types are the Heidbrink, Foregger and McKesson Units in America. They are well known in Britain also. The Heidbrink is the most commonly used in the U. S. A.

**Gas cylinders** :—They vary in size, from A (20 gals. oxygen or 50 gals. nitrous oxide) to size G (3200 gals. nitrous oxide) and H (1825 gals. oxygen).

**Laryngoscopes:**—There are many types the most popular ones being the Guedel, Flagge, Wis-Foregger blades. The Mackintosh type is more common in Britain.

**Intravenous Equipment:**—In the U. S. A. plastic sets are used which are discarded after use. The rubber tube sets used in Britain carry the danger of pyrogen reaction. Various commercial solutions are available; so also blood in ample quantities. Syringes are of all glass type. Cold sterilization is not in favour.

**Oxygen Therapy:**—Tent, mask or catheter are in use. The nasopharyngeal catheter is in use in the U. S. A. The B. L. B. mask and similar types are favoured in Britain.

#### (iv) TRAINING AND QUALIFICATIONS:

**Undergraduates:**—Training is limited to open ether by the drop, nitrous-oxide ether sequence and spinal anaesthesias.

**Post-graduates:**—The post-graduate is trained in cases of thoracic surgery, neuro-surgery, eye, ear nose and throat, orthopaedic and geriatrics. Instruction, practical and theoretical, is given in management of shock and resuscitation, blood transfusion and the maintenance and restoration of water and electrolyte balance, in the management of respiratory emergencies other than those occurring during anaesthesia, and in the indications and performance of diagnostic and therapeutic nerve-blocks. A short course of bronchoscopy is also given. Besides, opportunities exist for post-graduates to avail of meetings of Anaesthesia Societies and seminars and refresher courses.

**Qualifications:**—The F. A. C. A. and the Diploma of the American Board of Anaesthesiology, and M.Sc. (Anaesthesia) and the Fellowship of the International College of Anaesthesia (F. I. C. A.) are among the qualifications in the U. S. A.

#### (v) PERSONNEL, STATUS AND SCOPE OF ANAESTHESIA:

Nurse technicians and qualified medical men as Anaesthetists (or Anaesthesiologists) carry on the work in the U. S. A. In Britain, the work is done by the newly qualified House Surgeons and the higher trained Anaesthetists.

**Anaesthetic-orderlies:**—These exist in great Britain. They service the machines, change the cylinders, prepare the tray and clean up things after the job is over. They see that the machine is ready for use, the syringe is laid out, spinal trays set, tubes lubricated, and adhesive tape cut.

**The field of anaesthesia:**—In the U. S. A. this includes what is implied in the training of residents, e.g. fluid therapy, transfusions, oxygen therapy, diagnosis and relief of pain, and bronchoscopy. Cardio-respiratory problems and problems of resuscitation need the Anaesthetist's advice, as also unconsciousness from any cause. Oxygen therapy equipment and maintenance are his responsibilities.

#### (vi) RESEARCH AND RECENT DEVELOPMENTS:

Pharmacological investigations in the physiology of respiration and circulation, and in the new pharmaceutical preparations, are actively pursued. Drugs which have come to stay are the new vaso-pressors, (Methoxamine, Cyclo-Pentamine), muscle relaxants (Dimethyl-D-Tubocurarine), and anti-curare drugs (Tensilon); ultra-shortacting barbiturates (Sodiumthio-seconal or Surital), Procaineamide; various blood substitutes, and many new local analgesics. Drugs from outside the U. S. A. are Syncurine, Myanesin and Kemithal from Britain; Xylocaine and Dextran from Scandinavia, Flaxedil from France, and Polyvinyl-Pyrrolidone, a blood substitute, from Germany. Older drugs are freshly investigated, e.g. injectible quinidine, rapidly acting digitalis fractions and benzocaine in solution. Chloroform is being revaluated. Anaesthetic machines and appliances receive research-attention. New instruments e.g. gas analyzers, electric and electronic recording devices and machines employing radioactive isotopes are being constantly investigated. The use of music in the sedation of patients under spinal or regional anaesthesia is being explored. Wall-oxygen and wall-suction are provided in Recovery Rooms equipped to deal with emergencies likely to arise in the post operative 'wake-up' period.

