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IMPORTANT PROBLEMS IN SOVIET
OTORHINOLARYNGOLOGY

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IMPORTANT PROBLEMS IN SOVIET OTORHINOLA-
RYNGOLOGY

Following is the translation of an article by I.A. Lopotko, V.F. Undrits, et al in Vestnik Otorinolaringologii (Herald of Otorhinolaryngology), No 5, Moscow, 1960, pages 3-24.

(Comment on the 1961-1962 problem plan for scientific-research work in otorhinolaryngology by the Academy of Medical Sciences USSR).

In accordance with the seven-year problem plan for research work, problem commission O 36 (otorhinolaryngologic) under the Scientific-Planning Commission of the presidium of the Academy of Medical Sciences USSR, is drawing up the annual (biennial from 1961 on) plan for scientific research and studying and summarizing the results of the scientific work done. The commission's main task is to verify to what extent these plans are being executed, on what level scientific research is being carried on, what significance the data of the research done has for practical health care, and whether one or another of the planned timely questions has not been left out of the purview of LOR (Laringo-oto-rinologicheskkiye -- Laryngo-Oto-Rhinological) institutions.

On the basis of a study of the reports for the past years and of the plans for the future, the problem commission works out recommendations for drawing up plans for scientific research in otorhinolaryngology at the research locales, and ascertains the most important questions primarily subject to study. It examines questions regarding the extent to which this work and these plans accord with the resolutions of the 30th and 31st Congresses of the Communist Party of the Soviet Union concerning the strengthening and broadening of therapeutic-prophylactic work, and introduces the requisite correctives. Of special significance at present is also the compilation of plans and the performance of

work in accordance with the recently published decree of the Central Committee of the CPSU and the Council of Ministers of the USSR "On the measures for the further improvement in serving and safeguarding the health of the population."

In conjunction with the impending planning by the LOR institutions of scientific research work for 1961-1962, the present article gives in abbreviated form materials on the work done in 1959 (principally from the data sent in by authors of papers) and recommendations for the compilation of plans for scientific research in 1961-1962, i.e. for two years.

As in the preceding years, the curators of special problems have been: for the first problem, Prof. V. F. Undrits (assistant chairman of the commission) and Prof. I. A. Lopotko (assistant chairman of the commission); for the second problem, Prof. K. L. Khilov and Prof. A. G. Likhachev; for the third problem, Doctor of Medical Sciences G. I. Grinberg; for the fourth problem, Doctor of Medical Sciences T. N. Mil'shteyn, and Bachelor of Medical Sciences S. Z. Romm (secretary of the commission); for the fifth problem, Prof. B. S. Preobrazhenskiy, (chairman of the commission) and Prof. I. Ya. Sendul'skiy. Members of the problem commission Professors V. I. Voyachek, V. G. Yermolayev, A. I. Kolomiychenko, V. K. Suprunov, V. K. Trutnev and S. N. Khechinashvili took part in working out the problems.

First special problem

Angina and chronic tonsillitis

The 1959 plan for the special problem of "Angina and chronic tonsillitis" provided for the broad study of the problems of the etiology, pathogenesis, prophylaxis and treatment of tonsillar diseases on the basis of new achievements in physiology and pathophysiology. The list of subjects of the planned work included various questions relating to the tonsillar problem.

In 1959 about 100 projects were carried out on this problem, nearly all of which were in accordance with the recommendations underlying the plan of scientific work for 1959.

Despite the existence of a number of very valuable investigations performed in the scientific-research LOR institutes and in a number of LOR clinics, it must be

stated that there is no even coverage of the whole range of subject: some aspects of the problem were not given sufficiently thorough treatment (poor study of the statistics of diseases, vocational, clinical and living conditions, questions of incidence of disease in children of pre-school and school age, etc.)

A relatively large number of studies were devoted to the results of treatment by both preservative and surgical methods; however, some of the studies were not provided with sufficient evidence (there was no report on remote results, integrated investigations with pediatricians and therapists are almost entirely lacking; etc.)

On the basis of an analysis of the papers presented, it may be considered that the most important results have been obtained in the following problems:

A number of studies on questions of the morphology and physiology of the normal and pathologically altered palatal tonsil, refine our information about the reflex excitability of the tonsillar tissue, as well as about metabolic processes (ferments, vitamins) taking place in normal tonsils and in tonsillitis (R. A. Fel'berbaum, L. N. Yampol'skiy, E. I. Idel'chik, N. P. Belina, N. V. Chepurnaya and others, Leningrad). It has been established that the removal of the adenoids often changes the reactivity of the organism in the direction of normalizing the function of the palata tonsils (L. M. Kovaleva, Leningrad).

The role of inflammation of the third (nasopharyngeal) tonsil (adenoiditis) in hidden forms of poisoning of the organism has been determined more precisely (Fai Ing-Lien, Moscow).

A number of details have been learned in questions of the structure of the lymphatic vessels of the palatal tonsils and their connections with the surrounding lymphatic vessels of the mucous membrane of the pharynx; a study has also been made of changes in the lymphatic vessels of the tonsils in tonsillitis (K. A. Malkhazova, Leningrad).

It has been established that in chronic tonsillitis there are changes in the argyrophilous fibers and nervous elements, as well as desquamation of the endothelium of the vessels (R. N. Kayumova, Tashkent)

Studies on immunobiology occupy a considerable place. It has been shown that the use of allergens (of intestinal bacillus, enterococcus, beef, rabbit meat, etc.) in a number of cases produces parallergy phenomena

in some chronic tonsillitis patients; however, most of them exhibit a predominance of bacterial allergy of a streptococcal nature (P. P. Sakharov, Ye. I. Gudkova and others, Moscow).

A histological study of tonsils removed from chronic tonsillitis patients having a pronounced allergic condition revealed the disintegration of fat cells, which, as is known, secrete heparin, co-participating in the formation of histamine in the final phase of allergy.

A considerable place is occupied by studies on the ascertainment of the pathogenesis of tonsillitis and the significance of the general and immunological reactivity of the organism. The results of these studies indicate that the decisive significance in the pathogenesis of tonsillitis belongs to the reactivity of the organism, both non-specific and immunological. Allergy plays a big role in connection with the fact that most tonsillitis cases, especially those complicated by rheumatism, develop against an allergy background (V. K. Trutnev, P. P. Sakharov, Ye. I. Gudkova, B. M. Sagalovich, Moscow; D. A. Pigulevskiy, I. A. Lopotko, O. Yu. Lakotkina, N. P. Belkina, L. N. Petrova, Leningrad, and others.)

It may be considered that some of the elaborated reactions, for example, the skin tests with streptococcus allergen, the general immunological reaction according to V. I. Ioffe, the intra-tonsil test, and others, have diagnostic value.

Among the studies relating to the prophylaxis and treatment of angina and chronic tonsillitis, the following should be noted. An evaluation was made of the action of negative aero-ions, which showed their normalizing effect on the mucous membranes of the upper respiratory passages (E. K. Siyrde, Tartu). Verification (still unfinished) was made of the effectiveness of the streptococcus vaccine manufactured by the Moscow Ear, Throat and Nose Institute. A study was made of the significance of the integrated therapy (vaccination and desensitization) in the prophylaxis and treatment of angina (V. K. Trutnev, P. P. Sakharov and others, Moscow). It was established that the introduction of medical substances into the palatal tonsils has not only local action but also reflex action (V. A. Filenius, K. G. Astakhova, Irkutsk). A further evaluation was made of the prophylactic significance of the dispensary method of combating morbidity at work (S. Z. Romm, A. M. Vaynshteyn, Leningrad; A. S. Tokman and F. A. El', Moscow, and others.)

