

blood pressure and weight readings should be made. Hypertension or rapid weight increase may be indications for stopping treatment. Patients should be cautioned to use salt sparingly and to avoid overexertion.

Both drugs produce a feeling of euphoria. Either may produce emotional or mental disturbances, especially in mentally unstable individuals.

ACTH stimulates the responsive adrenal cortex to produce a cortisone-like substance and through this agent produces its beneficial effect. A good response to ACTH is reflected by a fall in the eosinophile count, which may drop to zero. If the adrenal cortex is nonresponsive or exhausted there will be no therapeutic response and the eosinophile count is not altered. In such an event, cortisone can be utilized. Cortisone is, in effect, a substitution therapy. Thorpe, at a recent meeting of the Association for Research in Ophthalmology, warned that prolonged use of cortisone might cause wasting of the adrenal cortex and result in adrenal insufficiency when withdrawn. He advocated minimal daily doses of ACTH to be given along with cortisone when the latter is to be used over a long period of time. The therapeutic response to cortisone can be best judged by the clinical study of the case at hand.

There may be withdrawal symptoms following use of both drugs, and these may be avoided by gradually reducing the dose during the final period of treatment.

ACTH has no local action and can be used only in general administration. The adult dose is 20 to 50 mg. intramuscularly 4 times daily. This may be continued over a long period of time. In children, doses are proportioned according to body weight. Cortisone has in addition a local action and can be given generally or locally. When given systemically cortisone can be administered either intramuscularly or by mouth; and for adults 100 mg. is given three times the first day, twice the second day, and once daily thereafter. The dose for children is not clearly established. It may be disproportionately large.

Cortisone has the advantage of having a local action on tissues. In the eye it can be administered topically in a 1 to 5 dilution, by subconjunctival injection of 0.1 to 0.4 cc., or by retrobulbar injection. Cortone<sup>R</sup> contains 1.5 per cent benzylalcohol as a preservative and this ingredient apparently produces considerable immediate local reaction that may persist for a day or two.

In subconjunctival use the conjunctiva is anesthetized with a few drops of pontocaine and 0.1 to 0.4 cc. cortone is injected beneath the bulbar conjunctiva anterior to the insertion of the superior rectus muscle. There may or may not be considerable chemosis of the conjunctiva which usually subsides within twenty-four hours. A whitish mass remains 4 to 7 days as the absorption is fairly slow. I have had no personal experience with retrobulbar injection of cortisone. Leopold<sup>3</sup> reports considerable edema of the lids and conjunctiva following retrobulbar injection and this mode appears to be the least desirable of all.

Local use of cortisone is very effective in anterior segment disease, but apparently is of little value in posterior segment disease. In the latter, systemic administration is the method of choice.

In the great rush to use these drugs both experimentally and clinically they have been tried out on just about every type of ocular lesion that exists. The greatest benefits have been derived from their use in acute inflammatory lesions. They are somewhat less useful in chronic inflammatory lesions. The benefit in hereditary conditions is questionable and they seem to have little value in degenerative lesions. They seem to be definitely contraindicated in the treatment of tuberculous lesions. There have been a number of reports of cures of sympathetic ophthalmia by the use of these drugs; this one factor alone would justify a permanent position in the ophthalmologist's armamentarium.

Rather than take the time to enumerate all the different disease conditions (and the results obtained) that have been treated with ACTH or cortisone I refer you to the tables and charts in several articles in the March 1951 issue of the A.M.A. Archives of Ophthalmology and to other articles listed in the bibliography.

I have treated only one patient with ACTH. I have treated quite a few with cortisone by topical, subconjunctival and systemic administration. I will briefly summarize my experience with these two drugs.

A 35 year old, nulliparous, white female with unilateral optic neuritis was hospitalized and treated with ACTH. Physical examination revealed early pregnancy (her first). The ACTH was stopped after five days because of lack of knowledge of what effect it might have on the fetus. The patient made a slow but steady recovery. Vision improved from 20/200 to 20/25. She later delivered a normal female child.

Two patients with unilateral acute iritis treated with topical cortisone and atropine made speedy recoveries.

A 60 year old, white female had an endothelial dystrophy of many years standing. She was treated with cortisone drops every three hours while awake for one month with no evidence of change.

A 34 year old nurse suffered an abrasion of the cornea by a twig from a Christmas tree. She was seen the following day with a red, painful eye; there was some lid edema. Cortisone drops controlled the pain within twenty-four hours and the patient made an uneventful recovery.

A 9 year old school boy received a corneal injury by the point of a pencil. There was moderate localized keratitis. The eye was atropinized; the next day it was still quite painful. Cortisone drops were started every hour, the eye was comfortable within eight hours, and the patient made a speedy recovery.