**Prevention of Explosions:**—Explosions are more frequent in the U.S.A. than they are in Britain. Among measures to prevent explosions are conductive floors, conductive rubber, spark-proofing of equipment, air-conditioning, and humidity control, in the operation theatre.

A 'Staticator' is devised, which indicates the presence of static charges in the vicinity of the antenna of the instrument.

**Abstractor's note:**—The Indian Surgeon and Anaesthesiologist are largely the product of the English speaking countries. With the advent of the Republic time has now come when this subcontinent should develop its own system of training, its own equipment, choosing agents and methods best suited to local conditions irrespective of the fact that they may not be shared by the others. A constant exchange of ideas, and contact with the vast literature on the subjects related to anaesthesia are obviously necessary.

R. P. MUNSHI, Bombay.

## Association Notes

### THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

#### Provisional Programme of the Sixth Annual Conference—Hyderabad Session December 1953.

The Reception Committee of the Conference extends a very cordial invitation to you to attend the conference lasting from 22nd to 25th December, 1953.

Hyderabad city is the largest city in the Deccan and the climate is very bracing during December. The nights are rather cold and you need a warm blanket. The day begins with a cool breeze and towards afternoon it is warm. In and around the city, visitors should make it a point to see the Osmania University buildings, Secunderabad city, the Salar Jung Museum, Charminar, Golkonda fort, and the twin artificial lakes of Himayat-Sagar and Osman-Sagar.

The Ellora and Ajanta caves are world famous and can be visited after a railway journey to Aurangabad, which is 320 miles from Hyderabad; this trip will take two days and the round trip will cost Rs. 80 by 1st Class, Rs. 60 by II Class and Rs. 50 by III Class inclusive of railway and bus and food. Please bring your family with you so that you can really enjoy a holiday with sight seeing. Boarding and Lodging for the delegates and their families have been arranged in the University Campus which is very near the venue of the Conference. Lodging and Boarding, including morning tea, breakfast, lunch, tea and dinner will be charged at Rs. 10/- per day per member. Non-resident delegate will be charged Rs. 2/- per principal meal add Re. 1/- for tea or breakfast. Please bring your bedding and a mosquito curtain.

Excursions to local places of interest will cost a nominal transport expense and details of timing etc., will be furnished on your arrival.

It is expected to make the Scientific session interesting. Please contribute your experience by reading papers and taking part in the discussions.

The delegates fee is Rs. 10/-.

Railway concession forms will be sent to you as last year on hearing from you.

Monday 21st December 1953.

Governing body meeting at Dr. R. Venkat Rao's bungalow, followed by dinner.

The Sixth Annual Conference will be opened by Shri B. Ramakrishna Rao, the Chief Minister of Hyderabad on Tuesday, the 22nd December 1953 and the Scientific Session inaugurated by the Health Minister Shri Mehdi Nawaz Jung Bahadur at Hyderabad.

1. Boarding and lodging from 22nd to 24th December 1953 in the University Campus, plus to and fro transport expenses to the Railway Station will be a lumpsum of Rs. 18/- only instead of Rs. 30/-, and Rs. 10/- a day subsequently per head.

#### 2. GENERAL PROGRAMME :

Tuesday 22nd December 1953.

|                   |                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8-00 a.m.         | Breakfast in University campus for the resident delegates.                                                                                                                        |
| 8-30 a.m.         | Registration of delegates in the Osmania University campus.                                                                                                                       |
| 9-20 a.m.         | Group photograph of the members of the Association.                                                                                                                               |
| 10-00 a.m.        | Chairman of the Reception Committee's address.<br>Opening of the Conference.<br>Inauguration of the Scientific Session.<br>Presidential Address by Dr. D. Ram.<br>Vote of thanks. |
| 1-00 to 2-00 p.m. | Lunch.                                                                                                                                                                            |
| 2-00 to 4-30 p.m. | Scientific papers.                                                                                                                                                                |
| 4-30 to 5-30 p.m. | Tea.                                                                                                                                                                              |
| 5-30 to 7-30 p.m. | Scientific papers (short).                                                                                                                                                        |
| 8-30 p.m.         | Dinner by the President of the Conference.                                                                                                                                        |

