ENDO NASAL TECHNIQUE: A REVIEW OF PATIENT FILES

by

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ABSTRACT

Objective: To demonstrate the efficacy of the Endo Nasal Technique in the treatment of rhinitis and sinusitis

Clinical Features: The review of case files from a practitioner who is currently utilizing the Nasal Specifics Technique in treating his rhinitis and sinusitis patients

Intervention and Outcome: The observed patients with sinusitis symptoms receiving care had 55% the duration of symptoms compared with those not receiving care. The observed patients had 3.12 episodes per year prior to treatment as compared to and 0-2 episodes per year with treatment.

Conclusion: The average duration of sinusitis and rhinitis after ENT treatment is substantially lower than the duration prior to treatment. In addition, the number of remissions was substantially lower following treatment.

Key Indexing Terms: Sinusitis, Rhinitis, Endo Nasal Technique, Chiropractic

INTRODUCTION

Going back in ancient European history as far as 1250B.C, there is no documented example of E.N.T manipulation to be found. K.A Ligeros, a Greek medical doctor who specialized in manipulative history, has made suggestions that the Bedouins of the Greek tribes practiced some form of secret healing that was believed to involve treatment of the nasal cavity through a primitive form of cranial therapy (1).

The first concrete mention of ENT manual treatment, that has been documented, comes from Willard Carver; LL.B, D.C in his 1921 textbook titled "Chiropractic Analysis". This third edition included a section on nasal treatment that involves placing

rubber levers into the nose, however Carver offers little in the way of instruction, stating to the student that such methods need to be learned from an instructor (2). Dr Carver makes references indicating he used a form of nasal technique in 1906 for treatment of hydrocephalus, but since he failed to record his results, no official documentation exists (1).

Despite Carvers early mention of ENT work it is not until December 9, 1928 that Nephi Cottam, D.C. applies for a patent on his treatment which is described as, "single and double manipulation" in the patients mouth "of the tendons, muscles, membranes, tissues, ducts, glands, organs, growths, and hardened or solidified accumulations, for the restoration of the body" that we get a verifiable record (1). This letter, number 235675 of the U.S Patent Office, clearly puts Dr. Cottam at the starting line for all future ENT growth. Inspired by the term Osteopathy, Cottam began calling his cranial adjusting "craniopathy" in about 1932 and published his book "The Story of Craniopathy" in 1936 (1).

The importance of this work was soon gaining momentum and Dr. Paul Gillet M.D. was proving that massaging the mucous membrane of the nasal passage by means of a metal probe could open communication with the sympathetic nervous system. Dr.Gillet called this "Sympathico Therapy", and as a result of his work, eventually received the "Legion d'Honneur" by the French Minister of Public Health (3).

At the same time Major Bertrand DeJarnette D.C, who was introduced to concepts of cranial adjusting through partner Richard Van Rumpt, D.C. (Rumpt learned these techniques from an osteopath named Budreau in 1922) published his text "Technic and Practice of Bloodless Surgery" in 1939 (1). This text includes a chapter on "Eye, Ear,

Nose and Throat Technic". Here DeJarnette describes three ENT techniques for treating disease. The first "Eustachian Tube Technic", involves manipulation of the tissues surrounding the Fossa of Rosenmueller and nasopharynx. A second technique termed "Nasal Technic", involved placing the little finger into the nares to manipulate the posterior aspect of the turbinates and stimulate the sphenopalatine ganglion. The third, known as "Tonsil Technic", involves basic cleaning and lifting of the tonsils to prevent infection. Even though DeJarnette gave illustrated explanations of these procedures they only consisted of a very small part of his entire "bloodless surgery" protocol (4).

It was not until Thomas T Lake, N.D. D.C., first published his book "Endo-Nasal, Aural and Allied Technics" in 1942 that we get a complete and extensive work. Dr. Lake dedicates the book to one of his teachers W. Wallace Fritz, M.D., N.D. It has been postulated that Dr. Fritz learned these techniques from Cottam at a convention in 1930 (1). Lake's system was based on the principles of Correction, Reconstruction, Drainage, Coordination, and Correlation of bone and tissue wherever interference with the intake and utilization of oxygen is found. To accomplish this task Dr.Lake developed an 11-step protocol to be used on patients suffering from disease resulting from anoxia (general depletion of oxygen) or anoxemia (depletion of oxygen in the blood). The procedure was as follows:

1. Lymphatic drainage
2. Lake head recoil (aka Cottam lift)
3. External carotid sinus adjustment
4. Opening the pharyngeal cavity
5. Fixation adjustments of the external and middle ear

6. Nasal dilation and drainage techniques
7. Tonsil technique
8. Massage and dilation of the pharynx and larynx
9. Tracheal adjustment
10. Releasing glands in the neck area-parathyroid, thymus, general raising of all glands
11. Raising of the diaphragm

In addition to the vast collection of techniques and instructional illustrations, Lake offers his students detailed information as to why such techniques are of benefit to the patient. Lake defines the system as follows,

> "Endo-nasal, Aural and allied techniques is that science of the healing arts which has for its purpose the removal of obstructions and impediments that interfere with the intake and utilization of oxygen in each and every part of the human body by means of manipulation by the hands and fingers" (5)

Dr. Lake is also credited as the first to coin the term Endo-nasal Therapy, which he claims was quoted from an article titled "Vigorous Health", London, England (long out of print) (5).

In 1950, Frank L. Finnell, O.D., D.C. publishes his book "Constructive Chiropractic and Endonasal-Aural and Allied Office Techniques for Eye-Ear-Nose and Throat". In his dedication he gives credit to both Gillet and Lake, even going so far as to use some of Lake's original sketches and several of his "trademark" techniques (6). Under ear techniques he instructs in wax removal, retraction of the tympanum via

Politzer,Valsalva's and Taylor's technique, Tympanic adjustment technique. Finnell mentions the Nasopharyngeal method of draining the Eustachian tube and fossae of Rosenmuller, he refers to this as the "Pharyngeal Finger Technic". It is here in Finnell's text that we also see the introduction of what is called "Nasal Specific Technic", which be utilized with the bulb of a Baumometer and finger cots to open up the nasal passages or the finger of the doctor alone. Massotherapy, a technique using negative pressure suction in the nasal cavities is also mentioned. Dr. Finnell also correlates the importance of removing all of the allergic factors such as milk, chocolate, wheat, bread, strawberries, gases, smoking, dust, odors, dry heat, and even cats and dogs when treating chronic conditions.

Borrowing heavily from the work of Lake and Finnell, the modern day approach to ENT work focuses on use of mild silver protein solution, endo-nasal, and nasal specific technique. It is within these three techniques that a consistent and effective treatment for sinusitis and rhinitis can be obtained and evaluated.

The Nasal Specifics Technique is currently taught and used at Western States Chiropractic College by Lester Lamm, D.C. and Steve Oliver, D.C. where they are currently gathering information on the success of the technique. A case study was published that showed that the intervention of the Nasal Specifics technique in to the treatment plan for a 41 year old, relief of her chronic sinusitis and sinus headache was achieved. Under her prior chiropractic care, her symptomatology was persistent until the use of this technique (7).

There are around 50 million Americans suffering from allergies and sinusitis symptoms (8). Currently patients suffering from chronic sinusitis are turning toward

physical exercise to alleviate symptoms. Other forms of treatment currently include: herbal therapy – 32%, chiropractic therapy – 16%, biofeedback – 13%, acupuncture – 11% chelation therapy – 7%, and medications – 60% (9).

METHODOLOGY

The purpose of this study was to determine the efficacy of manual medicine in the treatment of rhinitis and sinusitis. Data was collected from a review of records of patients that have received the Endonasal Technique. This data was analyzed and compiled to compare the natural history of rhinitis with or without use of the Endonasal Technique. Twenty-five patient files were selected based on the presence of presenting symptomotology in the rhinitis or sinusitis criteria. Subjects were both male and female and of all ages. Patients include male and female, non-smokers with chronic or acute rhinitis and sinusitis symptoms, swollen and inflamed nasal or pharyngeal membranes with or without exudate, sinus congestion and runny nose. Patients only included those who meet the standard criteria for diagnosis of rhinitis and sinusitis and whose condition is not complicated by smoking or current use of allopathic treatment for their condition. Patient files were gathered from those patients who have already been treated by Dr. Fiscella at his chiropractic clinic. Those patients that met the inclusion criteria and who have had the Endonasal technique performed on them were randomly selected. Patient records were assigned consecutive numbers according to the order in which the record was reviewed. These patient record numbers will be noted on the Patient Record Information Sheet. The first 25 patient records that met the inclusion criteria were selected. There was no bias as to how patients are selected during patient record review.

