ACADEMY OF APPLIED OSTEOPATHY

1962

YEAR BOOK

OF

SELECTED OSTEOPATHIC PAPERS

TWENTY-FIFTH ANNIVERSARY ISSUE

A Harry L. Chiles Memorial Publication

Published by
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Margaret W. Barnes, D.O., *Editor*
P.O. Box 1050
Carmel, California

CHARLES E. FLECK, D.O.

DEDICATION

The Academy of Applied Osteopathy

dedicates

The 1962 Year Book

to

CHARLES E . FLECK, D .O .

With a record of sixty-one and a half years of active practice in the osteopathic profession, Dr. Fleck retired, leaving to many others the task of carrying on some of the channels of osteopathic endeavors he helped to'start during his nearly fifty years in New York City as a practicing osteopathic physician.

His remarkable ability to organize practical outlets for bringing osteopathy to the people accounts for his being instrumental in the establishment of the New York Osteopathic Clinic and for his being also a founder of the Academy of Applied Osteopathy.

FOREWARD

TWENTY-FIFTH ANNIVERSARY YEAR BOOK

The 1962 Year Book is issued as the twenty-fifth anniversary edition of the collection of selected osteopathic papers. This commemorates the founding meeting of the group which was responsible for the organization now known as this Academy of Applied Osteopathy. Since that breakfast meeting in Chicago in July 1937 there have been published twenty-three previous issues of this book which has been known as the Year Book since the combined 1943-44 edition. At first membership lists and transactions of annual meetings were included, but from 1950 such material has been placed in an annual Directory, leaving only professional papers for the Year Book.

As has been customary with all previous editions the contributions to this book include lectures presented at convention programs, original articles by members and reprints from other sources. Articles this year were sought especially from members of the Academy who were instrumental in the work of the beginning of the organization. A number of the reprints and some few of the original articles have been used both because of their continued interest to the profession and because they represent the continued interest of these individuals in the work of the Academy.

Two reprints which reflect very up to date work in connection with attempts to explain the scientific background for the osteopathic concept are those used by permission from the American Journal of Physiology. They are the result of experimental work done at the Kirksville College of Osteopathy and Surgery by John Nelson Eble, Ph. D. while he was a member of the department of pharmacology at the college.

For this issue particularly there has been an attempt to include a biographical sketch of each author who has been associated with the Academy over many years. In addition are pictures of some of the people who were at the founding breakfast in Chicago. We wish we might have had more response from the doctors contacted so that we could make this token of appreciation more complete. To all who have contributed to this special edition and to all who have so loyally over the years devoted their energies to the osteopathic profession, expressing this devotion by supporting the activities of this Academy of Applied Osteopathy, there goes much gratitude and a sincere “Thank You."

Further editorial comment about authors and their subjects will be found at the start of each article. As has been the policy of all previous Year books, the material published conforms in general to the Academy’s principles of osteopathy, but a very wide latitude in individual expression of these principles is accorded each author. No attempt has been made to formalize the style of writing. These articles are not considered the final word, nor do they carry the endorsement of the Academy of Applied Osteopathy and the American Osteopathic Association.

Margaret W. Barnes, D .O . , Editor

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1962 CONVENTION LECTURES

OSTEOPATHIC MANIPULATION IN EYE, EAR, NOSE AND THROAT DISEASE

T. J. RUDDY, M.D., D.O.
Los Angeles, California

Manipulation of the cervical and upper thoracic regions of the spine for thecorrection of primary and secondary lesions of the vertebral joints, including their ligamentous and muscular constituents, and of the paraneural and paravascular tissues associated with these structures, is important as contributing to the cure of diease. However, all too frequently the general practitioner neglects these regions in eye, ear, nose and throat disease after he has referred the patient to the specialist, with the result that the patient does not receive the full benefit of osteopathy unless the specialist applies the manipulative treatment indicated.

In my opinion the specialist, in the absence of the general practitioner's service, should administer such treatment. When there is free functioning on the part of the sympathetic and parasympathetic nerves for the regulation of the blood supply to the eyes, ears, nose, pharynx and larynx, and there is no undue tension or pressure diminishing venous and lymph drainage from the neck tissues, one is ready for the special manipulative work to the organs of special sense.