A good-sized group of studies was devoted to the treatment of chronic tonsillitis. To this group may be related the question of anesthesia in tonsillectomy; especially effective in operations for paratonsillar abscess is the application of potentiated narcosis (F. F. Nazarova, Moscow).

The advisability of post-operation iontophoresis to the region of the tonsils, proposed by M. I. Vodop'yanova (Leningrad), requires further verification. The methods worked out in the LORclinic of the Stanislav Medical Institute (n. R. Beskrovnyy, A. A. Savingskiy, Stanislav), for the treatment of chronic tonsillitis with supersonic vibrations and X-ray radiation, as well as with oligodynamic silver, still require careful clinical observation.

Many studies confirm the effectiveness of tonsillectomy; here attention has been drawn to the fact that the effect of tonsillectomy is more considerable in complicated forms of chronic tonsillitis if it is employed at a comparatively early date.

In the last few years much scientific and organizational work has been done in the combating of angina. It has been ascertained that in a part of the cases (an average of 15-20% among the total number) angina is a recurrent aggravation of chronic tonsillitis; this has made it necessary to combat this chronic disease as well. At the same time it has been established that chronic tonsillitis itself in a considerable number of cases is the result of secondary angina. The frequently observed presence of streptococci in the palatal tonsils apparently also plays a role. However, the question of the epidemiologic evaluation of this factor requires precise scientific treatment, since it thus far remains merely a hypothesis.

Statistical data have shown that, although unfavorable geographic and climatic conditions do play a certain role in the incidence of angina, it is noted most of all in places where the population is most congested, especially in cities and highly developed industrial regions.

The incidence of the disease among workers at certain enterprises has been studied principally in connection with the working conditions, which is only one aspect. Inasmuch as the question of congestion is being raised, it is necessary to also study the living conditions: the sanitary condition of the communal dwellings, restaurants, clubs and other public places (B. S. Preobrazhenskiy, Moscow). Not all of these questions

have been studied concretely.

There has been little study of the significance of questions of nutrition (regimen, quality, allowance, vitamins) and so forth in the etiology of angina and chronic tonsillitis. Here, too, concrete practical scientific grounds must be found for the a priori ideas expressed in the literature.

All this applies to the incidence of angina and chronic tonsillitis both in adults and in children (school and pre-school) and adolescents.

It has long been known that many diseases of the heart, joints and kidneys and so forth are etiologically or pathogenetically connected with chronic tonsillitis. However, attention has now been focused on the reverse: the significance of chronic general diseases of the organism for the rise of chronic tonsillitis (B. S. Preobrazhenskiy, Moscow).

The largest number of studies have been made in the Moscow and Leningrad otorhinolaryngological scientific-research institutes, since these institutions naturally have a broader scientific base and a larger number of collaborators. It is also to be explained by the fact that the Moscow Institute is the principal institute for the problem of angina and chronic tonsillitis under the Ministry of Public Health of the USSR, and the Leningrad Institute, though it has a different range of specialties (surdology, phoniatory and logopedi), is nevertheless working on a number of important questions relating to the tonsil problem; moreover, it is the chief institute on problem No 36 for the Academy of Medical Sciences of the USSR.

Many LOR chairs of the medical institutes (Moscow, Leningrad, Chelyabinsk, Orenburg, Irkutsk, Omsk, Dnepropetrovsk, Odessa, S. anislav, Tbilisi, Tashkent, and others) have taken an active part in the solution of the tonsil problem.

The LOR institutes, LOR chairs and LOR departments of the hospitals have done a great deal of valuable work relating to the treatment of angina and chronic tonsillitis, the establishment of indications for surgery in chronic tonsillitis, the perfection of anesthesia and operating techniques, etc.

But the main question of the causes of the frequent incidence of angina in broad strata of the population, as well as the elaboration of measures which could lead to the lowering of this incidence, goes far beyond the capabilities of the LOR institutions, if they work in isolation.

Thus far, the question of the interrelation between angina and chronic tonsillitis, allergy and metatonsillar diseases has not been clarified and the existing measures of prophylaxis of these diseases are also inadequate.

Angina and chronic tonsillitis cannot be regarded merely from the standpoint of the microbic factor. While this factor has indisputable significance, a definite role belongs to the reactive characteristics of the organism, not infrequently to its allergic condition.

The problem of angina incidence must be studied integrally: by hygienists, microbiologists, virologist, epidemiologist, infectionists, occupational pathologists, therapists, pediatricians, and public-health organizers. The problem of tonsillar pathology must also occupy an important place in the plan of scientific research of the medical higher educational institutions.

Great prospects with respect to the promotion of the work on the tonsil problem are opened by the scientific-research plan for 1961-1962, worked out jointly by the special commission for combating angina under the Ministry of Public Health of the USSR with problem commission No 36 of the Ac of Med Sc. of the USSR and the Ministry of Public Health of the RSFSR with the principal institutes. Many other specialists, having a relationship with this problem, are being engaged for research work in this special commission, in addition to the otorhinolaryngologists. It is to be hoped that such an important solution will be concretely realized.

With regard to the study of various questions relating to the tonsil problem, the following subjects are recommended for 1961-1962:

1. Study of the causes of the incidence of angina and chronic tonsillitis by age groups among the organized and unorganized population under various climatic conditions.

2. Study of the incidence of angina and chronic tonsillitis at places of work.

3. Influence of living conditions (communal dwellings, restaurants, first-aid centers and of the living routine of workers upon the incidence of angina and chronic tonsillitis.

4. Role of nutrition in the etiology and pathogenesis of angina and chronic tonsillitis in children and adults.

5. Study of the incidence of angina and tonsillitis in the rural population (children and adults.)

6. Determination of the contagiousness of various forms of angina.

7. Significance of chronic-tonsillitis patients in the rise of epidemic and episodic anginas.
8. Study of strains of streptococci (type, toxicity, virulence) distinguished in angina and chronic tonsillitis.
9. Immune responses of angina and chronic-tonsillitis patients to antigenic components of streptococcus.
10. Study of the role of allergy in the rise of secondary angina and chronic tonsillitis.
11. Autosensitization in the rise of chronic tonsillitis and metatonsillar complications (rheumatism).
12. Role of adenoviruses in the rise of angina and chronic tonsillitis.
13. Determination of the date of restoration of working capacity after recovery from angina.
14. Verification of the effectiveness of preparations for the prophylaxis of angina and chronic tonsillitis.
15. Refinement of measures for the prophylaxis of complications in angina and chronic tonsillitis cases.
16. Working out of a plan of organizational measures for combatting angina under the conditions of major industrial production.
17. Working out a classification of angina and chronic tonsillitis.
18. Working out questions of the physiology and morphology of the lymphadenoid tissue of the pharynx in application to questions of the pathogenesis, diagnosis, prophylaxis and treatment of tonsillitis.
19. Study of the clinical aspects of angina and its relation to allergy.
20. relation of tonsillitis to rheumatism, infectious arthritis, nephritis, etc.
21. Perfection of the diagnosis of chronic tonsillitis.
22. Working out new methods of prophylaxis and treatment and their evaluation in accordance with the classification of tonsillitis.
23. Working out methods of applying ultra-violet irradiation and ultra-high frequency therapy to children, as well as electrophoresis of medical substances in chronic tonsillitis.
24. Perfection of preservative methods of treatment and refinement of methods of sanatorium and health-

resort treatment of tonsillitis and metatonsillitis.

Second special problem

Chronic purulent otitis media and its complications

The materials contained in papers presented during 1959 may be divided into three groups: 1) employment of tympanoplastic surgery in chronic purulent otitis media, 2) otogenic intracranial complications and 3) allergy diseases of the ear. To these studies are added investigations into various questions of otiatry.