Wednesday 23rd December 1953.

|                   |                                      |
|-------------------|--------------------------------------|
| 8-00 a.m.         | Breakfast.                           |
| 9-00 to 1-00 p.m. | Scientific papers.                   |
| 1-00 to 2-00 p.m. | Lunch.                               |
| 2-00 to 4-00 p.m. | Scientific papers.                   |
| 4-00 to 5-00 p.m. | Visit to Sarojini Devi Hospital—Tea. |
| 5-00 p.m.         | Visit to Golkonda Fort and Tombs.    |
| 9-00 p.m.         | Association subscription Dinner.     |

Thursday 24th December 1953.

|                    |                                                            |
|--------------------|------------------------------------------------------------|
| 8-00 a.m.          | Breakfast.                                                 |
| 9-00 to 11-30 a.m. | Business meeting.                                          |
| 11-30 to 1-00 p.m. | Visit Secunderabad, Osmania Hospital and Salarjung Museum. |
| 1-00 to 2-00 p.m.  | Lunch.                                                     |
| 2-00 to 5-00 p.m.  | Visit to various hospitals.                                |
| 5-30 p.m.          | Leave for Aurangabad on a trip to Ajanta and Ellora caves. |

24th December 1953 General Body Meeting :

- Morning
1. Confirmation of the minutes of the Fifth (Patna) Session December 1952.
  2. Honorary Secretary's Report for 1952-1953.
  3. Honorary Treasurer's report with audited accounts for October 1952—September 1953.
  4. Honorary Chairman of the Editorial Boards report, with audited Journal accounts for 1952-1953.
  5. Resolutions submitted by the Governing Body.
  6. Resolutions submitted by members if given before 22nd November 1953.
  7. Election of Office Bearers for 1953.
  8. Selection of the place and time of the Seventh Annual Meeting under rule 15 (c).
  9. Selection of the Local Secretary under rule 15 (d).
  10. Inviting Scientific papers for 1954, 1955 and 1956.
  11. Inviting Donations.
  12. Any other Business with the Permission of the Chair.
  13. Meeting of the Editorial Board.
  14. The Meeting of the Newly Elected Governing Body under the newly elected President for 1954.

We are grateful to the Reception Committee for finding ways and means to have reduced the lodging and boarding charges for the days at the University Campus, from Rs. 30/- to Rs. 18/-.

#### TRIP TO AJANTA AND ELLORA.

Please remit, as per Schedule, the amount, by Money Order, to enable early reservations.

|                      | II CLASS | INTER CLASS | III CLASS |
|----------------------|----------|-------------|-----------|
| Return Rly. fare ... | 54/-     | 35/-        | 20/-      |
| Bus ...              | 10/-     | 10/-        | 10/-      |
| Food for 2 days ...  | 20/-     | 20/-        | 20/-      |
| Total ...            | 84/-     | 65/-        | 50/-      |

Due notice should be sent to the Secretary Local Branch, before 1st November 1953 to reserve accommodation.

Rs. 10/- (I.G.) per day, per member, will be charged for this arrangement which includes morning tea, breakfast, lunch, evening tea and dinner. Delegates staying with friends will be charged at Rs. 2/- (I. G.) per meal.

All communications, with correct addresses, may be addressed to Dr. R. Venkata Rao, 823, Himayathnagar Main Road, Hyderabad-Deccan.

Chairman Reception Committee ... Dr. S. K. Jatar.  
Hon. General Secretaries ... R. Venkata Rao.  
Dr. K. Keshav Kumar.  
Dr. G. V. C. Rao.

Members are requested to inform the Hyderabad (Deccan) Secretary and myself immediately what papers they wish to read at the Conference and to send the manuscript by the registered post on 1st November 1953, to the Hyderabad-Deccan Secretary.

The Local Secretary would further like to know how many of you are coming, including the members of your family, whether vegetarian or not. Dr. Venkata Rao will send you the authority slip for Railway concession in any class (single fare for return journey) provided you attend the opening meeting of the I. M. A. which follows our conference. Please also let met know :

- (i) Whether you want him to make arrangements for your lodging and boarding ?
- (ii) How many attending ?
- (iii) Coming by air or rail and the time of arrival.