Ulcers, cataract, squint, glaucoma and other major pathological conditions of the eyes as well as diseases of the ear, nose and throat, may require surgery, and it is understood that where there are surgical indications, surgical service is given. However, special osteopathic manipulative measures may be applied to aid in preparing the patient for operation and for prompt recovery following surgery.

MANIPULATIVE TREATMENT OF THE EYES

This may be divided, first, into osteopathic manipulative technic directed to the eyelids: second, to the lacrimal apparatus: third, to the eyeball; and fourth to the extrinsicmuscles.

Manipulation of the Lids. --Before manipulation is attempted, two drops of holocain, 1 per cent, are placed on the upper part of the globe every three minutes for three applications. An instrument called an eye -finger, which was developed by the writer, is placed beneath the upper lid; the lid is pressed firmly against the eye-finger with the index finger and drawn down and out, down and in, and straight down, stretoh-ing the lid tissues, freeing circulation and stimulating nerve function. The lower lid may be manipulated in the same manner by similar movements. The lids may be held resistant against the eye-finger pressure to develop muscular tone; especially is this true in Bell's palsy or other eyelid paresis or paralysis, or where atony or spastic conditions exist in certain cases of atonic or hypertonic entropion, ectropion, or ptosis. In chronic chalazion, hordeolum, blepharitis marginalis, blepharospasm, palpebral conjunctivitis, and "baggy lids" there is much to be gained from the use of the combined eye-finger and index finger manipulation to the lids; in many instances surgery is avoided.

Manipulation of the Lacrimal Apparatus. --The most common disturbance to the tear secreting and conducting system is obstruction in the tear duct--dacryostenogis. If found in the very young, this calls for nonsurgical measures in the first six months of the child's life. One should place the "cotted" cushion of the little finger over (upon) the lacrimal sac, alternating the pressure in a "compression-decompression" movement. The suction created in the tear sac will free the drainage by way of the tear duct

into the nose. It will be of advantage to place a few drops of 2 per cent boric acid solution or a 1 per cent saline solution in the cul-de-sac from time to time during the manipulation. After the child is six months old and the puncturn, canaliculus, or nasal duct refuses to open, bougienage or dilatation may be required. Usually a single dilation will suffice.

In chronic dacryostenosis of the adult, manipulation as described for the child may be applied. However, a healthier condition of the tissue is all one may expect because in most instances surgical dilatation will be required.

Manipulation of the Lacrimal Gland. -- This is seldom indicated, as purulency is more commonly observed in the gland than is a simple inflammation. However, the gland is easily drained in a simple dacryoadenitis by placing the eye-finger beneath the outer one-third of the upper lid, and while traction is being applied, compressing and decompressing the lacrimal gland with the edge of the thumb of the opposite hand.

Manipulation of the Conjunctiva.--The conjunctiva is the superficial membrane of the eyeball and is subject to such conditions as pterygia, pingueculae, and a large variety of inflammation, from a simple follicular conjunctivitis to trachoma, "vernal catarrh," and phlyctenular conjunctivitis.

The first two (pterygia and pingueculae), and the last (phlyctenular conjunctivitis), are of the bulbar conjunctivae and require a special procedure. The first two are fibrotic hyperplasias with or without fatty degeneration. They are the direct result of irritants, as wind, dust, light, heat, cold, eyestrain from faulty use, and errors of refraction--which maintain a passive or active hyperemia or both with a consequent increase of embryonic tissue, leading to the fibrosis.

With the eye anesthetized as before, the concave side of the eye-finger is placed on the eyeball over the pinguecula, pterygium or phlyctenule. A longitudinal stretching, alternating with a right angle stretching to the long axis of the blood vessels, is exerted for one minute to each point or area. Even if surgery may be necessary because of cosmetic or physiological reasons, healing will be much more speedy and smooth if preceded and followed by this manipulation.