A 9 year old school girl had a history of a sore left eye off and on for five years following whooping cough. She had a large, acute, corneal ulcer superimposed on an old vascularized scar. Atropine and cortisone drops were not effective after several days. The ulcer was cauterized with trichloroacetic acid with some benefit; but the eye became sore again and now the ulcer had a typical dendritic appearance and was treated with iodine, again with some benefit. It again flared up and this time subconjunctival cortisone was administered and the ulcer then healed, leaving, however, a large, central, vascularized opacity.

A 9 year old colored male had had sore eyes for a year. General examination revealed no foci of infection. Serology was negative. Examination of the eyes revealed a sclerosing type of keratitis. With atropine and cortisone drops the eyes quieted down and became white. Atropine was stopped after three weeks. At that time, March 26, 1951, there was definite clearing of the corneal opacities. Cortisone was to be continued for two more weeks. The child has not returned for observation at this time.

A 27 year old white truck driver had mild episcleritis that resisted usual treatment. Upon addition of cortisone drops both eyes whitened out rapidly and became comfortable. His symptoms had not recurred two months after stopping treatment.

A 4 year old girl had had sore eyes for one year following measles. She had received treatment of all sorts. Examination revealed severe

phlyctenular keratitis with considerable scarring and some vascularization of the cornea. Atropine and cortisone drops were administered for three weeks during which time the photophobia subsided and the eyes became white and painless. The child could play outside for the first time in nearly a year. Examination by her pediatrician revealed no focus of infection. The chest was clear on x-ray examination and there was no family history of tuberculosis. A month after cessation of treatment redness and photophobia returned. Atropine and cortisone again gave rapid relief of the symptoms. Cortisone drops are being given for an indefinite time. The corneal scarring was clearing slowly when last observed.

A 9 year old boy had a linear extraction of a traumatic cataract. Cortisone drops were started twenty-one days after surgery. A 57 year old white female had a combined extracapsular extraction of a hypermature cataract. Cortisone drops were started twelve days after surgery. Both of these eyes had remained red and sensitive to light after surgery. Following addition of cortisone drops both eyes quickly became comfortable and whitened out. The cortisone did not seem to have any effect on healing of the incisions.

A 6 year old white boy received a laceration of the cornea with prolapse of iris, lens and vitreous when struck by an arrow. The prolapsed tissues were excised and the laceration sutured and covered with a conjunctival flap. The eye remained irritated; cortisone drops were started thirteen days after surgery. The eye became comfortable. Three days later the wound seemed to bulge out a little. Cortisone was stopped. The eye went on to heal. The lens is swollen and completely opaque, but the eye is comfortable and the tension remains good.

A 33 year old white man stabbed himself in the eye with the points of an electrician's pliers April 6, 1951. He received a 6 mm. laceration of the sclera, near the limbus, with a large iris prolapse. The prolapsed iris was excised and the sclera was sutured. The laceration was covered by a flap of conjunctiva. Eight days after surgery the eye remained red and painful. Cortisone drops were instituted and are being continued. The eye is comfortable and is healing well.

A 43 year old white housewife had severe uveitis with secondary glaucoma and massive vitreous exudates. She was given "the works". She was treated in the hospital with atropine, penicillin, streptomycin and fever therapy. Two paracenteses of the anterior chamber were done; no organisms could be cultured from the aqueous samples. General examination revealed chronic



arthritis and much dental infection. The worst teeth were extracted. She was given topical and then subconjunctival cortisone with little benefit. She was then given systemic cortisone in full doses for a total of 1 Gm. The eye quieted down rapidly and became white and the patient was discharged from the hospital. She obtained symptomatic relief from the arthritis. Two days later the eye was again red and painful. Exudate was present in the anterior chamber. The inflammation did not respond to penicillin and fever therapy. She was again hospitalized and given full doses of cortisone along with antibiotics and atropine, and again the eye quieted down. She was treated for two weeks in the hospital and then discharged to continue oral cortisone 100 mg. daily at home. During her stay in the hospital all remaining teeth were extracted and healing of the gums was uneventful, even though the patient was receiving full doses of cortisone. The oral cortisone was continued at home for a month with gradual reduction of the dose. The eye remained quiet and painless and there was definite clearing of the vitreous opacities when last seen.

The patients treated with topical cortisone were given the drops during their waking hours. The man who had the scleral laceration received drops every hour around the clock for two days while in the hospital. He was discharged and continued them at home during his waking hours. The 6 year old boy who had the corneal laceration from an arrow was the only one who showed any evidence of poor wound healing while receiving cortisone, and for that reason his dosage was stopped; however, the wound then healed uneventfully.

The total amount of cortisone used in topical treatment is actually minute and absorption is even more minute. Topical cortisone apparently can be administered indefinitely. So far, no reports of systemic reaction or allergy to topical cortisone have appeared.

In my experience, cortisone has given excellent and often dramatic relief from pain and photophobia. When used postoperatively, these patients must be watched carefully as there may be a masking of complications or mishaps.