Patients were required to have presented with associated symptoms and return for completion of treatments as noted by the doctor. Patient record review encompassed the previous 5 years of patient records at Dr. Fiscella's office.

DATA ANALYSIS

A symptomatology questionnaire for each date of each record review was performed based on a 12-14 day time frame. At the conclusion of symptoms or 14 days, the final review was done as to whether the condition was in remission due to the Endonasal technique or if symptoms were still present. See Appendix I.

DISCUSSION

Prior to treatment, the number of days during which patients presented with symptoms of sinusitis and rhinitis ranged from 5 to 15 days with a mean of 9.88 days. Patients received between 1 and 6 ENT treatments with a mean of 3.4 treatments. The duration of symptoms subsequent to treatment ranged from 1 to 12 days with a mean of 5.4 days. Prior to treatment the selected patient population experienced between 1 and 5 episodes of rhinitis and sinusitis per year with an average of 3.12 episodes. Following treatment, patients experienced between 0 and 2 episodes of sinusitis and rhinitis.

The above findings illustrate that in our selected population the duration of sinusitis and rhinitis symptoms following treatment was 55% of the duration of symptoms without treatment. Prior to ENT treatment the selected patients experienced an average of 3.12 episodes of rhinits and sinusitis per year; however, following

treatment patients experienced far fewer episodes. Self-reports suggested between 0 and 2 episodes of remission.

The endo-nasal technique and nasal specific technique, in conjunction with colloidal silver application, provide an alternative treatment of rhinitis and sinusitis without the harmful effects that can occur with antibiotics. Our limited study illustrates the potential for this technique to limit the course of the disease and improve the overall prognosis of patients who experience chronic cases of rhinitis and sinusitis.

While our study is a necessary beginning in analyzing the effects of ENT treatment of sinusitis and rhinitis, it has many significant limitations. Our patient population is small and contains no control group. Another important limitation of the study is the fact that the data obtained is based upon review of specific patient files that had undergone this type of treatment and subjective self-reports from the patients. Yet another limitation was the fact that limited data was available in the literature concerning the natural course of the disease and the efficacy of allopathic treatment for means of comparison. Significant variables exist which can alter the outcome of any type of treatment. Some of these variables include dietary and environmental factors.

Standardization of patient care including consistent dietary factors, patient monitoring for 24 hours subsequent to treatment, and consistent environmental factors would assist in minimizing the variables that could adversely affect the outcome of the study. Comparing the manual methods of treatment to the allopathic approach would also be beneficial. Utilizing a larger study group with a control group would also strengthen the data.

CONCLUSION

Based upon the above data, the endo-nasal technique and nasal-specific technique with the application of colloidal silver proves to be a promising intervention in the treatment of rhinitis and sinusitis. The average duration of sinusitis and rhinitis after ENT treatment is substantially lower than the duration prior to treatment. In addition, the number of remissions was substantially lower following treatment. Overall the ENT procedure and treatment protocol has provided enough data to warrant further research.

REFERENCES

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APPENDIX I – PATIENT RECORD INFORMATION SHEET

Patient Record Number:________
Patient Biographic/Demographic Information:
Type of Work

Family History of Condition

Smoker / Non-smoker

Dairy Product Usage

Age:____

Gender: Male:____ Female:____

Length of Condition___________

Number of Previous Episodes_____

Approximate length of each episode____

Symptoms reported by Patient:

Previous treatments performed
OTC____
Rx____
Surgery____
Home Remedies____
ENT____
Colloidal Silver/Supplements____

Diagnosis:____________

Number of ENT Treatments performed____
Duration of remission____

Notes:

APPENDIX II: ENDO-NASAL TECHNIQUE PROCEDURE

The most utilized ENT procedures done today can be summarized into four basic techniques, which are summarized below. The subsequent procedure has been adapted from Finnell and Lake's texts.

Conservative Management of Chronic Sinusitis with Mild Silver Protein Solution

Indications: Chronic sinusitis or related head/facial pain. Chronic nasal congestion secondary to irritation/inflammation of nasal mucosa.

Contraindications: Epistaxis, polyps, or history of nasal bone fracture.