Eleven papers on studies were presented on the problem of tympanoplastic surgery. Analysing these studies one may come to the following conclusions:

There are conflicting data regarding the grafting of a free patch of skin to a bone wound. Thus, according to the materials of the L'vov clinic (L. Ya. Dudnik), there was complete necrotization of the patch in 3% of the patients and partial in 6%. At the same time, according to the data of the Kazan' clinic (F. V. Kastorskiy), only 9% of the patients were able to form a new drum cavity; but according to the materials of the clinic of the Semipalatinsk Medical Institute (B. I. Dunayvitser) and the Kazakh Medical Institute (A. I. Multusova (Alma-Ata), adhesion of the transplant was observed in 50% of the patients. Owing to the absence of the respective materials it is impossible to give an explanation of the reasons for the dissimilarity of the results of this operation. There are some modifications in the creation of a free patch of rhomboidal form (B. I. Dunayvitser, Semipalatinsk) or of a biologic tampon (M. I. Ovsyannikov, Zaporozh'ye; Yu. B. Preobrazhenskiy, Moscow).

In the paper of A. A. Smutmeva of the Sverdlovsk clinic regarding the work on the remote origins of tympanoplastic surgery, unfortunately no figures are given on goods, satisfactory or unsatisfactory clinical and functional results. Consequently, we have thus far not had the necessary materials for a fundamental evaluation of Vul'shteyn's operation. Which operations are most rationally and functionally effective: tympanoplastic surgery with a meatal flap on a stem, successfully employed by a number of Soviet ear surgeons (V. F. Undrits, K. L. Khilov, B. S. Krylov, G. M. Komarovich), or tym-

panoplastic surgery with a free flap? It is not understandable, therefore, why it may be considered that the tympanoplastic method using a free graft is more rational. This seems all the stranger because in plastic operations on the face, when the aim is the grafting of a flap of skin to skin, surgeons have long since abandoned free plastics, preferring to use a flap on a stem (Indian and Italian methods, migrating patch according to Filatov, and others); and ear surgeons are trying to get the free flap to graft to the exposed infected bone of the middle ear, i.e. to have the flap adhere under extremely unfavorable conditions. This evidently accounts for the frequent failures of free tympanoplastic operations in chronic otorrhea. The methods described in our special journals are not used by all LOR institutions, whereas in a number of clinics they have found wide application and proceed with great functional success. Deserving of attention are the materials published by L. A. Bukhman (Leningrad), according to which in free tympanoplastic surgery according to Vul'shteyn paresis of the facial nerve is observed in approximately 10% of the cases, serous labyrinthitis in 3%, purulent labyrinthitis in 1%; in a 10% of the observations there was complete or partial necrosis of the free flap, which is not noted in non-free plastics.

A. A. Barteneva (Leningrad) has investigated the "sensitivity" of the free flap with the aid of the Ratchi electronic stimulator. It has been found that sensitivity of the flap to galvanic current is absent at an early date after the operation, and restoration of sensitivity in case of favorable grafting of the flap, occurs only 20 days after the operation. It might be possible to recommend to the author that he make such investigations in cases of non-free tympanoplasty; then it is possible to expect maintenance of the sensitivity of the flap even after operation, which would, to a certain extent, serve as grounds for preferring an operation with a meatotympanal patch. Some studies on tympanoplastics (D. M. Rutenburg, Leningrad; E. P. Gaudyn'sh, Riga; A. D. Matveyev, Ryazan') may be characterized as having such prospects.

Fifteen papers on studies were presented on the question of otogenic intracranial complications.

In the first study (A. N. Pomukhina, Rostov-na-Donu), an analysis is made of lethal results due to otogenic abscesses of the brain for a year period. It has been found that in 13 out of 54 patients who died, no

diagnosis of abscess was rendered because of the absence of clear neurological symptoms in the patients.

The difficulty of diagnosing brain abscesses is also pointed out in the study of Yu. K. Dzhaganov (Saratov), in which the author expresses the concept that arachnoidal cysts, toxic edema of the brain, extradural and subdural abscesses, tumors of the brain and cerebellum, purulent meningitis, non-purulent encephalitis and sinus thrombosis may be taken for abscesses of the brain. For the purpose of perfecting puncture diagnosis of abscesses of the brain, the author proposes his own procedure, refined in the sense of determining the localization of the abscess: puncture when the direction of the piercing is determined by the constant perceptive points of the skull.

Logically akin to these studies are the biochemical investigations of the spinal fluid in various intracranial complications. G. A. Feygin (Tashkent), doing research by means of electrophoresis of the albumins of the blood serum and the distributive chromatography of the mixture of free amino-acids in the spinal fluid on filter paper, as well as reflexometric determination of the total albumin content in the blood serum, comes to the conclusion that hypoproteinemia, dysproteinemia and particularly a considerable rise in alfa-1 globulins in the blood serum occur in intracranial complications.

In the studies on the question of otogenic septicopyemia, interesting new concepts may be found. Thus, for example, the investigations of G. M. Starikov (Smolensk) have established that the rise of sinus thrombosis is promoted by an immoderate use, in cases of purulent otitis media, of antibiotics having a toxic-allergic action on the organism, a use which lowers its reactivity. According to the same author's data, frequent development of septic pneumonia in otogenic sinus thrombosis cannot be explained solely by carriage of the septic embolus into the lungs, but is also the result of disturbance of the lung ventilation and the gas exchange by reflex action. Here, as well as in the study by V. A. Spokoynaya (Stalinsk), certain facts are already adduced concerning effaced forms of otogenic septicopyemia in treatment with antibiotics. Worthy of attention is the proposal of N. L. Voznesenskiy

(Moscow) concerning the use of dicoumarin in otogenic sepsis and sinus thrombosis; this proposal has been scientifically based and is being used in the clinic

with good results.

A study by N. I. Muratov (Krasnodar) gives data on the data on the treatment of meningitis. The author affirms that there is no need to introduce antibiotics endolumbally, since their action proves more effective when injected intramuscularly. A series of studies by N. P. Meshkov, F. Ya. Fel'dman and K. A. Drennova (Tashkent) on otogenic meningitis and brain abscesses give statistical data warning about the necessity of early hospitalization of patients.

Dynamic investigations have been made (I. G. Kozlova and V. M. Shirokaya, Ryazan') of the ocular fundus in patients suffering from acute and chronic otitis, showing that in a number of cases, one may presume from a change in the ocular fundus, the presence of arachnoiditis, warning of the possibility of the development of threatening intracranial complications.

In addition to the above-mentioned studies, 10 were presented on various questions of otiatry. Significant among them is a study (by M. Ya. Kozlov, Leningrad) on morphologic and functional changes in the middle and inner ear in acute radiation sickness, caused by general irradiation.

An attempt (by I. M. Ispuganov, Zaporozh'ye) to prove experimentally the effectiveness of a novocain blockade of the mammiform process in acute otitis media was apparently not crowned with success in view of the absence of data on the mutual position of the lymph and blood circulation of the middle ear.

Positive results are described (by O. I. Orlova, Alma-Ata) for the lavage of the ear with a 1% alcohol solution of levomycetin in chronic mesotympanitis.

Concrete scientific grounds are given (A. F. Fotin, Moscow) for a wide employment of X-ray irradiation of the ear in treating chronic otorrhea. There are no especially original materials in the studies by E. A. Ladyzhenskaya and I. I. Martynenko (Tashkent) on tympanogenic labyrinthitis and mucous otitis.

To the section on allergic diseases of the ear belong three studies: those of Pai Ch'in-Sheng (Moscow), Sh. M. Gurdenidze (Tbilisi) and M. P. Efremov (Saratov). These studies may be evaluated as mobilizing our attention with respect to the frequency of allergic diseases and proposing active measures to combat them on the plane of desensitization of the organism by various drugs, including cortisone.