The Honorary Treasurer reminds me that some of you have not yet paid your current year's subscription in spite of his two reminders, and third from myself by registered post. If we do not receive your subscription in a fortnight after the posting the journal to you, it will hurt me to put your names under our rules before the Governing Body for removal. Please hurry up and co-operate with us.

Response to request for short papers has not been prompt yet. Kindly intimate immediately so that they can be incorporated in the final programme.

The following is the text of the resolution—

30 (a) Moved by Dr. R. N. Kacker and seconded by Major S. Chatterjee and carried unanimously.

“ Resolved that the summary of all the Scientific papers be sent to the head office by the 15th October and the typed copy of the entire original Paper by the 15th November preceding the annual conference of the same year.”

As the members have not sent me the same, I request that to avoid delay they send this year to Dr. R. Venkata Rao, 970, Himayathnagar Main Road, Hyderabad Deccan. This will facilitate greatly to arrange the Final details of reading the Papers.

L. HIRANANDANI,  
Honorary Secretary.

Bombay, 27th October 1953.

The meeting of the Governing Body was held on Tuesday, the 27th October 1953, at the Residence of Dr. C. A. Amesur. The following were present :—

Dr. C. A. Amesur                      Dr. R. N. Kacker  
Dr. R. A. F. Cooper                  Dr. L. H. Hiranandani

Dr. Kacker proposed, Dr. Cooper seconded and Dr. Hiranandani supported that Dr. Amesur be requested to take the Chair.

1. Then the Hon. Secretary read the minutes of the last meeting held on 15th July 1953. Dr. Cooper proposed and Dr. Kacker seconded that the same be confirmed (Carried unanimously and signed by the Chairman.)

2. Dr. Cooper proposed and Dr. Hiranandani seconded the election of the following members in the following categories.

(a) Dr. I. Kukreja, D.O.R.L., as Associate member with effect from 1st December 1952.

Dr. T. S. Shetty, M.D., as Ordinary member from 1st October 1953.

Dr. K. V. Radhakrishnan, D.L.O., as Ordinary member from 1st October 1953.

(b) Dr. N. K. Apte, M.S., D.L.O., to be ordinary member instead of associate member with effect from 1st October 1953.

(c) Col. P. Papatlal to be Associate member instead of Ordinary member with effect from 1st January 1953.

Put from the Chair to Vote and carried unanimously.

3. Chairman of the Editorial Board pointed out that as the branches, had not sent their nominees to the Editorial Board under new rule 34, he suggested that the following to represent the following areas :—

|                     |     |                   |
|---------------------|-----|-------------------|
| Dr. R. P. Munshi    | ... | Bombay            |
| Major S. Chatterjee | ... | West Bengal State |
| Dr. S. Jagannadham  | ... | Andhra            |
| Dr. A. K. Sinha     | ... | Bihar             |
| Dr. Nandagopal      | ... | Madras            |

Put to vote and carried unanimously.

4. Dr. C. A. Amesur informed the members the constitution he had suggested to the Bombay Government for the creation of the Council for the Deaf in the State of Bombay in his capacity as a Chief of the E.N.T. Unit at the J. J. Hospital for information. This was discussed at a Clinical meeting of the Bombay Branch last month ; and also sent to other branches for information.

5. Prof. C. Satyanarayana and Prof. Sarma have been asked by the Governments of Madras and Assam to suggest ways and means to start Audiology Clinics. Their suggestions and those of other branches when received will be put before you.

6. Dr. Cooper said that he has given his books for audit and hopes to get a certificate in time for printing in the December issue of the Journal.

7. Moved from the Chair that in terms of article 3 (d) it be resolved "that Dr. C. Satyanarayana be requested to give his technicolour Film on Narrow Field Laryngectomy on loan to get a duplicate made ; and the cost of the copy be borne by the Association". Carried unanimously.

8. Chairman congratulated the Local (Hyderabad) Secretary for the good arrangements the Reception Committee and he are making.

### THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Receipts and Payments for year to 30th September, 1953.

| RECEIPTS.                                                      |            | PAYMENTS.                                             |                      |
|----------------------------------------------------------------|------------|-------------------------------------------------------|----------------------|
|                                                                | Rs. A. P.  |                                                       | Rs. A. P.            |
| Balance at 1st October, 1952—                                  | Rs. A. P.  | Advances to Indian Journal of Otolaryngology          | 660 0 0              |
| Investments at cost                                            | 4,805 10 0 | Bombay Branch-share of subscription                   | 99 0 0               |
| Due by K. B. Vakil & Sons.                                     | 187 2 3    | Andhra Branch-share of subscription                   | 63 0 0               |
| Cash at Bank in current account with Lloyds Bank Ltd.          | 971 14 9   | Salaries                                              | 205 0 0              |
| Subscriptions—                                                 |            | Printing & Stationery                                 | 94 0 0               |
| Ordinary members                                               | 2,376 0 0  | Postage & Telegrams                                   | 153 8 0              |
| Associate members                                              | 240 0 0    | Bank Charges                                          | 17 4 0               |
| Donations                                                      | 2,616 0 0  | Sundries                                              | 74 8 0               |
| Dividends—                                                     |            | Balance at close, comprising Investments at cost      | Rs. A. P. 4,877 14 6 |
| Imperial Bank of India                                         | 80 0 0     | Cash at bank in current account with Lloyds Bank Ltd. | 3,061 1 6            |
| Ambedkar Electricity Co. Ltd.                                  | 71 10 0    |                                                       | 7,939 0 0            |
| Surat Electricity Co. Ltd.                                     | 34 8 0     |                                                       |                      |
| United Commercial Bank Ltd.                                    | 20 0 0     |                                                       |                      |
| Interest—                                                      |            |                                                       |                      |
| Rs. 1,000 Debentures of Tata Locomotive & Engineering Co. Ltd. | 25 0 0     |                                                       |                      |
| Less : Income Tax                                              | 6 9 0      |                                                       |                      |
|                                                                | 18 7 0     |                                                       |                      |
| Total                                                          | 9,305 4 0  | Total                                                 | 9,305 4 0            |

(Sd) D. RAM,  
President.

Examined and found correct.

(Sd.) Dr. R. A. F. COOPER,  
Honorary Treasurer.

(Sd.) SHARP & TANNAN,  
Chartered Accountants (Honorary Auditors.)

BOMBAY,  
23rd November 1953.

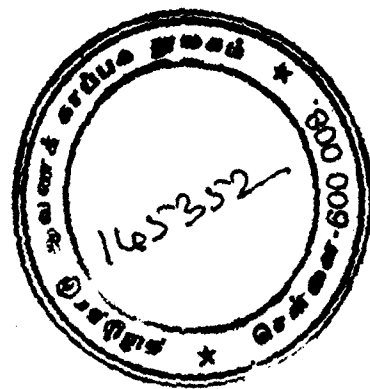
# THE ASSOCIATION OF OTOLARYNGOLOGISTS OF INDIA

Investments held at 30th September, 1953.

| PARTICULARS.                                                                          | Rs.   | A. P. | Rs.                                          | A. P. |
|---------------------------------------------------------------------------------------|-------|-------|----------------------------------------------|-------|
| Debentures of a company—                                                              |       |       |                                              |       |
| Rs. 1,000 Tata Locomotive & Engineering Co. Ltd., 5% Regd. Taxable Debentures 1960/65 |       |       | (Cost including stamp duty & transfer fees.) |       |
| ...                                                                                   |       |       | 1,030                                        | 6 0   |
| Ordinary shares of companies—                                                         |       |       |                                              |       |
| 1. Imperial Bank of India of Rs. 500 each fully paid                                  | 1,750 | 9 0   |                                              |       |
| 10. Ahmedabad Electricity Co. Ltd., of Rs. 100 each fully paid (new)                  | 1,111 | 4 0   |                                              |       |
| 5. Surat Electricity Co. Ltd., of Rs. 100 each fully paid                             | 616   | 4 0   |                                              |       |
| 10. United Commercial Bank Ltd. of Rs. 100 each, Rs. 50 per share paid up             | 369   | 7 6   |                                              |       |
| Total ...                                                                             |       |       | 3,847                                        | 8 6   |
|                                                                                       |       |       | 4,877                                        | 14 6  |

BOMBAY,  
23rd November, 1953.