Manipulative Treatment of the Cornea. -- The cornea receives its nutrition in part from the aqueous humor, but chiefly by way of the ninety lymph canals extending from the periphery to the center. The canals act also as conduits for sensory nerves. The only blood vessels to the cornea are within the peripheral two or three millimeters--branches of the anterior ciliaries and the conjunctival arteries. Any manipulation that will free the arterial supply and the venous and lymph drainage is indicated in cornea1 disease, ulcerative or nonulcerative. Contraindicated as it may seem at first to the less experienced, alternating pressure and release direct to the cornea with the concave surface of the eye-finger will remove an exudate from the lymph channels and cleanse ulcerated areas with less trauma than by chemical or instrumental curettage, the latter cold or hot.

Pneumococcus and other organisms may cause ulcers with undermined edges and deepening craters which require the use of the thermophore at 200 F. Also the quartz rod, curettage, actual cautery et al. may be specifically indicated and used without fear of resulting scars as nebulae, maculae, or leucomata if administered properly. But even if these surgical means are called for, the eye-finger before and after speeds up the healing and prevents complications and blindness.

Recently a student at a local university suffered a burn of the outer one-half of the cornea from an explosion during the synthesizing of sodium hydroxide. After 24 hours the cornea was white from exudate which, had it remained to choke the nutrition of the cornea, would have left the eye permanently blind. Manipulation as described in the foregoing paragraph for cornea1 disease was given, one to three times daily, with complete restoration of the cornea1 transparency and normal vision.

One should try continuous pressure with the use of the eye-finger direct to the cornea, or he may use the index finger on the external surface of the lid over the cornea. In any acute keratitis, in acute inflammatory glaucoma, and in acute iritis, after the cornea becomes "smoky" or clouded, one may observe how efficiently the exudate is dispersed by this method. An exudate, or edema, is no more difficult of treatment in the eye than in any other accessible part of the body.

Manipulation of the Globe. -- This may be employed to overcome circulatory stasis in the episclera, sclera, uvea (iris, ciliary body, and retina), affecting indirectly exudates in the lens and vitreous. Thus in episcleritis, scleritis, iritis, cyclitis, uveitis, choroiditis, retinitis, papillitis, hyalitis, glaucoma, cataract and other benign diseases of the tunics and media, alternating pressure and release to the globe is indicated.

Since finger-point pressure to any part of the body will tend to dispel the blood from that

part for the moment, so will pressure by the index finger to the globe blanch the entire vascular field of the retina. And reasoning by deduction, this should effect a similar temporary ischemia in the uveal tract and lens. Alternate pressure and release with the finger either on the globe or on the lid over the globe operates on the same principle as the "lymphatic pump" or alternate application and release of a tourniquet; it prevents or removes exudate and insures normal oxidation (internal respiration). With proper nutriment in the arteries normal nutrition (protein for repair, carbohydrate and fats for energy, and vitamins and minerals to aid metabolism), will be assured to the diseased cells and intercellular tissues.

If the general osteopathic physician or the surgeon or other specialist will always visualize this picture of internal respiration and nutrition in connection with all of his efforts toward relief of his patient, he will never hesitate to employ well-designed, well-organized osteopathic manipulation in the treatment of any disease or condition whether or not requiring surgery, internal remedies or radiation.

Experience over nearly four decades with manipulative osteopathy prompts one to stress the benefits to be hoped for in the prevention of blindness, or the restoration of vision in glaucoma, cataract, and even in certain stages of primary optic nerve disease. Admitting that all foci of infection and other sources of toxemia, general and local body mechanics, living habits, and so forth are properly considered, there is no reason why all but irreparable pathology in these eye diseases may not be corrected without surgery.

The exudate in choked disk destroys the optic nerve; the exudate in the lens is the major change in the formation of cataract and the resulting blindness; the exudate in the retina and especially the cornea in acute glaucoma, is the real factor, plus intraocular pressure, that destroys vision, surely and speedily.