On the basis of a perusal of the studies on this problem, the general impression of all the studies executed

in 1959 may be presented in the following form. A considerable part of them are descriptive, not constructive in character. The questions of theory, which have clearly been detached from practical medicine, should be raised to a higher level. At the same time, one may single out a group of subjects that are unquestionably promising and constructive. These are studies on angiography, encephalography and tomography in the topical diagnosis of intracranial complications, as well as experimental and biochemical research. In confirmation of this, such considerations as the following may be cited. Determination of the localization of brain abscesses is still considered an unsolved question. Even in cases where the abscess develops with clearly pronounced neurologic symptoms and when its localization is definite, the finding of the abscess by puncture is often no easy matter. The question involuntarily arises why neurosurgeons make wide use of electroencephalography to determine the localization of a brain tumor, while ear surgeons do not clinically study this method in intracranial complications. In this connection, subjects relating to encephalography, angiography, tomography, etc. must be recognized as prospective topics.

Studies of an experimental character, bases for the advisability of employing this technical surgical treatment, are also to be welcomed.

It is necessary also to state the following considerations. Ordinary roentgenography of the temporal bone does not satisfy the demands for ascertaining the character of the pathologic process in the system of the middle and inner ear or of abscesses of the skull cavity and brain. One may take as an example the usual roentgenography of the cholesteatomic cavity, the glomus, primary cholesteatoma of the labyrinth and petrositis. The commonly accepted settings according to Stenvers, Schueller and Mayer do not bring out the depth of location of this pathology.

Sometimes only tomographic roentgenograms with these settings can bring out the data necessary for the diagnosis and choice of method of operations. The same applies to the determination of the location of intracranial complications.

Of no less value are angiographic investigations of the organ of hearing, when a comparison of the angiographic data of the normal with the pathologic ear permits one to define more precisely and perhaps differentiate the various diseases. Such a roentgenographic

investigation must not infrequently be given preference over methods of contrast roentgenography and new settings.

In questions of roentgenography one cannot disregard so-called electro-roentgenography as a new economical simple but, unfortunately, still unsufficiently perfected method.

We have already spoken above of the non-utility of repeating the subject matter of the tympanoplastic surgery as proposed by Vul'shteyn. Still, this does not mean that the perfection of operations to restore hearing must be ignored; however, such perfection must not be confined to various modifications of the forms of free flaps taken from different places. The success of functional operations is insured by the following factors: 1) covering of the fresh surface of the skin patch with mucous membrane and 2) careful handling of the labyrinth fenestrae. The further investigations must also be carried out on this plane. Whether it is to be a free transplant of preserved tissue of an amnion or mucous membrane taken from the mouth cavity or other place, or whether it is to be mucous membrane cut from the cavity of the middle ear, is hard to predetermine, but work on this plane appears promising. Speaking of manipulations of the fenestrae of the labyrinth, it should be noted that this stage of the operation is evidently not performed by everybody lege artis, since there is still not enough working skill with the surgical microscope, and it is quite understandable that ear surgeons well versed in optics could attain better functional results. It must not be forgotten that the idea of tympanoplastic surgery was born after its authors had become freely conversant with optics in the fenestration of the labyrinth in connection with otosclerosis; later, optics was also used in tympanoplastic surgery. One should expect descriptions of new rationalizing microscopic methods of handling the fenestrae in the studies for 1961-1962. From this standpoint one can agree with the subject schedule regarding the perfection of surgical methods of improving the hearing in otorrhea cases under the condition, of course, that the new proposals are worked out experimentally and clinically.

A special place in the 1960-1962 plan should also be occupied by studies on subjects concerning the preservative treatment of chronic purulent otitis media.

Hardly any ear surgeon makes wide use of preservative treatment of complicated epitympanitis (choleste-

atoma, caries). This category of patients is usually treated by surgical methods. In the section of studies on the conservative treatment of otitis there is talk about uncomplicated mesoepitympanitis and especially about mesotympanitis. In employing various antibiotics, we sometimes forget about the condition of the macro-organism, its reactivity and the paths by which an infection penetrates from a bordering focus of infection in lymphadenoid formations of the nasopharynx, from the mucous membrane of the nose or the accessory sinuses, so that we do not obtain the expected results. It is incomprehensible, for example, why only local applications of antibiotics should be employed in chronic suppuration of the mucous membrane of the middle ear. It remains uncertain whether the medicament penetrates deep into the mucous membrane. To obtain better results one should rely upon the perilocal action of antibiotics as well as local action, and upon intramuscular injection, but this is usually neglected. Yet it is a known fact that the combined action of antibiotics is the most effective; for example, in abscesses, better results are obtained with the joint action of lavage of the cavity with a solution of antibiotics and intramuscular injection of them.

More attention should be paid to chronic purulent otitis of an allergic nature. This field offers a wide field of activity of experimental laboratory research.

For the purpose of exacting the indications for different kinds of surgical methods of treating patients suffering from chronic purulent otitis media, craniometric investigations are necessary.

The entirely unfounded standardization of surgical procedures is quite inadmissible. For example, one clinic prefers to operate according to Taaufal', another uses some endoaural procedure, whereas it would be possible to adopt the most rational procedure in each individual case according to the craniometric data.

The clinic of intracranial otogenic complications still has a number of unsolved questions on the plane of ascertainment of the paths of penetration of infection, pathologic anatomy, symptomatology, diagnosis and treatment. This applies especially to brain and cerebellum abscesses. Experimental work on these questions in comparison with the clinical data should be regarded as offering good prospects. It should be considered quite indispensable to search for new methods of refining the localization of brain abscesses by perfecting electronic

amplifiers of bio-currents and other procedures of modern electronics.

The treatment in 1961-1962 of the following questions relating to this particular problem is recommended:

1. Working out measures of prophylaxis against chronic diseases of the middle ear.
2. Perfecting methods of diagnosis (including roentgenologic) of various forms of otitis media for a differentiated selection of methods of treatment.
3. Exacting the indications for conventional and various kinds of surgical treatment in chronic purulent and adhesive otitis media.
4. Studying the remote results of various kinds of hearing-restoring operations in chronic purulent and adhesive otitis media.
5. Experimental study of the penetration, treatment and healing of brain and cerebellum abscesses.
6. Further study of the general (disturbance of the general metabolism, allergy, etc.) and local adaptive reactions in patients suffering from chronic purulent otitis media.
7. Study of the various causes of the disturbance of sound conduction in persons with pathology of the middle ear as a basis for acoustic prosthesis and new operations to create a sound-conducting apparatus.

Third special problem

Physiology and pathology of the acoustic analyzer and the voice

From the data of the papers sent in, it may be seen that work has been done on many questions relating to this problem.

On the physiology of hearing, a review is presented on the physiological bases of operations to restore the hearing (T. N. Mil'shteyn, Leningrad). Experimental and clinical investigations have shown the significance of the pliant portions -- the fenestrae-- in the capsule of the labyrinth for the preservation of the capacity of the labyrinthine fluid to move and consequently to conduct sound. Experiments on animals (G. M. Komarovich, Leningrad) have determined what significance this or that kind of surgery in the region of the oval fenestra has for the conduction of sound. In normal animals, fracture of the lamella base and complete

removal of the stapes sharply reduce the power of microphonic potentials; puncture of the footplate has little effect on the force of the bio-currents.

To judge the individual sensitivity of man to an adequate irritant, the mobility of the nervous processes in the acoustic analyzer was determined (A. P. Vozhzhova, Leningrad) from the time of reverse adaptation and from the "critical frequency of the sound flashes" after acoustic loading in radio operators (lengthy load of sounds of low intensity) and in motorists (action of intensive noise irritation).