Procedure: The physician will need 6 inch cotton tipped applicators, a 10% solution of Mild Silver Protein, a pair of latex gloves for the physician, a tissue-lined plastic bucket or box to catch to exudate and discharge from the patient's nose, and a box of facial tissues. After a thorough physical examination of the patient's nasal recesses, the physician will prepare two super-saturated 6 inch cotton tipped applicators. One at a time, the physician will insert a cotton applicator into the middle meatus of patient's nose. The physician will slowly and carefully insert the applicator at an approximate *45* degree angle into the middle meatus. The applicator will encounter resistance after it has been inserted about 2 inches. Upon encountering resistance, the physician will simultaneously lift the free end of the applicator and apply gentle insertion pressure. As the applicator approaches a horizontal orientation, the applicator will appear to "give way" or "drop" into place. It is where the applicator "drops into place" that the physician discontinues inserting. It is at this location that the saturated cotton tipped applicator is most effective. This is the location of the orifices to the maxillary, frontal, and ethmoid sinuses. This process is repeated on the opposite nostril.

The cotton tipped applicators are left in place for ten to twenty minutes and the sinuses allowed to purge. The patient can be left in a sitting, upright position or lying prone on an adjusting table with the head extending off the end. A receptacle for catching the exudate or discharge should be placed in the patient's lap or off the end of a treatment table. The patient should be forewarned that they should not become alarmed at the sight of copious quantities of unsightly, black mucoid discharge. It will usually begin as a ninny nose and progress rapidly to the production of long, strings of mucoid discharge that will be discolored by the silver protein solution. It is not unusual for the patient to experience tearing of the eyes. Additionally, it is quite common for a patient to experience fits of sneezing. After the specified time period, remove the applicators, give the patient a box of facial tissue and allow them to blow their nose in private in order to expel the accumulated mucoid debris. It is not unusual for the patient to report a corresponding stuffy nose over the days that this procedure is being performed.

The complete course of treatment consists of three separate one-hour interventions. There should be two days of consecutive treatments followed by a day without treatment (this allows the irritated soft tissue structures of the nose to recover) followed by another day of treatment. That would be two days of treatment, a days rest, and a day of treatment. For most cases of chronic sinusitis, this will cause the sinuses to sufficiently purge to allow clearer breathing and significant diminishing of facial and headache pain.

This procedure is not a cure; it is a therapeutic intervention to relieve symptoms. For the chronically afflicted, the therapeutic value could be expected to last for 6 months to a year. For those patients with less severe manifestations of chronic sinusitis, a therapeutic intervention will most likely be needed every year or so.

Endo-Nasal Protocol

Indications: Chronic rhinitis and sinusitis are amenable to treatment by manual methods utilizing the endo-nasal and nasal specific techniques in conjunction with application of colloidal silver.

Contraindications: Presence of active ear, nose, or throat infection, tympanic membrane perforation, ear, nose, or throat masses, tonsillar or peritonsillar abscesses, or other pathologies requiring referral of patient for further evaluation or treatment.

Physician preparation: The treating physician will need a pair of clean latex examination gloves for this procedure. Additionally, a dilute solution of phenolated iodine is commonly used for disinfecting the physician's digit before insertion into the nasopharnyx.

Patient preparation: The patient is seated in a chair with legs fully extended and toes purposefully pointed toward the ceiling. It is advised to have the patient sit on their hands. This will provide the physician with a few extra seconds of treatment time should the patient attempt to remove the physician's hand from their mouth. The physician should utilize their non-treating hand to stabilize the patient's head on the opposite side from which the physician is standing and treating (right hand treats the right nasopharnyx, left hand treats the left nasopharnyx). While stabilizing the patient's head with the non-treating hand, the physician should use their index finger to depress the patient's cheek between the upper and lower molars of the patient's open mouth This will minimize the likelihood that the patient will bite the hand that treats them.

Procedure: Once the patient is seated properly and stabilized, the physician will dip the index finger into the phenolated iodine solution and insert it into the patient's mouth. It is best to move along the inside of the cheek on the side being treated until the soft palate is encountered. Without stimulating the gag reflex, roll the hand over so that the posterior aspect of the index finger is functioning as a tongue depressor. Instruct the patient to think the vowel sound "a" as in the word "after". Instruct the patient not to vocalize the word, only think about forming the mouth to make the sound. This will

provide the greatest aperture for access to the nasopharnyx. Quickly insert the finger up behind the mid-line of the soft palate, hook the finger and slide to the side. The finger should be inserted at an approximate *45* degree angle up and lateral toward the effected ear.