This has been a very brief review of a broad subject that is expanding by leaps and bounds. We are a long way off from the final answers. Certainly a much greater experience must be attained and a vast amount of data compiled and evaluated before we can hope to arrive at the true value of these agents in ophthalmology.

However, both ACTH and especially cortisone hold great promise of becoming real factors in our field. We should all be curious as to their value and should utilize them judiciously. To those of you who have already used these drugs, this report will be of little value. If there are any who have not tried them, perhaps this will stimulate you to try them out so that you can decide for yourself whether or not they have any value.

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#### THE NURSE SHORTAGE

What would you do, Doctor, if your office nurse quit and you were unable to replace her? There is no greater threat to the practice of Modern Medicine than the astounding decrease in the number of applicants for nurse's training. This decrease is a horrifying fact. One university school of nursing this spring graduated only six nurses. Last year at another school of nursing there were over a hundred freshmen. This year there are but twelve.

Whatever the cause of this decrease may be, the remedy had better be found and applied by us as a profession or we are going to find an unpleasant and unwanted change in our methods of practice. Let's not kid ourselves about it, either. We have changed from a home to a hospital practice since the last war. The necessity of that era has become the accepted of today.

We used to have a girl in the office chiefly to answer the phone while we were out. Today we find that a graduate nurse makes it possible for us to take care of many more patients by her efficient administration of medications and treatments, while we are examining and diagnosing new patients. Just what would you do if you could not get another nurse in your office when this one quits? And what are you going to do when your hospital is unable to remain efficiently open because there are not enough nurses to keep it going?

This may not be your problem, Doctors, but you had better make it so. These comments and questions are not fanciful flights of the imagination. In view of the drop of enrollment in nurses' training, the problem is acute. We must, as individuals in our profession, spread the gospel of the advantages of a nurses training to our young women and their parents.  
—L. J. Pankow, M. D., in *So. Dakota J. Med. and Phar.*

## PULMONARY RESECTION FOR THE SOLITARY METASTATIC LESION

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Although pulmonary resection for metastatic sarcoma and carcinoma had been reported previously in a few isolated cases, Alexander and Haight<sup>1</sup> in 1947 first pointed out clearly the possible applications of this procedure. In one of the earliest reported cases, published by Barney and Churchill,<sup>2</sup> the patient was alive and well 12 years after pulmonary resection of the metastatic tumor, and a patient operated on by Edwards<sup>3</sup> was living without recurrence 18 years after the lung resection for metastatic sarcoma of the fibula. Such long survivals suggested to Alexander and Haight and other investigators the advisability of re-evaluation of the prevalent opinion that a metastatic pulmonary lesion means a hopeless prognosis.

Excellent summaries with additional case reports were published by Alexander and Haight,<sup>1</sup> Effler and Blades<sup>4</sup> and Seiler, Clagett and McDonald.<sup>5</sup> The interesting papers by Mandeville<sup>6</sup> and by Sommer<sup>7</sup> covered certain aspects of the same problem. Seiler, Clagett and McDonald collected 52 cases from the literature and added ten more from the Mayo Clinic. The primary tumor type was stated in 57: 18 were sarcomas, 35 were carcinomas and four were mixed tumors. The most common primary site was the large bowel, with 11 cases, of which six were rectal in origin. Of the others, seven were fibrosarcomas, seven hypernephromas and five were carcinomas of the ovary. The interval between the time of removal of the primary tumor and that of the appearance of the metastases was variable but usually was from one to four years. Bronchial involvement was mentioned in 27 cases and was present in 63 per cent of these. The longest survival periods were: one case, 18 years; one case, 12 years; one case 7 years; one case, 6 years, 2 months. Twenty-three of the 62 were living and well at the time of the case reports; two had lived more than ten years, seven from three to ten years and the remaining from a few months to two years. The operative mortality was 10 per cent.

Alexander<sup>8</sup> aptly stated, "The patients and the surgeons who deal with this condition are confessed gamblers." It is apparent, however, that the possibility of cure or prolonged arrest is well worth the chance. An extremely thorough examination supplemented by all the applicable

x-ray and laboratory investigations must be employed to determine whether or not the primary tumor has been completely eradicated and to make sure that no metastatic lesions other than the pulmonary one are present. Obviously the accuracy of such a survey is limited to a certain extent with regard to the primary lesion and to a considerable degree concerning other metastases. Recognizing these limitations, and provided the patient's general physical status is satisfactory, the solitary pulmonary metastatic lesion probably should be resected.

Four additional factors favoring such resection warrant brief consideration: First, the pulmonary metastatic lesion may provide a focus from which tertiary colonization may occur. Second, the pulmonary lesion may be a second primary tumor rather than a metastatic one. Third, removal of a metastatic pulmonary lesion may provide effective and prolonged palliation even if cure is not obtained. Fourth, the lung resection usually is technically much easier than for primary pulmonary malignancy or infection and an appreciable decrease in the operative mortality from the reported level should soon be apparent.