The time factor permits greater leeway in the treatment of cataract: however, all other conditions being equal, manipulative procedures will be most effective if begun and continued while the disease is in its incipiency and first stage of maturation. Alternating pressure and release over the equator of the globe will alter the flow of fluids in and through the capsule; change of the lymph pressure will follow in the zonule and between the lens fibers, and by repeated treatments over a period of weeks or months, according to the presence or absence of alterable exudate in the lens fibers, first stage cataracts may be cured.

In the absence of essential hypertension we may expect to reduce intraocular pressure from a glaucomatous level to normal, and maintain it there with finger technic. The nonsclerosed portion of the sclera, or the spongy material making up the spaces of Fontana, interpolated between the angle of filtration and the canal of Schlemm is the site through which must be effected the greater part of the tension reduction. This circumcorneal zone is the site of hernia of the vena vorticosae in a chronicectasia of the sclera and in a chronic noninflammatory glaucoma. It is the common site of rupture of the eyeball from trauma.

I have been able to prove that the eye-finger, or index finger, pressure applied over the equator on vertical, temporovertical, and nasovertical lines, stretches (bulges forward) the tissues of Fontana'a spaces and drains the intraocular fluid, Needless to add, this method should not be applied, any more than any treatment should be applied, without the use of methods to check the progress made. Aided by the tonometer, perimeter, and visual acuity tests, it is possible to determine whether the disease is progressing (as it tends to do) or the ophthalmologist is preventing its progression,

The exudate in choked disk is as amenable to manipulative measures as it is in any other part of the eye. We should observe the disk through the ophthalmoscope while applyingpressure over the equator with the eye-finger, and note the exudate and "swelling" reduce. We must check the "field" and visual acuity and note the increase in each after an effective treatment. We must be convinced by our own experience, allowing for peridental, antral, ethmoidal or other factors that may have destroyed the nerve cells (ganglion layer), or axones in the disk and retrobulbar area. One may fail because of tardiness and lack of persistence, or procrastination on his own part or lack of cooperation, on the part of the patient.

In certain intractable cases the "bi-finger" technic is employed. One eye-finger is placed to embrace the equator of the globe above, and the other below, using a "pincher" traction movement to stretch the optic nerve (at least straighten out the "S") and by traction forward and toward the several points of a perimeter (up, in, down and out), stretch the orbital tissues embedding the arteries, veins, lymphatics, nerves of sensation and of motion, and the sympathetics. Caution should be exercised not to "pinch" the ball to a degree of injury.

Manipulative Technic to the Extrinsic

Muscles. -- The extrinsic ocular muscles may exhibit a tendency to imbalance, termed heterophoria, in which the eyes have excessive convergence (esophoria) or are in a position of abduction or divergence (exophoria). Also, one eye may be held in abduction predominance with its fellow in adduction, either right or left. Hyperphoria; that is, one eye evidencing a tendency upward, the other relaxing or pulling to a lower position. Too, any combination as up and out, or up and in, and the reverse of these positions, as in the cyclophorias, may be encountered.

The heterotropias (strabismus) are visable deviations from normal balance in which the eyes may be actually fixed in any of the positions described above. In these conditions there is an actual lengthening or shortening of the muscle or muscles. The paretic and the paralyzed "squint" conditions are, as the title implies, partial or total paralyses of certain extrinsic muscles, the eye turning away from the paralyzed (or in the direction of the normal) muscle.

It is admitted in physiology that traction of a muscle is its most powerful stimulant; thus this principle is carried out in the technic of extrinsic ocular muscle treatment. We place the eye-finger over the muscle to be stretched, at or posterior to the equator of the globe. We ask the patient to look in the direction of the muscle directly opposite. This resistance after ten double counts (one-two up to ten-two in 10 seconds) will relax the muscle to be stretched, enabling the eye-finger to "tumble" the globe inward, outward, upward or downward. By moving the eye-finger under the outer, posterior quadrant as the patient looks up and out, the superior oblique is stretched, the traction being in the direction of the inferior oblique pull. Now we place the eye-finger over the upper outer posterior quadrant, the patient directing his vision down and out. The traction is made in the direction of the superior oblique pull upward, forward and inward, to stretch the inferior oblique muscle. The eye must be "tumbled" until the cornea is almost invisible in order that the given muscle may be stretched effectively.