The physician's finger will eventually encounter a cul-de-sac or dead end soft tissue resistance. This is the fossa of Rosenmuller. It is here that the Eustachian tube empties from the middle ear. Forcefully insert the finger into the fossa and disrupt any adhesions in the area. The finger is too large to insert into the Eustachian tube but it is sufficient to disrupt the adhesions and stretch the soft tissue structures in the fossa. As the physician withdraws the treating finger, he or she should "spring" the soft palate. This is done by simply hooking the soft palate and administering a gentle tug on the way out.

This entire procedure can be done in a matter of seconds for the patient who does not tolerate the insertion, or it can be managed over a period of 20-30 seconds if the patient accommodates it well. Regardless of the time frame, it is imperative to be in the right location and to disrupt the adhesive fibers that occlude the orifice to the Eustachian tube.

Home care: Post-procedure intervention can be as helpful as the procedure itself. After the Endo-nasal manipulation has been conducted, it is important for the patient to auto-inflate the middle ear chamber. This can easily be achieved by having the patient perform a Valsalva type maneuver as if to "clear the ears". This will create a constant positive pressure in the middle ear chamber and cause the fluid accumulation to be forced out the Eustachian tube. Auto-inflation should be performed by the patient as frequently as prudent (6-10 times a day). Supportive to auto-inflation is massage. The patient should be instructed to aggressively "milk" the soft tissue structures posterior to the angle of the jaw downward. The patient should place a fingertip in the sulcus formed by the posterior aspect of the jaw and the anterior/inferior portion of the external ear. The patient should then sweep downward following the anterior border of the sternocleidomastoid muscle. This process will facilitate lymphatic drainage as well as emptying of the middle ear chamber.

Nasal Specifics

Indications: Chronic facial and head pain secondary to chronic sinusitis, chronic headaches of various etiologies to include migraines, chronic nasal airway obstruction or narrowing.

Contraindications: Epistaxis, polyps, history of nasal bone fracture.

Procedure: The physician will need a pair of latex examination gloves, a quick-release insufflation bulb as used on a blood pressure cuff, finger cots, lubricating jelly, and toothpicks.

Following a thorough history and physical examination of the nose, the patient is prepared by lying in a comfortable supine position on an adjusting table or other low

treatment table. The physician has already prepared the equipment to be used in this procedure:

- 2 to *5* finger cots have been unrolled and placed one inside the other and secured with string to the nipple of the insufflation bulb. 2 finger cots are most commonly used but up to *5* can be used for more difficult and protracted cases (this is usually determined after an attempt with 2 finger cots has been made).
- The finger cots attached to the insufflation bulb are substantially coated with a lubricant like KY jelly and placed on a clean surface near the head of the patient.
- The physician should glove up immediately prior to administering the therapeutic intervention.

The therapeutic intervention requires the physician to place the lubricated finger cots into the inferior meattus of the nasal passages. This is best achieved by laying the tip of the finger cots over one of the nares and "catching" it with a toothpick. As the tip of the finger cot is doubled over the end of the toothpick, the toothpick is used to insert the finger cot into the inferior meatus. The inferior meatus is found by sounding with the toothpick on a 90 degree plane line to the long axis of the face. If the patient were upright, the insertion would be absolutely horizontal. Once the finger cot is in place, the toothpick is withdrawn. At this point the physician reaches across the face of the patient and completely occludes the opposite nostril with the index finger. Simultaneously, the physician inserts the nipple of the insufflation bulb inside the nares being treated and occludes the remainder of the opening with the thumb (the same hand that is occluding the other nares). The physician then gently and slowly inflates the finger cot by squeezing the bulb. The finger cot should be inflated until it takes up the existing air space in the inferior meatus. The physician can feel this end point because there is remarkable resistance to further inflation. The physician is now ready to fully inflate the finger cot. Instruct the patient to inhale and hold their breath during the inflation process. This will prevent inadvertent aspiration of a loose cot. In rapid succession, the physician will quickly inflate the finger cot by squeezing the bulb twice. Immediately upon completion of the inflation, the physician compresses the quick release button on the insufflation bulb and allows the cots to deflate. The inflation/deflation procedure takes 2-3 seconds to complete.