### CASE REPORTS

*Case 1.*—A 38 year old colored female came to the clinic June 15, 1949. She had noted a mass in the right breast in April 1948. In March 1949 her local physician performed a simple mastectomy and after receiving the pathologic diagnosis of carcinoma referred her for further treatment. Her general physical examination was normal except for evidence of aortic insufficiency. The simple mastectomy wound was well healed. Several small discrete nodes were felt in the right axilla. Serologic tests for syphilis were positive. The routine x-rays were negative. On June 17, 1949 operation to complete a radical mastectomy was carried out. Histologically, no tumor was found in the scar or the muscle but the axillary lymph nodes contained metastases. Her postoperative course was uneventful and she returned to the clinic regularly without complaints until a year later.

On June 15, 1950 she complained of pain in the shoulders and a slight cough which on one occasion had been productive of a small amount of blood. All examinations were normal with the exception of the chest x-ray which showed a solitary lesion in the posterior segment of the left lower lobe. She was admitted to the hospital for more careful studies, all of which were negative. By July 20, the lesion had enlarged slightly. Left lower lobectomy was performed, with a smooth recovery. A single area of metastatic

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carcinoma from the breast was found on pathologic study. She has had no further symptoms and nothing to suggest recurrence to the time of her last visit February 15, 1951.

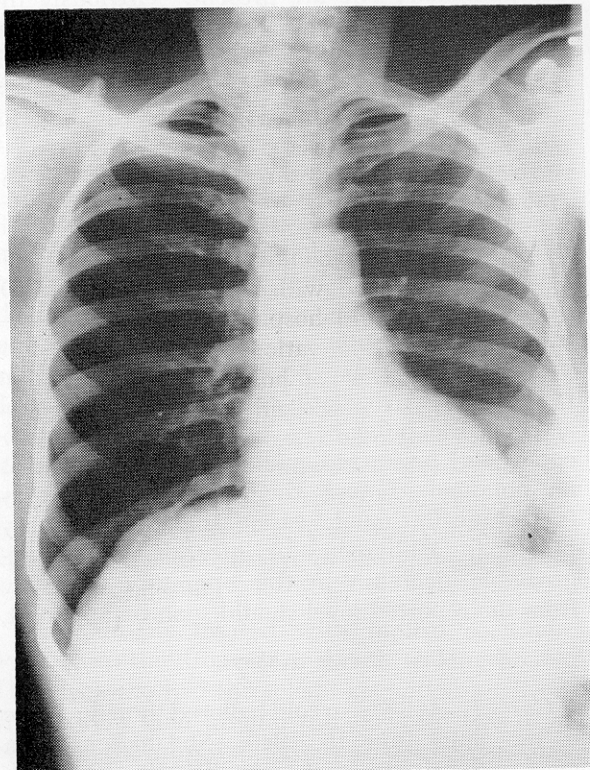


Fig. 1.—The rounded area of increased density is seen in the left lower lung field in case 1.

*Case 2.*—An 18 year old colored boy was first seen September 26, 1949. About one year before he had noted intermittent aching pain just above the left knee. Following minor trauma four months prior to admission, swelling developed above the left knee and he walked with a limp. On the morning of admission, the knee suddenly became very painful and he was unable to walk.

The general examination was not remarkable. The left knee was fixed in extension and just above the joint the leg was hot, swollen and tender. X-ray showed a mottled area of destruction in the distal third of the femur measuring 12 x 4 centimeters. The shaft of the femur was uniformly expanded, the cortex thickened and coarse and a transverse fracture was seen in the upper portion of the involved section. The lungs were clear. Irradiation was given to total 3000 r without effect on the tumor. Biopsy was then done and the pathologic report was osteolytic, osteogenic sarcoma. A high thigh amputation was performed and the histologic studies confirmed the biopsy.

His course was then uneventful until a routine chest x-ray in June 1950 showed a small rounded

area of increased density in the left lower lobe. The lesion increased in size very slowly. The patient and his mother were reluctant to accept further operation. Finally, in October, he was transferred to the Medical Division, Oak Ridge Institute of Nuclear Studies for special radioactive isotope studies. No demonstrable change occurred in the lesion and on November 3, 1950 operation was performed by the authors. The metastatic lesion was found at the interlobar fissure, involving both the lingula and the lower lobe. In addition, a 3 millimeter, firm, smooth area was palpated in the upper lobe. Pneumonectomy was therefore carried out. His post-operative course was not remarkable. Because of the unusual findings, the pathologic studies will be the subject of a later report by those at Oak Ridge who carried out the radioactive isotope studies. At the time of the patient's last visit in February 1951 no evidence of recurrence could be demonstrated.

#### SUMMARY

Two cases of pulmonary resection for metastatic lesion, one from a carcinoma of the breast and the other from an osteogenic sarcoma of the femur, are reported. The periods of follow-up are inadequate, but these patients serve to illustrate the principle of this procedure. If the primary lesion has been eradicated, the presence of other metastases excluded and the physical condition of the patient satisfactory, pulmonary resection offers a change for cure and an excellent possibility for palliation. The available evidence suggests that routine chest x-ray should be an important part of a cancer follow-up program in order to select a larger number of patients for this procedure.