(Sd.) R. A. F. COOPER,  
Hon. Treasurer.



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## Accounts of the Journal of the Association of Otolaryngologists of India with the Hony. Treasurer at Madras

Receipts and Payments for the Year ending 30-9-1953.

| RECEIPTS.                                                              | Rs.   | A. P. | PAYMENTS.                                                                      | Rs.   | A. P. |
|------------------------------------------------------------------------|-------|-------|--------------------------------------------------------------------------------|-------|-------|
| To Opening Balance—                                                    |       |       | By Printing Charges                                                            | 2,372 | 12 9  |
| S. B. Account with Canara Banking Corporation Ltd., as on 1-10-1952... | 4,305 | 6 0   | " Establishment Charges                                                        | 240   | 0 0   |
| " Central Office Contribution                                          | ...   | ...   | " Postage                                                                      | 140   | 12 9  |
| " Advertisement                                                        | ...   | ...   | " Railway Freight                                                              | 25    | 12 0  |
| " Subscription to Journal                                              | ...   | ...   | " Artist Charges                                                               | 26    | 0 0   |
| " Interest from Bank                                                   | ...   | ...   | " Stationery (Wrapper for Journals)                                            | 183   | 0 0   |
|                                                                        |       |       | " Bank Charges                                                                 | 11    | 3 0   |
|                                                                        |       |       | Closing Balance—                                                               |       |       |
|                                                                        |       |       | On S. B. Account with Canara Banking Corporation as per Pass Book on 30-9-1953 | 4,330 | 7 9   |
|                                                                        |       |       | Cash with Clerk (Continuities account)                                         | 25    | 7 9   |
| Total ...                                                              | 7,349 | 8 0   |                                                                                | 4,355 | 15 6  |
|                                                                        |       |       | Total ...                                                                      | 7,349 | 8 0   |

(Sd.) D. RAM,  
President.

(Sd.) C. A. AMESUR,  
Honorary Chairman.

(Sd.) P. V. CHERIAN,  
Honorary Treasurer.

Examined and found correct.

(Sd.) K. JOHN & CO.,

Chartered Accountants (Honorary Auditors.)

MADRAS,  
1st December, 1953.

Two antihistaminics of  
established value

## Antistine Pyribenzamine

Wide experience has shown that patients suffering from the same allergic disease do not always respond equally well to the same antihistaminic drug. Occasionally, a particular patient may fail to derive benefit from a preparation which is normally effective. In such cases the administration of another drug from the group of histamine antagonists frequently produces the desired result.

**Indications:** Urticaria, Vasomotor rhinitis, Pruritus, Serum sickness, Anaphylactic shock, Hypersensitivity to drugs, Allergic asthma, etc.

A new medical approach  
to nasal decongestion...

## Antistine-Privine Nebulizer

Contains 1:200 Antistine and 1:4000 Privine in aqueous isotonic solution. This new synergistic combination thus contains the effective antihistaminic, Antistine, to control allergic reactions, and the potent vasoconstrictor, Privine, to shrink the nasal mucosa or for decongestion of the conjunctiva.

**Indications:** Vasomotor rhinitis, Common cold, Hay fever, Allergic conjunctivitis, Spring catarrh, Eczema, Oedema of the eyelids, etc.

GIBA PHARMA LIMITED P. O. BOX 1123 - BOMBAY



## UNI-FERON

Saccharated iron Oxide 100 mg. in 5. c. c.  
for iron deficiency anaemias, anaemias  
of pregnancy, preoperative  
conditions.

★

## UNI-VITE (DROPS)

Vitamin deficiencies in general, parti-  
cularly for ladies & children.

★

## UNI-B-COMPLEX C

Water soluble vitamins in Therapeutic  
dosaße particularly useful in Diabetic  
neuritis, Typhoid and other toxic  
fevers and in post operative  
conditions.

★

## UNI-B-TWELVE (Parenteral)

Vitamin B 12, 15 micrograms with  
Vitamin B-Complex factors per  
c. c. for Pernicious anaemias,  
nutritional and other  
types of macrocytic  
anaemia.

★

**UNICHEM LABORATORIES, BOMBAY 26.**