This process is repeated on the opposite nostril in the inferior meattus. After both inferior meattus have been treated, the finger cots are inserted in the middle meattus of both nostrils. The middle meattus are found on a *45* degree angle to the long axis of the face and are the easiest to find. After both middle meattus have been treated, the finger cots are inserted into the superior meattus. These meattus are more difficult to access and frequently require gentle sounding of the area. The superior meattus are found at a much more acute angle and well toward the roof of the nasal recesses. Once each of the superior meattus have been subjected to the inflation process, the physician returns to the

inferior meattus for a final inflation. Returning to the inferior meattus is required because it is felt the inflation of the middle and superior meattus causes the turbinates to be inappropriately displaced downward and a final inflation of the inferior meattus will correct this.

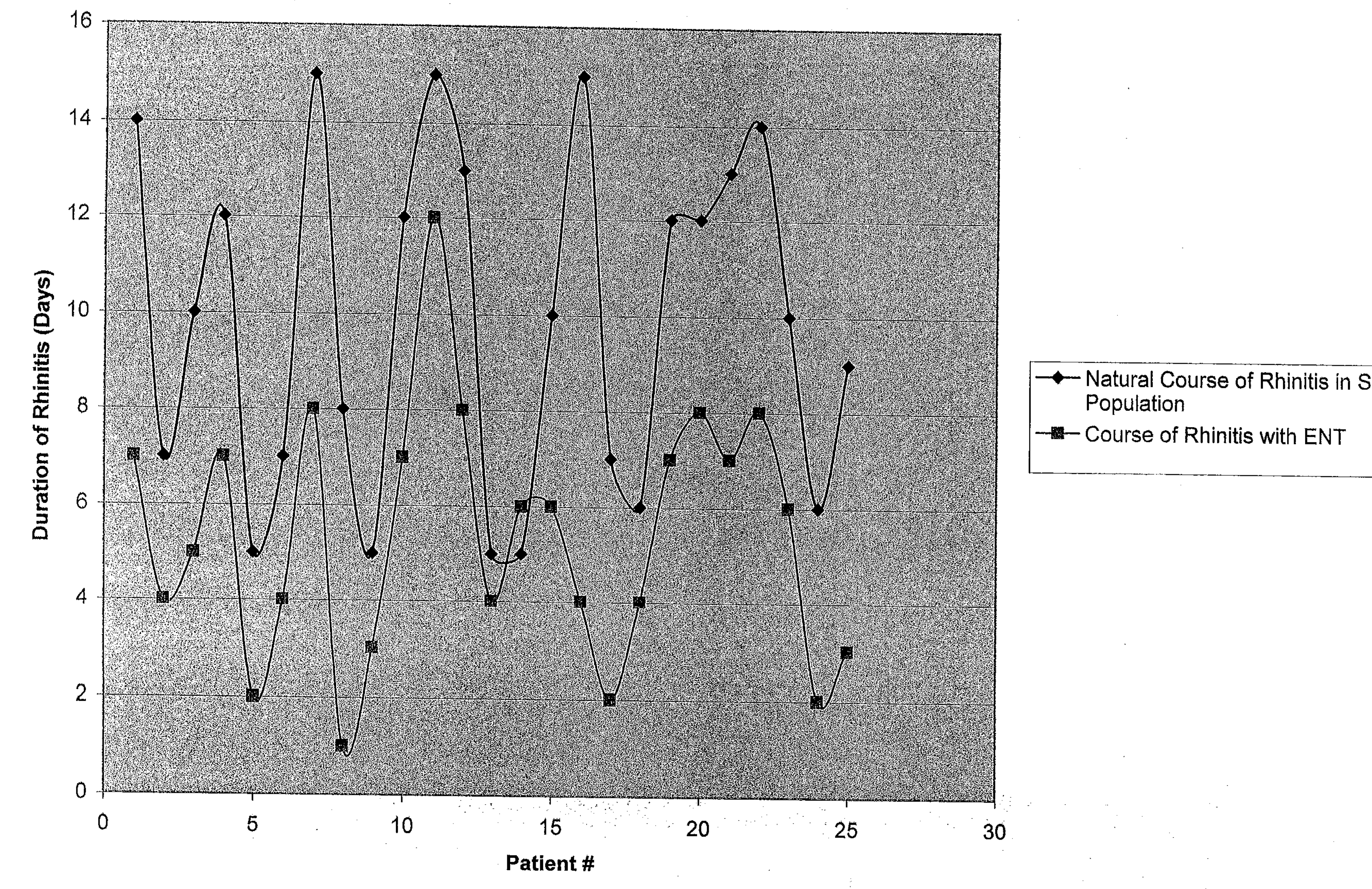
Usually a couple or three treatments are all that is required to bring relief or benefit to the patient, but this will depend entirely on the presentation and degree of compromise to the airway.