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## YOUR STATE SOCIETY—THE HOME FRONT\*

By R. D. BERNARD, M. D.,  
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Great strides have been made in medical service by the American Medical Association since a resolution, which originated in the North Central Conference, was presented to this organization at its meeting in 1943. This resolution requested the House of Delegates of the American Medical Association to authorize the formation of a Council on Medical Service and Public Relations and establish a Washington office.

The reorganization of its public relations policy and its assumption of the offensive, in contradiction to a defensive position, has placed the American Medical Association in the foreground of defenders of our American way of life and the right of American people to enjoy the best medical care of any nation in the world's history.

This morning I wish to call your attention briefly to a few of the problems and objectives which confront the state medical society at the grass roots which, in reality, constitutes the home front in an overall analysis of our fighting forces.

Formation of regional groups of states, loosely banded together for discussion of mutual economic and legislative problems: These groups have been recognized and modified by the American Medical Association to promote discussion of problems in an informal way and at a level only slightly above the home front. The regional meetings of the Council on Medical Service and the recent district meetings of the Legislative Committee of the American Medical Association are excellent illustrations of this new method by which information is disseminated by direct approach from the top level to the home front level. If you will study the various methods our state societies have devised during the past few years to improve public relations, which in the last analysis means better medical service, you will realize great progress has been made in building up an impregnable defense of our present system of medical care.

Many states have a single medical service unit which through its subcommittees establishes liaison with lay groups in cancer and tuberculosis committees, veterans' organizations, labor and various health organizations. This does conserve manpower, makes a few excellent men responsible for the success of their program but lacks a broader approach of other states which

prefer to have special committees of five to eight members assigned to meet with these groups and assist in their activities. The important thing is whether or not these committees are actually doing the job. Are the members of these committees in the driver's seat, behind the driver or merely passengers on these various lay committees? Is there close cooperation between your society and state cancer committee, state tuberculosis committee and the state polio committee? Their drives have a powerful appeal. Vast sums are being collected. Are you consulted concerning the distribution of the reserves which these committees have acquired? Are you acquainted with the details of cost of polio treatment and hospitalization? From my limited field of observation, I am astounded at the staggering cost for hospitalization and nursing in this particular field and yet no one can deny the enormous value of these lay organizations. I believe that the fine people who devote much time to these drives deserve great credit and the full time administrators are, for the most part, doing fine work. They will welcome active intelligent cooperation of state medical committees who will team up with them and assist in guiding their courses.

I am much concerned with the question "do we need more doctors?" Regardless of your opinion, what have you done to prove that your opinion is correct? It is my feeling that this should be answered in terms of service to the public. Are the physicians distributed geographically and with adequate age groups to render satisfactory service? This is definitely a home front problem. We in Iowa are now conducting such a survey. We are trying to determine the service rendered by our physicians in each county. We want to know whether or not the community is receiving adequate medical service at night. Is the obstetrical service adequate, is the physician, due to age or physical disability, practicing only part time, et cetra? We propose to follow up this survey by further questioning in certain locations in an attempt to find the answer to some of the more difficult questions such as where relocation or the addition of doctors will solve the service problem.

The need for more general practitioners is now generally accepted. Here again the home front can and should be the activating factor—increasing hospital facilities, adequate office facilities and a guiding hand for the student through medical school which, working hand in hand with the state medical societies, will do much to balance the output of the finished medical product.

\*Address of the chairman before National Conference on Medical Service, Chicago, February 11, 1951.



Scholarship funds have been and still are valuable in three ways: First, if established as a state society project, most members take pride in watching their contribution build up the fund. They realize that their dues are really "doing something" to assist the deserving student. We appreciate the rich benefactor who establishes funds of this nature but the real thrill is actually becoming a part of it. Second, the medical schools, especially the state schools, realize that the state society is putting its shoulder to the wheel to boost—not knock. It will increase the interest of the organized profession in the faculty, their objectives and problems and promote co-operation. Third, the student is given a practical boost just when he needs it most. His admiration for the profession will increase for he knows he has friends willing to stand by him and assist him. He starts out in life appreciating the value of Organized Medicine. Our State Society educational fund is functioning very well.

A large cross section of the American population, through its increased interest in public health projects and its education, in the doctor's office, in lay periodicals, and in public school and college teaching, has grown to expect more thorough examinations and scientific tests and is in a large measure responsible for the increase in medical care costs. The younger doctor is trained, and rightly so, to depend upon these facilities to assist him in diagnosis. However, a carefully prepared history, a thorough physical examination, plus a good dose of keen diagnostic perception, will solve many of the problems of diagnosis which are now made by expensive laboratory methods.