The mechanism of hearing fatigue under the influence of a sound load was investigated in experiments on animals when wide awake and in a state of barbituric narcosis (G. V. Gershuni, Ya. A. Al'tman, Leningrad). Electric responses were recorded from three sections of the auditory system: the cochlea, the inner articulate body and the auditory zone of the cortex. It was shown that changes not only in the peripheral, but also in the central sections of the acoustic analyzer participate in the development of phenomena of hearing fatigue.

A comparatively large number of studies were devoted in 1959 to the etiology and pathogenesis of deafness and hardness of hearing.

The significance of vibrations in the pathogenesis of vocational hardness of hearing under working conditions in reinforced-concrete plants was determined (P. S. Kublanova, Moscow). A clinical study was made of VIII nerve pair lesions in malaria (E. A. Ladyzhenskaya, Tashkent), disturbance of the auditory and vestibular functions in hypertension (A. G. Ganiyev, Tashkent), cochleovestibular disturbance in vascular diseases (N. L. Rayner, Gor'kiy), the action of ultrasonic waves on the inner ear of animals (V. A. Simolin, Gor'kiy), the influence of radio emanations on the organ of hearing (S. A. Zlotnikov, Leningrad), the characteristics of the auditory function in persons working in noisy places, (S. Z. Romm, Leningrad), as well as pathomorphologic changes in the inner ear in brucellosis. (Yu. G. Tolstov, Orenburg).

In the pathogenesis of deafness, functional disturbances of the central links of the acoustic analyzer are also of substantial significance as well as organic affections of this or that section of the auditory apparatus. In 1959 such investigations were undertaken into various disorders of hearing and speech functions.

Investigations of the functional condition of the central sections of the acoustic analyzer were made after measuring the thresholds of audibility by oral report and also by determining the auditory sensitivity from skin-galvanic, conditioned nictitating and conditioned motor reactions. Such investigations were made into peripheral affections of the hearing -- otosclerosis and neuritis of the auditory nerve (M. A. Ratenberg, Leningrad), into central disturbances of the hearing caused by suggestion under hypnosis (R. V. Avakin and R. A. Fel'berbaum, Leningrad). Functional disturbances of the central links of the acoustic analyzer, it is found, may be the main factor in the genesis of subjective ear noises (A. P. Velitskiy and A. I. Lopotko, Leningrad; S. N. Mikhaloyts, Moscow).

Much attention was paid in 1959 to questions of methods of investigating the hearing and differential diagnosis of various affections of the acoustic analyzer. The significance of the "phenomenon of loudness equalization" for differential diagnosis in adults (T. N. Mil'shteyn, Leningrad) and in children of various age groups (B. M. Sagalovich, Moscow) was determined. The essence of this phenomenon was studied in experiments (G. V. Gershuni and Ye. A. Rodionova, Leningrad). Methods of speech audiometry were perfected (G. I. Grinberg, S. G. Kristostur'yan, Leningrad). Tables of words for speech audiometry were worked out in the Kazakh language (O. Sh. Baymakonova, Semipalatinsk). Methods of measuring subjective ear noises were worked out (A. P. Velitskiy, Leningrad). Work was done on perfecting methods of investigating bone conductivity with the aid of the acoustic sounder (S. A. Shelikhova, Leningrad) and the Zhele test (M. P. Mezrin, Sverdlovsk; M. I. Lapsker, Leningrad), and the diagnostic significance of the Weber test was verified (Z. N. Yushkova, Leningrad).

Newly synthesized medicaments -- anti-inflammatory, spasmolytic, sympatholytic and anti-histamine, those weakening the excitability of the nervous system, etc. -- are proposed for the treatment of hardness of hearing and subjective ear noises (A. P. Velitskiy, Leningrad). In the combatting ear noises, use has also been made of the internal application of a 0.5% solution of novocaine (Ye. A. Kupryashkin, Chelyabinsk) and subcutaneous intrameatal novocaine blockade (E. K. Kirko, Moscow). The primary and remote results of ear prosthesis in 1,000 patients are given (B. S. Krivitskaya, Tashkent).

Most of the studies on the surgical treatment of otosclerosis deal with questions of operations on the stapes. A. I. Kolomiychenko (Kiyev) has presented data on more than 1,000 operations on the stapes made by him in the last three years.

S. Z. Mikhaylovskiy and N. V. Studzinskiy (L'vov) have employed, for treatment of otosclerosis, the method of imping a fistula on the upper semicircular canal, which, in the author's opinion, is a simpler procedure than the generally accepted operation, fenestration of the labyrinth, in which the fistula is placed on the horizontal semicircular canal. A number of authors have made a comparative appraisal of the various surgical methods of treating hardness of hearing in otosclerosis cases (V. F. Nikitina and R. A. Tarasova, Moscow; T. N. Mil'shteyn, Leningrad).

Of the studies planned for 1959 on questions of physiology and pathology of the vestibular analyzer, only one was completed, concerning the investigation of the function of the vestibular apparatus in pupils of a deaf-mute school (L. M. Tokareva, Alma-Ata). The date limit for completion of the other studies was planned for 1960. In 1959 two studies were published outside the plan: "The present state of the question of Menier's Disease" (A. Kh. Min'kovskiy, Chelyabinsk) and "Modern methods of clinical vestibulometry" (S. N. Khechinashvili, Tbilisi).

Ten studies were carried out on physiology and pathology of the speech and the voice. Three studies concern hearing and speech disorders. A general survey of the significance of the condition of the acoustic analyzer for the development of speech was presented by N. N. Traugott (Leningrad). The author points out that the possibility of speech development in children with hearing defects is determined not only by the degree of hardness of hearing and nutrition conditions, but also by the characteristics of the lesion of the central sections of the acoustic analyzer.

The formation of conditioned associations with sound irritants in children with sensory disturbances of speech and in children with pronounced hardness of hearing and well-developed speech, was done by conditioned motor methods by exhibitions of pictures to children of pre-school age or with inscribed instructions to older and literate children (Ye. A. Mikhaylova, Leningrad). The results of this research brought out substantial differences in the formation of conditioned

reactions to sounds in children of these two groups.

Investigations of the functional condition of the acoustic analyzer in patients with other speech disorders were made by Z. S. Boyko (Leningrad), using the method of working out a conditioned nictitating reaction to sound of 1,000 cycles/second and differentiating by frequency to a tone of 800 cycles/second. The conditioned nictitating reflex to red and differentiation of green color were worked out in parallel. It was established that the formation of conditioned nictitating reflexes to sounds in stammerers is retarded by comparison with the normal, is less stable, and in a certain part of the patients, no reflexes were elicited.

On the question of the pathogenesis and treatment of logoneuroses, five studies were carried out according to the report data. The functional condition of the respiratory muscles in stammerers was determined more precisely (A. V. Shokina, Leningrad). The motor chronaxia of two muscles, the direct and the exterior oblique muscle of the abdomen, which participate in the act of respiration, was investigated.

A study was made of the character of the changes in the excitability of the vegetative section of the nervous system in stammerers (I. M. Milakovskiy, Leningrad). Observations were made of the condition of the respiration, pulse and arterial pressure by means of pneumographic recording of these reactions when speaking and when not speaking, before and after treatment. These indices were studied with the Aschner reflex, a cold irritant and passive movements of the patients' arm. The latter irritant normally does not cause any change in the function of respiration or the cardio-vascular system. It was established in the process of treatment by the method of a thorough collection of anamneses, clinical observations of 127 patients with an evolutionary form of stammering and investigation of the condition of the nervous system that the gravity of the stammering is in direct ratio to the character and intensity of the neurotic phenomena (M. P. Bleskina, M. G. Visleneva and I. M. Milakovskiy, Leningrad).