To resist the action of a muscle will also stretch the structure, but especially will such manipulation increase its size and tone. This is indicated when the muscle is atonic, and is applied to the weak muscle in the phorias, tropias paretic or paralyzed "squints." We place the eye-finger over the weak muscle at the equator of the globe. While the eye is being turned in the direction of the weak muscle we press against the eyeball as a brake-shoe resists the turning of a car wheel. In paretic and paralytic muscles, the eye must be directed as far as possible in the direction away from the weak muscle in order to stretch the weak muscle to its full length. Now we "set the brakes" to resist the weak muscle. The brake pressure should be light in the beginning, increasing the resistance as the tone and strength of the muscle increase. Phorias respond to ten minute treatments three times weekly (later two, and then one treatment weekly), and reach a "balance" and binocular vison after four to six weeks' treatment, if the visual purple (vitamin A) "regeneration time" is normal, and no uncorrected error of refraction exists. Exceptions are the cyclophorias caused from faulty astigmatic corrections, and the exophorias with marked convergence failure or insufficiency.

There has been observed an allergic functional weakness in the extrinsic ocular muscles paralleling the myasthenias, even of the gravis type, which should not be overlooked. Possibly these will not respond favorably without elimination of the causes of the allergy.

All phorias require rechecking at three month intervals by a dependable instrument such as the rotoscope. A rotary prism over each eye, one to measure and hold the vertical balance and the other to measure the horizontal imbalance, will prove reasonably accurate.

Heterotropia offers a more difficult problem. In the six months' child, where no demonstrable disease or amblyopia exist, time and adequate growth may suffice. Also we must determine whether or not emmetropia is present in each eye. If one eye is diseased or amblyopic with a consequent marked inequality in the visual acuity of both eyes, "balance" of the eyes may not be hoped for unless and until the disease or amblyopia may be corrected. It is an observation, too, that in anisometropia--unequal focus of both eyes--the error of refraction must be corrected. Should the differences in the refraction of the eyes exceed two or three diopters, especially if hyperopic, the prognosis is not so favorable, at least until after a period of years under treatment.

In the adult, the correction of heterotropia is frequently a surgical procedure; however, by combining osteopathic technic with such corrective aids as the rotoscope or intelligentlyapplied rotary prism, many cases are cured without surgery.

Paretic (local) imbalances (paretic strabismus) respond favorably. As in the phorias and the tropias, vitamin B complex and other means for correcting nutritional deficiencies

should go hand in hand with osteopathic manipulation.

Paralytic squint has a less favorable prognosis. If a peridental infection or sinusitis has caused a peripheral neuritis, the condition will be corrected in six weeks to two months. Caution will be exercised in the early period not to intensify the neuritis. But manipulative measures to promote a good circulation in the parts affected are indicated to prevent secondary degeneration of the nerves.

PROPHYLAXIS

There is so much to be considered for the welfare of the eyes of our children of school and college age, and for adults in the home, the office, and the factory, that it is impossible in this paper even to analyze any one of the categories.

Something that each parent can do is to provide ample illumination for the boy and girl doing "homework." The number of foot-candles of light in the open on a clear day is approximately 10,000; in the shade of a tree the foot-candles of light are 1000; on a porch 500 foot-candles; immediately inside an unshaded window 250 foot-candles, and five feet from the window, only three to five foot-candles of light.

The average school child is "far sighted" (hyperopic) in his early years, and if near-sightedness (myopia) develops it is chiefly the result of poor illumination, requiring the child to hold the book too close in order to see clearly. While 40 to 60' foot-candles may be sufficient, if the eyes are not too tired, it is better to have the light reasonably intense. A one hundred watt bulb at 26 inches from, and at right angles to, the page, will not be excessive unless the eyes are extremely photophobic--sensitive to light;

Of the 25,000,000 children of school age in this country, one in every 2000 goes blind annually, and in most instances the condition could have been prevented. A recent report showed that the Federal government had expended $l,500,000 in a year for relief to the blind. One state alone expends $832,000 annually for the relief of its blind. Much of this could be prevented by building the school desks at 30 to 45 degree angles instead of nearly flat, and arranging the lighting so that each child would have the needed sixty-five foot-candles of light for reading.