Another factor in the cost of medical care is the present level of medical and surgical fees. This is a problem to be solved at the state level. The average fees being charged throughout the country probably are not too much out of line with the increased costs (or expense) involved in rent, transportation, professional assistants and the cost of living. We have always had, and always will have, a certain few who charge all the traffic will bear but these are a very small minority.

Blue Cross and Blue Shield, and similar prepaid protection measures, are doing a great job. Are your doctors doing their share in selling your Blue Cross and Blue Shield which are a most valuable weapon to use in defeating the government insurance scheme? The least expensive, the surest and, I believe, the easiest place to defeat government control of the practice of medicine is in the doctor's office, which is the home front.

For the past three years a large portion of the work of our field secretary has been devoted to calling upon the members of the State Society, explaining in detail our medical service plan and conducting schools of instruction for the physicians' office assistants. Plans are now under way to continue this program by the addition of four full time men. Blue Shield will share in this added cost.

Have you fully explored the value of improved public relations, which means better medical service in an augmented interprofessional or allied professions' program? This group, which includes druggists, dentists, veterinarians, nurses and hospitals, can solve many of our problems. A better understanding of mutual problems, a better distribution of medical care throughout the state, reduction in counter prescribing by druggists, more care in writing prescriptions, and so forth, will result from such meetings.

We have sponsored, during the past six months, 32 of these meetings at the district level. The attendance has been excellent. One result which we feel is a distinct compliment is the request by outstanding members of the legal profession to be included as guests during our 1951 program.

Grievance Committees have been accepted and encouraged in any public relations program. Better medical service is apparent even at this early date. A study of their reports, with an analysis of their overall findings, and the proper transmission of their information to the profession, plus well supervised press relations will do much to increase the effectiveness of this committee.

#### MEDICAL-PRESS-RADIO PROGRAM

This program was instituted to develop better understanding and closer relations between the doctors, hospitals, nurses and the press. Following the first meeting of the medical-radio-press conference in the fall of 1949, our State Society was asked to send a physician to participate on a panel for the annual meeting of the Iowa Radio News Editors Association. It was after this meeting that we completed a code of cooperation and asked its approval by the associations represented at the meeting.

These codes spell out, in detail, the responsibilities of all parties in the providing and reporting of medical news. The developing of this "Code of Cooperation" has been definitely a cooperative affair. We have had official representatives of the above named groups at all our planning meetings. This complete representation has assisted us in working together harmoniously

and has afforded us an opportunity to discuss other problems with these representatives even though they may not pertain to medical news relations. Interest in this project has been excellent from the start and our 1950 all-state conference was exceptionally well attended.

Television is becoming a factor in health education and its progress is, of course, limited at the present time, but a program such as that developed by the Illinois State Medical Society is most encouraging. We cover a little over 25 per cent of the population of the state. The response is favorable and we hope to expand our programs as soon as facilities are available.

The growth of interest in public health and in public health organizations is phenomenal. Have you checked them lately? Their membership is all inclusive. The American Legion, other veterans' organizations, women's clubs, welfare organizations, farm groups, educational groups, et cetera, all are united under this public health flag. Their members are serious, intensely interested in health problems; their leadership in all communities is well established and many of their leaders are outstanding in their communities. What is the relationship of your county society to these groups in areas in which their leadership is unsatisfactory? Are you a part of them? Can you direct their activities? Are they conducting immunization programs AFTER asking your cooperation or is the reverse true? Are you assisting them in developing their programs or is this done by lay groups and you merely assist them? Has the county society assumed the leadership and requested their cooperation? Are you sure that ALL of the groups are against socialized medicine? Are you interested enough to assist them in selecting their radio programs? Did you read the Ewing survey questions on child health? These people are your patients—your neighbors—your teachers of your children—members of your school boards. They are honestly trying to make your city a better place in which to educate their children and in which to live. Business men in the organizations just can't understand why their doctor isn't more interested in such projects.

One of the biggest—if not the biggest—home front jobs the medical profession has today is to take an active working interest in this vast organization. The usual excuse "I am too busy practicing medicine to take an active part in such organizations" is not the solution. If we, as a profession, can direct the thinking and activities of this group—on the home front—we can match the fine work which has been done at the national level.

In this brief resume of state medical society activities, I have attempted to direct your attention to the activities of the profession which improve public relations, which educate the public in American medical research and practice and our consistent efforts to improve medical service. We must render the best type of medical care in the office, home or hospital, and this will become the most important weapon we have today to defeat the socialization of medicine.

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#### THE TOBACCO HABIT AND PEPTIC ULCER

Few ulcer patients seem to have suitable relaxation and recreation. On the surface they may seem to be fairly well adjusted, but upon close investigation you will find that they are as much at fault in this regard as in their attitude toward their work.

A game of golf with a customer is not very relaxing, and merely belonging to a country club without using it regularly means nothing. It must be impressed upon these people that they should leave their work at the office and for a period each day devote themselves to some form of recreation entirely divorced from their usual work.