Under observation by logopedists speech specialists (T. N. Vorontsova, M. N. Kiseleva and I. S. Khuriyeva, Leningrad) were 88 patients suffering from stammering complicated with sound phobias, and a control group of 20 stammerers not burdened with sound phobias. The clinical observations showed that in the first group of patients, the extinction of old pathological

speech associations and the elaboration of a new speech stereotype under the influence of logopedic work, takes place more slowly, and are less stable than in the patients of the control group.

The action of various pharmacologic substances were tested against stammering (A. A. Sakharov and M. I. Pel'chevskaya, Leningrad). Among the analeptics, caffeine was employed; among the soporifics, barbamy; among the antispasmodics, diphenine, trimethane, chloracon and phelacon; among the cholinolytics, tropacine, diphacyl (difatsil), pentophene and arkenal; among the neuroplegics, aminazine [chlorpromazine]. As shown by the observations, the most distinct effect was noted in the case of simultaneous use of logopedic procedures and certain preparations; of these, chloracon, barbamy and caffeine should be given first place.

On the physiology and pathology of the voice only two studies were presented. An integrated method of treating phonasthenia was worked out (A. P. Kolibaba, Khar'kov). This method is based on endolaryngeal intramural novocaine blockade of the larynx with addition of adrenalin or in a mixture with 50,000 tolerance units of penicillin on each side of the larynx. Simultaneously, use is made of physiotherapeutic procedures (faradization or iontophoresis with novocaine, calcium chloride or potassium iodide), local application of oil infusions into the larynx, internal administration of bromine preparations and other medicaments. A study was made of the change in the function of the voice, and also of certain vascular changes in women singers during menstrual period (T. Ye. Shamsheva, Leningrad).

To summarize this particular problem, it may be noted that there was comparatively little discussion of the problems of the physiology of the hearing as related to the conduction and perception of sounds, particularly the question of the mechanism of bone conductivity, which still remains unclear. The etiology and pathogenesis of hardness of hearing in 1959 was studied mainly with respect to hardness of hearing and deafness due to lesions of the nervous elements of the acoustic analyzer. Almost no attention was paid to questions of the etiology and pathogenesis of otosclerosis. Work on these questions should be done in various directions: investigations of endocrine biochemical shifts, morphologic changes, the role of heredity in the pathogenesis of otosclerosis, etc.

Methods of investigating the auditory function and differential diagnosis of various affections of the acoustic analyzer should continue to occupy a prominent place in the scientific-topics plan of 1961-1962; in particular, special attention should be paid to working out methods for investigating hearing in children with the aid of tonal and vocal audiometers; it is necessary to perfect the methods of investigating hearing.

It is necessary to continue the perfecting of surgical methods for treating otosclerosis and to engage in a search for new physical and medicinal means of combating various forms of hardness of hearing, including those in which surgical treatment is not indicated.

It is necessary to perfect the methods for investigating the vestibular analyzer for differential diagnosis of the various levels of its affection with the exploitation of conditioned reflexes and investigations of the cortical electronic activity, and to work out methods of recording vestibular reactions. To be studied is the activity of the vestibular analyzer under conditions of weightlessness and the influence of the newly synthesized pharmacologic substances and ionizing irradiations upon the vestibular function.

The phoniatriy section was poorly represented; special attention must be paid to it.

Finally, the combatting of speech disorders due to the pathology of the organs of the nose, ear and throat, and the questions of the vocational selection and treatment of singers and vocalists demand a solution.

Scientific research on this particular problem is recommended for 1961-1962 in the following directions:

1. Further study of the mechanisms of conduction and perception of sounds, particularly the mechanism of bone conductivity.

2. Study of the etiology and pathogenesis of otosclerosis -- metabolic processes, endocrine disturbances, the role of heredity, etc.

3. Perfecting of the methods of tonal and vocal audiometry, objective methods of investigating the hearing, topical diagnosis of various affections of the acoustic analyzer in adults and children.

4. A search for new and the perfecting of the existing, conventional (physical and medicinal) methods of treatment and prophylaxis of hardness of hearing and

subjective ear noises. Working out methods of selecting hearing prostheses.

5. Perfecting of surgical methods of treating hardness of hearing in lesions of the sound-conducting apparatus and exactment of the indications for these operations.

6. Perfecting the methods of investigating the vestibular function and differential diagnosis of different levels of affection of the vestibular analyzer.

7. Study of the significance of the vegetative innervation and endocrine influence of the glands of internal secretion on compensation for disturbances of the vestibular function.

8. Study of disorders of the singing voice, as well as speech impediments due to the pathology of the organs of the nose, ear and throat, and elaboration of methods of eliminating them.

Fourth special problem

Combatting occupational diseases and mechano-trauma in otorhinolaryngology

In many studies on vocational pathology during 1959 the same shortcoming is noted as was pointed out in 1958. Research is confined mainly to the recording of lesions of the nose, ear and throat organs in the workers of various industrial enterprises, though frequently, these lesions are already well known; there has been no decisive turn toward up-to-date topics and methods of investigation. Studies on the incidence of angina and chronic tonsillitis likewise often amount to nothing more than a simple recording of the number of workers ailing from angina at the various places of work. A lot of figures are cited, to be sure; it is evident that many physicians have done research and therefore a large number of workers have been examined. But these studies lack a broad and profound analysis and synthesis of the individual facts noted.

As a rule, there are no detailed indications of the condition of the nose, ear and throat organs in workers included for the first time in a given kind of industry, which would enable one to take further changes into account. Few clear data are given on the significance of the dispensary method in serving the workers of this or that place of work.

However, a number of studies establish definite factors having positive significance.

Among the studies carried out in 1959, the following deserve attention. The study of diseases of the accessory sinuses (N. S. Zaviyskaya and B. N. Dovgan', Stanislav), with use of a relatively newer and up-to-date method of diagnosis -- fluorography.

In determining the character of the lesion of the accessory sinuses in miners (S. F. Letnik, Stalino, Donbass), not only were the morphologic changes discovered in the mucous membrane of the sinuses recorded, but the researcher's own original proposals regarding the mechanism of the origin of paranasal sinusitis are stated.

One study (A. E. Luts, Tallin) gives a very detailed sanitary-hygienic characterization of the oil-shale mines, and gives materials on the investigation of workers in this relatively new branch of industry.

Most in accord with the modern demands made upon studies in the spectrum of vocational pathology is the work of V. Ye. Ostapkovich (Moscow), which, in the course of dispensary work, studied the action upon the upper respiratory passages of a very modern occupational disease -- the chronic action of small doses of ionizing radiation.

One should point out the study by V. A. Simolin (Gor'kiy) on the action of ultrasonic sound on the inner ear of animals, which represents interesting experimental research; however, the author treats the data obtained only from the aspect of N. V. Belogolovov's theory. If these conclusions are convincing and reliable, a criticism should be given of the studies of foreign authors who describe in a different manner the lesions of experimental animals by ultrasonic sounds and treat these data differently. The study by S. Z. Romm (Leningrad) is executed on the level of present-day demands. The author analyzes certain characteristics of the auditory function in persons working under conditions of work noise, not only with exploitation of the modern methods of threshold and super-threshold audiometry, but also, in particular, with the application of the still least studied noise audiometry, both tonal and vocal.

To the problem of mechanotraumas of the nose, ear and throat organs, may be related the studies on injuries by foreign bodies to the esophagus and to the nose, ear and throat organs. The studies by D. N. Ten and V. V. Koroleva (Semipalatinsk) and N. I. Dudina

(Stalingrad), as well as the majority of the others, are purely clinical and /.../* the main questions of vocational pathology. /Translator's note: The last part of this sentence was evidently corrupted by a printer's correction line substituted at the wrong place: the last line of the par. (6 words) is identical with that of the 2nd par. below/.

The study by B. K. Volkov (Leningrad) deals with the comparatively new method of treating burns of the esophagus with cortisone.