In ten years 350,000 adults lost their eyes in one middle western industrial state. Multiply this by 30 industrial states and we have the appalling number of 1,500,000 who, during a similar period, may be reported as losing their vision from one of many causes. There is much in osteopathic manipulation and in the habits of our children and working adults, to be done to save eyes.

OSTEOPATHIC MANIPULATION IN CONDITIONS OF THE EAR

Manipulative measures may be applied to the external ear as a prophylactic, and possibly a curative treatment for furunculosis, allergic dermatitis, "athletes foot," chronic catarrhal otitis externa, and acute and chronic myringitis.

A preliminary manipulation that is very beneficial is springing the mandible against resistance, This should be done during right and left lateral closing, as well as during vertical opening and closing. The muscles, vessels and nerves which occupy the regions in and around the angle of the jaw are subject to pressure by the pterygoid fascia and to movement by the pterygoid muscles which, if fixed, interfere with the external auditory canal and the membrana tympana, possibly predisposing to diseases of the canal and membrane.

A second manipulation is done by inserting the catted fifth finger in the external canal, gently twisting to relax the skin and fascia even to, and including, the membrana tympana. Almost as essential are manipulative measures that will free and drain the digastric triangle and the superior portion of the posterior triangle as both of these spaces and, in part, the suboccipital triangle, drain the external and middle ear. Resist the contraction of all muscles affecting those areas.

Manipulating the Eustachian Tube and Middle Ear. -- It at first seems trite to describe this manipulation, as I have written about it nearly every year during four decades while discussing the subject of eustachian tube disease. It goes without question that any manipulation of the tubes must be approached from the epipharynx if the membrana tympana is to be kept intact. We place the cotted index finger of the right hand on the right upper dental arch, passing the finger backwards until it crosses the faucial pillar, thence posterior to the palate, touching the lower portion of the nasal septum when the manipulation is intended for the tube. When the back of the index finger touches the vertebral bodies the finger is in a position to treat the fossae of Rosenmuller and to stretch the vault of the epipharynx laterally. A study of the circulation to these tissues including the tubercle of Gerlach, and

all of the tube, will make one realize the opportunity offered by finger technic to relieve deafness in scores of children, and give relief to thousands of adult patients suffering with acute and chronic, simple and suppurative, otitis media.

To stretch the fossae of Rosenmueller, the index finger is extended until its dorsal surface touches the bodies of the vertebrae. The finger is moved laterally with a definite frequency and strength. One may count one, two, three, repeating three times to the right, and as many to the left. The pressure should be gentle--not sufficient to cause bleeding, although if there is adenoid tissue present, even the presence of the finger may cause oozing. This is osteopathic nonsurgical technic resisting the pharyngeal mus - cles --not so-called finger surgery. Both lateral vaults are fully stretched, and as a finishing touch the soft palate receives a one, two, three stretch forward, against resistance.

To dilate the eustachian tube, the pulp of the index finger touches the septum near the floor of the nose. The finger is moved toward the same side as the hand. It will fall into the meatus of the tube. If, as in acute infections, one desires drainage only, an alternating or pumping pressure is employed. If, however, as in chronic purulent conditions, and in chronic catarrhal deafness it is desired to dilate the tube, the cotted index finger is directed toward the middle ear by alternate pressure and release, counting one, two, three, until the tube is fully dilated to the petrosa. This may require several treatments.

Manipulation to any given part of the body, when designed and applied to establish and maintain normal nutrition to that part or organ, and regulation of its function, is not only good treatment but it may be specific as part of reestablishing normal environment. There is much difference between manipulation to maintain normal structure and function, and manipulation intended specifically to cure a disease.