In the beginning they will have to concentrate upon this almost as much as they do on their work and get over the idea that doing something that is not directly or indirectly profitable or worthwhile is a waste of time. The reading of detective stories is sufficient for some men. A definite hobby is of tremendous importance. The development of social contacts may be the answer.

A definite attempt should be made to break the patient of the tobacco habit. Unfortunately, too many of us are actual addicts, and to stop smoking is almost impossible. The physician must make up his mind as to whether the psychologic strain of trying to give up the "weed" is more deleterious than the organic effects of continuing its use.

The adverse effects of tobacco are threefold: 1. Nicotine absorbed into the blood stream in sufficient quantities depresses the sympathetic nerve endings, thereby allowing the vagus to have greater effect, which results in increased gastric secretion and motility. 2. The tars and other substances that are dissolved in the sputum when swallowed act as a gastric irritant. 3. The appetite is decreased.

It may be impossible to make the patient give up his cigarettes, and if this be the case he should be continuously urged to cut down drastically on the number that he consumes and to use a filter type of holder, which at least removes some of the more irritating substances.—Wm. T. Gibb, Jr., M.D., in *Medical Annals*, District of Columbia.

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Predisposition to ulcerative colitis may be due to an overindulgent living mother; that to duodenal ulcer to a prematurely dead mother.—W. S. R. in *Detroit Med. News*.



## DISEASES OF THE LARYNX\*

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There are a multitude of disease entities affecting the larynx. Many are quite common and may be seen almost daily in the practice of the otolaryngologist and not infrequently in general practice. There are less common laryngeal disorders which many times the laryngologist sees only after a considerable interval. It is often the case that only a provisional diagnosis will be made at the initial office examination of the patient. Whatever the case, the presence or absence of laryngeal disease can be determined in nearly 100 per cent of patients by one relatively simple examination, namely, inspection of the larynx with a laryngeal mirror. Mirror laryngoscopy should be a routine practice of otolaryngologists in the course of making a complete examination of patients, whether the patient presents symptoms of laryngeal disease or not. With patients presenting symptoms referable to the larynx or hypopharynx, mirror laryngoscopy is the *sine qua non* in making an early diagnosis. Yet it is with surprising frequency that such patients are treated empirically by their first physician without the benefit of a satisfactory mirror laryngoscopy. Many carcinomas of the larynx have waxed extensive during these periods of trial therapy.

### MIRROR LARYNGOSCOPY

The technic of mirror laryngoscopy is presented in our standard texts of otolaryngology and physical diagnosis. Proficiency is readily obtained, but not by the occasional examiner of the larynx. Complete familiarity with the normal anatomical landmarks of the larynx and recognition of what constitutes normal motility of the larynx is essential before the examiner can evaluate the abnormal or diseased larynx. The value of routine examination of the normal larynxes is thereby emphasized, attention being given to laryngeal appearances during quite breathing, on phonation and during coughing. Familiarity with the normal larynx and with its normal variations better qualifies one to recognize real pathology or abnormal functioning in its earliest development.

### DIRECT LARYNGOSCOPY

Where difficulties are encountered that will not permit a satisfactory mirror laryngoscopy, a direct examination with the aid of a laryngoscope is indicated. In infants and small children direct laryngoscopy usually is necessary to evaluate the

larynx. Direct laryngoscopy compared with a satisfactory mirror laryngoscopy usually is inferior in value for diagnostic visualization of the larynx. The laryngoscope is of particular value in the inspection of blind areas that may exist, such as the anterior commissure, the ventricles, subglottic region, the pyriform sinuses or post-cricoid region.

Intralaryngeal operative procedures either for biopsy of lesions or for removal of benign growths are best accomplished by direct laryngoscopy under local anesthesia. Hospitalization and adequate preoperative sedation of the patient greatly increase the ease with which these procedures may be accomplished both for the patient and the operator. Only the very occasional patient requires general anesthesia, and this leaves much to be desired at it usually is helpful to have the patient phonate on request during these procedures. Suspension laryngoscopy under general anesthesia, though used routinely in some clinics, is thought to be a more formidable and less simple method of direct laryngoscopy.

### SYMPTOMS

The common symptoms presented by patients with laryngeal disease is hoarseness. Hoarseness is that voice disturbance produced only by interference with the normal vibration, approximation and tension of the vocal cords. Other voice disturbances resulting from nasal or pharyngeal obstruction, paralysis and fixation of the tongue by neoplastic disease and paralysis of the palate are not considered as hoarseness and must be differentiated. Lesions of the larynx may occur in those areas that do not produce voice disturbances and thereby remain quite silent except for more or less vague sticking or burning sensations in the throat often aggravated by swallowing. This is particularly so with lesions of the epiglottis, the aryepiglottic folds and those bordering on the pyriform sinuses. Cough and expectoration may become associated symptoms. If the lesion is sufficiently large or obstructing there will be a varying degree of obstructive laryngeal dyspnea with stridor. This latter situation is the common symptom of bilateral abductor paralysis of the larynx in which condition the voice usually is normal. If a paralyzed vocal cord is in an adducted position with good tension, as is often seen, the voice will be relatively normal. Considering the ease with which this error might be made a preoperative and postoperative mirror laryngoscopy of thyroidectomy patients should be a routine practice in those cases in which the surgery has been in the vicinity of the recurrent laryngeal nerves.