A special study (N. P. Belkina, Leningrad) on the mechanical trauma of the jugular section of the esophagus deals with the dynamics of healing and gives a comparative evaluation of the healing of wounds of the esophagus with the use of various suture materials. In addition, it examines the question of the parenteral feeding of patients in general, and particularly, in cases of trauma of the esophagus from foreign bodies or the esophagoscope.

Thus, it may be considered on the basis of the data of the reports, that 23 studies were carried out on the level of present-day demands; the others represent either statistical reports, or notes from practice, or a mere description of diseases observed in workers. In these studies there is not a sufficient analysis of the material given; the authors draw no practical conclusions and solve no theoretical questions. These studies usually amount to no more than a mere recording of the number of workers with nose, ear or throat diseases at the various places of production. While indicating the percentage of workers suffering from angina, the authors do not compare this percentage with the incidence of angina in groups of population of this city combined by any other feature. Individual investigators (P. S. Koren'kov) in their studies draw the questionable and dangerous conclusion that workers suffering from chronic catarrh of the upper respiratory passages and chronic sinusitis represent a source of infection which may spread dropwise among workers and be transmitted to healthy persons; at the same time the author gives no well based material that would serve as premises for such a conclusion; the data on the epidemiologic research are not indicated and the conclusion is essentially nothing more than a verbal invention of the author.

Proceeding from these facts, it must be considered that, in order for future studies to meet the present-day demands of occupational pathology, it is necessary to in

clude the study of occupational diseases of the nose, ear and throat organs, chiefly at the new places of work, and to use up-to-date methods and data in the current literature, not only domestic, of course, but also foreign. Thus, for example, in working on questions of occupational pathology of the upper respiratory passages due to the dust factor, one must positively take into account the electric charge of the dust, as is done by all hygienists. In studying the occupational pathology of the upper respiratory passages, one must not only record the morphological changes in them but also positively investigate their function and principally take into account the change in it by comparison with the normal.

Before studying this or that element of occupational nose, ear and throat pathology at a given place of production, in a given shop, it is necessary to determine precisely whether the existing sanitary-hygienic norms are being executed there, and to proceed on this finding. In case of non-observance of these norms, it is necessary to alert the proper authorities about this, not to make scientific investigations. After all, it is hardly required to prove scientifically once again that the harmful is really harmful.

In studying new places of production, for example, that of uranium ores, one should not only direct one's attention to the harmful effects of uranium salts on the nose, ear and throat organs, but also to verify by experiment the effectiveness of treatment of these afflictions with unitol, indication of which is to be found in the latest literature.

Proceeding from the foregoing, we recommend consideration of the following subjects concerning occupational nose, ear and throat pathology.

1. Study in the clinic and laboratory of the mechanism of the origin of aero-otitis and mare-otitis.

2. Study in the clinic and laboratory of the degree of the spread of lesions of the auditory analyzer to its central sections in any subtype of trauma.

3. Determination of the stagewise development of the lesion of various sections or parts of the auditory analyzer.

4. Study of the reversibility of occupational lesions of the auditory analyzer.

5. Determination of the dependence of lesions of the auditory analyzer upon the individual predisposition of the patient (low tolerance of the auditory organ --

predisposition to ;noise trauma).)

6. Determination of methods of evaluating individual sensitivity to noise, acceleration and barotrauma of the ear.

7. Study of the influence of small doses of ionizing substances on the auditory analyzer.

8. Study of the influence of ultrasonic sounds on the auditory analyzer and the stagewise development of the affection of its sections.

9. Determination of the possibility of using pharmacologic substances for prophylaxis of affections of the ear from noise and acceleration trauma.

10. Elaboration of methods of determining hidden or early forms of occupational hardness of hearing.

11. Determination of methods of investigating the auditory and vestibular analyzers and the intervals of repeated audiometry and vestibulometry for detecting early forms of occupational affections.

12. Perfecting of audiometers to insure mass audiometrics and automated registration of tonal and vocal audiometry data.

13. Technical improvement of instruments for investigating the vestibular function, in order to make it possible to do research with threshold irritants, and also for automatically recording both vestibulo-somatic and vestibulo-vegetative reactions.

14. Determination of the role of various vitamins in raising resistance to noise trauma.

15. Summarization of the results of dispensarization of workers to detect occupational diseases at "new", heretofore uninvestigated places of production, taking into consideration the necessity of embracing large contingents of workers so as to provide proof of the correctness of the inferences drawn as a result of dispensarization.

16. Evaluation of the role of dispensarization of workers with obligatory detailed examination of the condition of the nose, ear and throat organs before going to work in a given shop as a means of verifying the effectiveness of various sanatorial and therapeutic measures; in sum, determination of the role of measures to heal the upper respiratory passages and insure the operation of the natural filters in combatting occupational injuries and occupational diseases of the upper respiratory passages.

17. Making of an analysis of the incidence of diseases of the nose, ear and throat organs in workers

of different occupations and different enterprises and comparison of the frequency of these diseases with that in large groups of the population organized by aspect other than the occupational one.

18. Study of the morphological changes on the part of the mucous membranes of the upper respiratory passages (in dynamics) in workers in dusty or hot shops, as well as in new settlers in the virgin lands and in state farm workers.

19. Determination of the role of the disturbance of nasal respiration in workers of different shops and different industrial enterprises.

20. Determination of the condition of the olfactory function in workers of different occupations and different industrial enterprises.

21. Study of the prevalence of lesions of the olfactory analyzer when occupationally affected.

22. Study of the adaptation and fatigability of the olfactory analyzer in workers of different occupations.

23. Determination of the reversibility of occupational affections of the upper respiratory passages.

24. Establishment of the dependence of affections of the upper respiratory passages upon the constitutional characteristics of the mucous membrane.

25. Elaboration of methods of determining the individual sensitivity of the upper respiratory passages in workers to occupational injury (for example, comparison of the degree of intensity of the general adaptive reactions in workers with intact and affected mucous membranes).

26. Study of the influence of small doses of ionizing substances on the upper respiratory passages.

27. Determination of the possibility of using medical substances to prevent productional affections of the mucous membranes of the upper respiratory passages.

28. Comparative evaluation of methods of objective registration and quantitative determination of olfaction and nasal respiration.

29. Comparison of the percentage of incidence of angina in workers of different large industrial enterprises and the population of large regions of different cities.

30. Study of the diseases of the larynx in professional workers -- in singers, stage actors, readers and pedagogues.

Fifth special problem

Oncology in otorhinolaryngology

This problem is a part of the great general medical problem of oncology. However, the functional and anatomo-topographic peculiarities of the nose, ear and throat organs create a number of special conditions which may contribute to a solution of the general task.

Twenty-four papers were presented on this particular problem.

Among the especially significant works, one should note the observations (I. Ya. Sendul'skiy, A. A. Kravchenko, Moscow) of the use of chemical therapy in malignant diseases of the nose, ear and throat organs; it was applied to 125 patients. Of great interest are the observations made in the LOR clinic of the Tomsk Medical Institute on the employment of the betatron in juvenile angiofibroma of the nasopharynx (A. G. Fetisov) and in cases of malignant tumor of the pharynx (A. V. Borozdina) and the larynx (M. P. Lisovskaya).

A study was made of the influence of massive (6,000-8,000 r) pre-operation X-ray irradiation in cancer of the throat on the healing of tissues after laryngectomy from the clinical and histological point of view (N. N. Usol'tsev and N. V. Moskovskaya, Moscow).

Data were adduced on the evaluation of the cytological method of investigating new formations of the nose, ear and throat organs (V. V. Gromov, Kazan'). A study was made of the electro-encephalographi changes in cases of malignant tumor of the upper respiratory passages (M. I. Garshin and V. D. Dragomibetskiy, Odessa).