Manipulation of the eustachian tube when applied gently as alternate pressure and release will reduce a turgescent condition that is causing a feeling of "fullness," or impaired hearing, the result of a cold or "flu." As the turgescence is reduced, the lumen of the tube increases, permitting the air to enter the middle ear, thus balancing the atmospheric pressure and restoring hearing. Also, in addition, any liquids as mucus, serous fluid, or pus that may be present willdrain and an otitis media and possibly a mastoiditis be prevented.

When, however, there exists a fibrous hyperplasia in the tubal walls, manipulation with or without an anesthetic may overcome the stenosis of the tube and restore the atmospheric pressure even permanently, but such technic will not cure deafness or aid hearing if there exist degrees of lessened movement (fixation) in the ossicular chain or depletion or degeneration in the hearing branch of the auditory nerve. In all cases of chronic progressive deafness, a complex pathological condition exists which must be considered in all of its phases if treatment is given to relieve or cure the deafness, and not merely to manipulate a part of the hearing apparatus.

Restoration of normal maxillary joint position and movement, correction of lesions of the cervical and upper thoracic articulations, the elimination of nose, throat, teeth, and other sources of infection, and the correction of dietetic and other errors and deficiencies are requisite in the treatment of ear conditions, as they are for the treatment of other diseases.

MANIPULATION IN DISEASES OF THE NOSE

By "nose" is meant in this discussion the nasal passages and the structures forming the walls of those spaces.

The purpose of manipulative technic is, or should be, to restore and maintain normal breathing and adequate ventilation of nasal spaces. This implies that the space between the septum and the turbinates is free; also that the space between the turbinates and the lateral walls is ample for ventilation and drainage of the frontal sinuses, anterior ethmoids and antrum in the middle meatus. Further, it is necessary that the space between the middle turbinate and the so-called superior turbinate be ample for ventilation and drainage of the posterior ethmoidal cells, and by reducing the turgescence or other condition in superior turbinate region, better ventilation and drainage will be effected through the sphenoid ostium. In this setup we are assuming that the situation is not a surgical one and lends itself to manipulative measures.

Theoretically, better circulation--arterial intake and venous and lymphatic output--constitutes the major benefit. Present-day advertising has placed at the disposal of physicians and public alike drugs that by vasoconstriction shrink the mucous membrane of the turbinates and tend to effect better ventilation and drainage in nasal and sinus spaces. A type of manipulation which I describe will duplicate the effects of these drugs and give even better results. Such manipulation not only will drive the excess fluids from the sanguinous spaces, but also will remove the faulty chemical and physical causes.

We first spray the turbinates and corres-

ponding portions of the septum with some mild nonvasoconstricting anesthetic, as 1 per cent novocain, 2 per cent holocain, or a butyn solution; this may be repeated. Using the writer's nasal finger No. 1, we place it on the inferior turbinate and repeat alternate pressure and release until the turgescence is reduced. We repeat these movements on the septum if necessary. Now we place the nasal finger No. 2 between the middle turbinate and the septum, repeating alternate pressure and release on the middle and superior turbinates, reducing any nonsurgical enlargement that may interfere with ventilation and drainage of the nose or sinuses. If the septum shows evidence of impaired circulation, similar movements may be applied. This manipulation, except in advanced fibrous hyperplasia and atrophy, is very beneficial and frequently curative in some types of anosmia as well as producing drainage.

We pass the cotted index finger along the upper teeth, past the pillars, thence posterior to the palate to the lower part of the septum. The finger is in the "master position" to move to treat the tubes or nose, or stretch the epipharynx. We unbend the finger and with lateralalternate pressure and release drain the epipharyngeal walls which carry the drainage from the nasal and sinus spaces. We follow this with soft palate stretching against resistance to effect drainage by way of the descending palatine vascular group, and again place the finger on the posterior border of the septum for purpose of location. The tip of the finger is placed on the inferior turbinate, then the middle, and finally the superior turbinate (both sides), using alternate pressure and release to conclude the drainage and ventilation. This technic is easy, effective, and as essential in nasal lesion treatment as is cervical and upper thoracic lesion correction in any situation.