\*Presented, with the author's movies on "Diseases of the Larynx," before the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, April 20, 1951.

**HOARSENESS**

Hoarseness is an indication of laryngeal dysfunction and the larynx should be studied until the cause is determined. A negative opinion is valueless until the entire larynx is visualized. When hoarseness persists beyond a few days the larynx should be examined. This is important even with acute laryngitis associated with respiratory infections as the degree of inflammation can be observed and treatment more judiciously outlined. With proper evaluation chronic inflammatory lesions that are so commonly seen would not ultimately develop. Also, if this procedure became habitual, cancer of the larynx would be detected at its incipiency in better than 80 per cent of cases and would thus be practically 100 per cent curable. Patients with carcinoma of the larynx more often than not date the onset of their hoarseness from the advent of a "little laryngitis" months previously.

Hoarseness may be a manifestation of disease that is primary in the larynx, or it may be a local manifestation of disease elsewhere. The local disturbances commonly seen are benign and malignant neoplasms, acute and chronic inflammatory and granulomatous lesions, syphilis, tuberculosis and vocal cord paralyses. Tuberculous laryngitis is secondary to pulmonary tuberculosis but not uncommonly is the cause of the patient seeking medical attention for hoarseness. Paralysis of one or both vocal cords may result from injury or disease affecting the recurrent laryngeal nerves or vagi, or it may result from more central lesions.

Paralyses are not infrequently seen following thyroidectomy, or may be associated with malignancy in the chest and neck, or they may be due to pressure of an aortic aneurysm, or secondary to cerebrovascular accidents, or to toxic and infectious neuropathies.

**BENIGN LESIONS**

Benign lesions of the larynx may be in the nature of polyps, vocal nodules, cysts, papillomas, fibromas, contact ulcer and chronic inflammatory hypertrophic changes in the mucosa. Keratosis is fairly common and, though potentially malignant, is a form of benign hyperplasia of epithelium. Congenital lesions are seen occasionally in the form of webs, cysts and stenoses, and manifest themselves usually by causing laryngeal stridor.

**MALIGNANCY**

Malignancy of the larynx occurs primarily in the form of epidermoid carcinoma. From the statistics before us today it comprises about 5 per cent of all malignant tumors, and its fre-

quency appears to be on the increase. In two-thirds or more of the patients the vocal cord is affected early and the voice impaired. The most common site of occurrence is along the free edge of the vocal cord but it may arise on any of the laryngeal surfaces, either interior or exterior. These lesions may spread in any direction, anteriorly, posteriorly, superiorly or subglottically. Extralaryngeal spread may be directly, as through the preepiglottic space, or by way of the lymphatics to regional nodes about the bifurcation of the carotid artery. In its early stages and for a while thereafter, hoarseness may be the only symptom. Laryngeal cancer is at first quite painless, the development of pain being evidence that the disease is becoming advanced. This pain, rather than being in the larynx, usually is referred to the ear on the side of the lesion. Dyspnea develops as the lesion fills the airway and becomes obstructive.

**DIAGNOSIS AND TREATMENT**

In the treatment of benign and malignant lesions of the larynx one's first concern is diagnostic. The diagnosis of a particular lesion is established when tissue is removed and examined histologically, with the aid occasionally of roentgen and serologic studies. A rather accurate provisional diagnosis can be made as a rule from the appearances of the lesion. At times it is difficult to differentiate such lesions from chronic inflammatory lesions, tuberculosis, syphilis and cancer. Roentgen study of the chest, serology and biopsy will make this differentiation possible as a rule. In the treatment of benign lesions of the larynx, and those affecting the vocal cords in particular, the lesions are removed primarily to restore the normal voice. This requires that particular care be exercised in removing these lesions in order to leave a smooth cord edge. Removal of most benign lesions of the larynx is readily accomplished by direct laryngoscopy under local anesthesia using one of several cup forceps, occasionally a snare, or shears. Although all tissue is submitted to the pathologist for diagnosis, the important function is taking infinite care to get the best cosmetic result possible.

In the treatment of malignant lesions of the larynx, the primary concern is confirming the diagnosis by biopsy and then deciding on a plan of therapy that will save the patient's life. The voice is of secondary importance. Fortunately for many of those in whom the diagnosis is made early, the removal of one vocal cord by thyroidectomy permits complete extirpation of the cancer, a 95 per cent chance of cure, and leaves the patient with a very useful voice. For those patients