Evaluation of the morphological changes in the tissues of the larynx in cancerous lesions of it revealed frequent growth of tumorous elements through the cartilages of the larynx; the author of the study (S. I. Mostovoy, Kiyev) came to the conclusion that a more radical removal of the larynx is necessary.

A number of studies are devoted to the question of the choice of method in the treatment of malignant tumors of the upper respiratory passages and the results of radiation and surgical methods (A. O. Shul'ga, Orenburg; N. S. Kuznetsova, Gor'kiy; V. V. Andreyev, Stalingrad; V. P. Bogdanov, Odessa; M. L. Sanotskiy, Kiyev).

The subcutaneous novocaine blockade was tested in the region of the neck as a palliative, pain-alle-

viating method in throat cancer (A. Kh. Min'kovsiy and Ye. A. Kupryashkin, Chelyabinsk).

It was ascertained that after extirpation of the larynx the acidity of the gastric juice was reduced in the patients, but 1-3 months later it was lowered, normal or raised in nearly equal numbers of patients (M. V. Sokolyuk, Kiyev).

Two papers relating to questions of benign tumors were presented, both on the subject of papilloma. One of them (Ye. A. Yakushin, Smolensk) considers the difference in the character and course of papilloma: 1) in children and 2) in adults. The author divides papillomata into primary and secondary; to the latter he assigns papillomatose growths in chronic inflammation of the larynx, tuberculosis, scleroma and throat cancer. However, the correctness of this division is doubtful.

Another work is devoted to the results of employing podophyllin in papilloma of the larynx in children; the systematic swabbing of the affected portions with a 1% solution of podophyllin in 70% alcohol after complete surgical removal of the papillomata, in the opinion of the author (V. Yu. Shakhov, Gor'kiy), retards, in a number of cases, the occurrence of relapses or prevents them.

Some new data on the question of the pathogenesis and pathohistology of fibroma of the nasolarynx are offered by K. A. Drennova and R. I. Danilov (Tashkent). The authors express the thought that a chronic inflammatory, not a blastomatose process, underlies nasopharyngeal fibroma. They propose the use here of the term "granulematosis of the base of the skull." This question undoubtedly needs extensive verification and evaluation, and that to a larger extent precisely by pathologo-anatomists.

By itself, stands a study on changes on the part of the middle ear in cases of tumor of the base of the brain (E. A. Ladyzhenskaya, Tashkent); the authoress has observed chiefly occurrences of epitympanitis with a comparatively benign course.

Thus, it may be considered that the studies on nose, ear and throat oncology, according to the reports on the work done in 1959, are few in number; however, there are a number of investigations presenting undoubted interest. At the same time, one is struck by the total absence of studies relating to tumors of the ear and their treatment; this is a poorly solved problem, especially from the viewpoint of therapy.

There are no studies of the so-called pre-cancer conditions in otorhinolaryngology from the standpoint of the prophylaxis of tumors, or about early diagnosis.

In the problem schedule for nose, ear and throat oncology planned for 1961-1962 special attention should be directed to the following questions:

1. Study of the conditions contributing to the rise of malignant tumors of the nose, ear and throat organs; more precise definition of the concept of pre-cancer condition.
2. Improvement of roentgenography and tomography in cases of tumors of the nose, nasopharynx, larynx and trachea.
3. Elaboration of indications for the employment of local anesthesia and general narcosis (including potentiated analgesia) in cases of benign and malignant tumors of the nose, ear and throat organs.
4. Improvement and elaboration of atypical (sparing methods) of surgical operation in throat cancer.
5. Chemical therapy in cases of malignant tumors in otorhinolaryngology.
6. Radiation and chemical treatment in cases of malignant tumors of the auditory organ.
7. Early diagnosis of metastases in malignant tumors of the nose, pharynx, larynx and trachea.
8. Elaboration of methods of prostetizing patients who have undergone laryngectomy and methods of using an artificial larynx.
9. Perfection of the technique of forming the voice in patients who have undergone laryngectomy and of the methods of teaching them to use it.

Scientific planning on a broad scale has been done for the first time in the last few years. There has thus far not been much experience in this matter. It is quite natural that a number of difficulties and deficiencies have appeared at the start, and these must be taken into account in the future.

Practice has shown that the results of the scientific research done in the preceding year can be summarized at the beginning of the year only in a negligible number of cases from the already printed studies. As a rule, the articles being printed are studies that were received considerably earlier in the editorial office; this situation is a quite natural one. Hence, the main form of summarization consists of the papers received from the authors locales, on the scientific research completed by December and in analyzing them. They are

forwarded to the planning commission by the first of February of the following year. It was precisely such reports that have furnished the material for the summarization of the 1959 results in the present article. However, here too, certain difficulties have arisen in a number of cases. Not all the authors have a sufficiently clear notion of the form, content and character which such reports ought to have. The report should be, above all, brief (2-3 pages of typed script) and should contain a clear indication of the purpose and task of the work, the essence and method of elaboration, the number of experiments or clinical observations made and then the concrete results obtained. In the main, it should be a well-founded answer to the question of what is scientifically and practically new about it, and what course the theoretical and practical investigation followed. Here, neither reviews of the literature, nor abstract and diffuse arguments are needed.

It is precisely in this area that the authors of some reports, and usually the most verbose ones, make a mistake. In a number of cases one encounters unnecessary general phrases with loud and, as a rule, unfounded self-evaluations such as: "a great deal of work was done", "much attention was paid," "... was subjected to thorough study" and the like. Of course, it is not appropriate for the author himself or the institution itself to give such testimonials; this should be done by others. Only the concrete, businesslike side is needed in a report.

Some reports, on the other hand, give general phrases. It must be supposed that here there is a lack of concrete results or that the results are doubtful; in such a case it is much more correct to transmit to the scientific planning commission, instead of a report, a brief notice that no concrete results have been obtained on a given piece of work.

One notes also reports which, under the guise of a report on scientific-research work, give simply accounts of the medical work done by this or that institution. Unless there is something new and original in this work, it cannot be regarded as scientific-research work, even though the institution's activity in itself is useful to the cause of medicine. However, if there are any proposals about new organizational forms, rationalizing proposals, diagnostic and therapeutic methods, etc., such work deserves inclusion in the scientific-research group.

In doing planning work we have had occasion to

encounter remarks by some authors to the effect that they are required to devote too much time to different kinds of reports. This is not correct. A report drawn up in businesslike fashion on 2-3 typed pages satisfies everybody -- both the directorate of the institution and the ministry of health of the respective republic, and the scientific planning commission. Consequently, there is no need to compose different reports on one and the same piece of work: only one has to be written, but that must be well substantiated.

Of essential significance for the planning and summarizing of results is the timeliness of the receipt of the self-reports by the commission. There is certainly no doubt that a report on work completed in December of the past year can be sent to the planning commission without delay by the first of February of the current year. Still, cases of non-observance of this procedure have been observed. Thus, the Belorussian Institute for the Improvement of Physicians did not dispatch the reports on work completed in 1959 until the 19th of March 1960; of course, such work could no longer be taken into account.

It is quite necessary to raise the responsibility of the heads of chairs for the tardy submission of self-reports, and for the content and quality of these reports. It is absolutely necessary also to obligate the authors of studies of a practical character to indicate at the end of the report measures for the possible or actual introduction of the scientific results of the work into practice.

The above mentioned shortcomings concern only a small part of the materials relating to the planning of scientific research in otorhinolaryngology. In the main, the material reflects the considerable amount of work done by many LOR institutions on both theoretical and practical questions. A number of investigations contribute directly or indirectly to the further improvement of the quality of therapeutic and prophylactic work in the USSR.

The change to biennial (1961-1962) planning will make it possible to carry out a more thorough and better planned study of the most important problems of Soviet otorhinolaryngology.