MANIPULATIVE TECHNIC IN TONSIL, PHARYNGEAL AND LARYNGEAL DISEASE

After using the writer's "tonsovac" to suction or aspirate the superficial contents of the tonsil crypts, the cotted index finger tip is placed against the anterior pillar of the tonsil, near the buccal margin of the pillar using a "piston," or alternate pressure and release movement, while the tonsil is forced into the faucial space with pressure externally by the other hand. Next we pass the tip of the finger over the lower or lingual attachment of the anterior pillar and use alternate pressure and release to press the contents from the infratonsilar nodule. By this manipulation the tonsils can be drained adequately not only of crypt contents, but of the exudates and transudates as well, Hyperemia is also reduced.

We place the cotted finger between the tongue margin and the attachment of the pillars and with a laryngo - and pressing movement (not alternating but progressive), one-two-three, we pass the finger downward until it touches the floor of the pyriform space. The stretching of the pillars is essential in effecting a normal circulation in the tonsil. With the finger still in the pyriform space, a lateral pressure is used to stretch the laryngo - and oropharynx, counting one-two-three, while moving the finger from the floor to near the tonsil level, thus removing any undue tension from the inferior and middle constrictors and lower part of the superior constrictor. This is repeated on the opposite side.

From a point low in the pyriform space, we pass the fingers medially and posteriorly to the epiglottis, pressing forward with alternate pressure and release movements. This technic renders taut the aryepiglottidean folds, and in doing so takes the "slack" out of the laryngealmucosa, including the vocal cords. This is a specific manipulation in laryngeal disease with or without surgery.

An additional manipulation is done by placing the finger on the tongue near the hyoid bone using, first, a forward and upward pull; second, a forward and right pull; and third, a forward and left traction. Drawing the tongue upward lifts the hyoid bone, stretches the thyrohyoid membrane, relieving tension on the internal laryngeal nerve and vessels. Traction on the tongue also releases tension on the cricothyroid membrane, freeing pressures on the inferior or recurrent laryngeal nerve and vessels. In this, too, we have a very specific treatment for the larynx in addition to lateral pressure, externally, to the hyoid, thyroid and cricoid structures.

COMMENTS

Osteopathic manipulation has relieved thousands of patients of their eye diseases that otherwise might have required surgery, and which, with or without surgery, might have resulted in partial or total blindness.

In deafness, we have a pardonable pride in our achievement. Of the three million school children who annually lose their hearing and become a burden to themselves and to society; it is safe to venture that in fully one-half of these cases blindness could have been prevented and

many of the remainder restored to normal or nearly normal hearing.

Surgery has slaughtered millions of tonsils unnecessarily. We have no quarrel with surgery of the tonsils when necessary because of infection, or surgery of any disease or condition where medical and surgical science has proved beyond question of a doubt that surgery is the wise and proper thing to do. However, the 10,000 or more members of the osteopathic profession who are licensed physicians and surgeons, can corroborate with their public the claim that 60 per cent of infected tonsils can be cleansed of their infection, and the tonsils maintained as normal structures without surgical removal. Our colleagues of the M.D. league through one of their leading institutions in the United States issued a statement not long since that 55 per cent of all the tonsils removed failed to result in measurable systemic relief. We made personal observation in as high as 50 tonsil operations daily in that institution and have first-hand information.

Singers, young and old, continue to have voice impairment. Anatomy and physiology are the same today as always; environment has not changed much. Strains, exposures, accidents, secondary disease, and other influences play a role of injury to the speaking and singing voice apparatus. As each week passes, our clinic takes care of dozens of new patients who are hoarse, or who have lost their voices. It is true that some of these are caused by cancer, tuberculosis, or syphilis, and some are due to benign tumors and other disease. We do not claim manipulation will cure patients with cancer, syphilis or tuberculosis, but osteopathic manipulation aided by the Federal and state required chemical specifics does effectively aid a greater number of those patients than are helped without osteopathic manipulation. Also, in the average benign case of hoarseness or aphonia, even in partial paralysis of the vocal cords, osteopathic manipulation properly given succeeds in restoring the voice in approximately 100 per cent of the cases.