If this therapeutic protocol initiates a severe nosebleed, appropriate intervention with anterior or posterior nasal packs should be started.

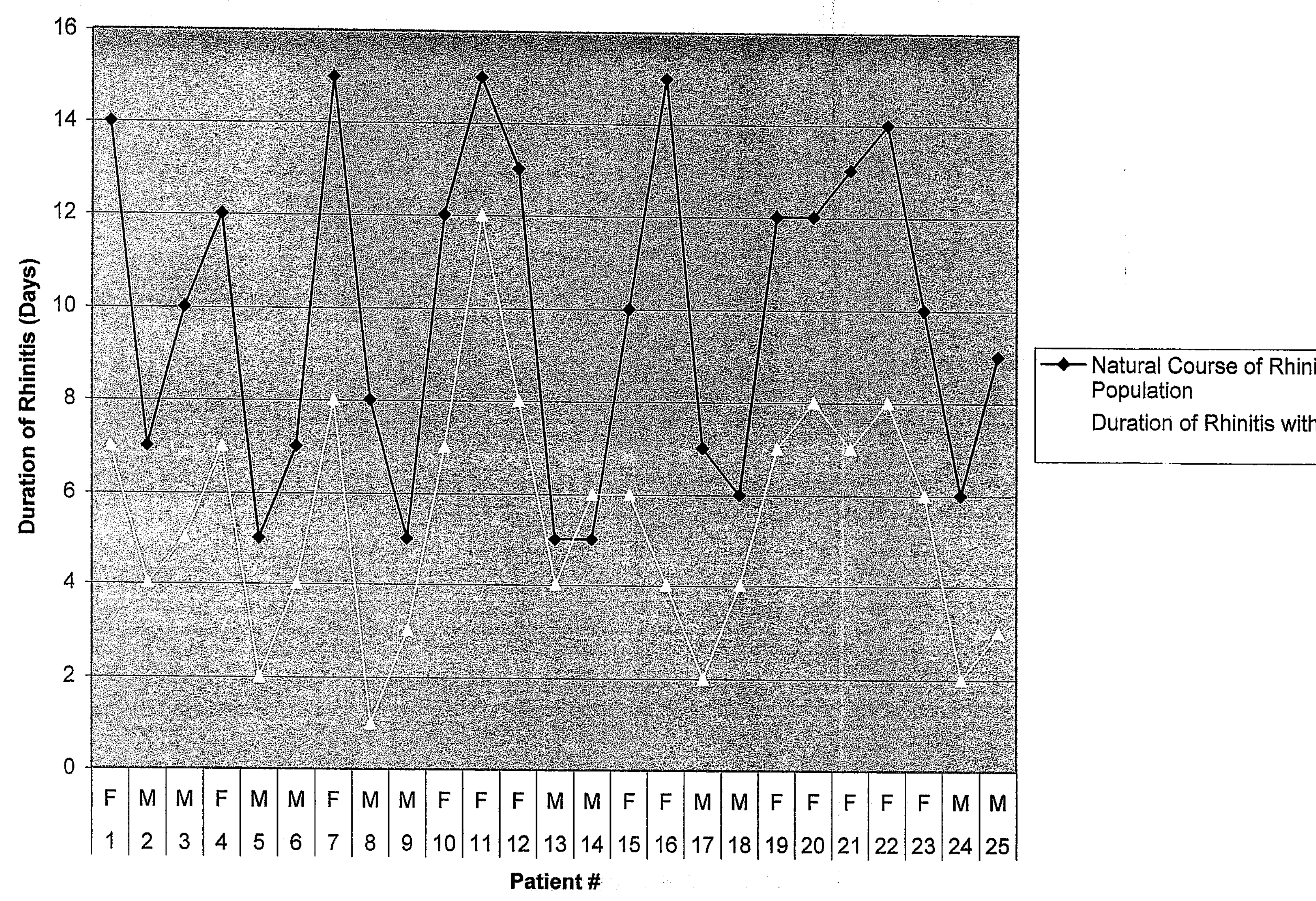
DATA COLLECTION

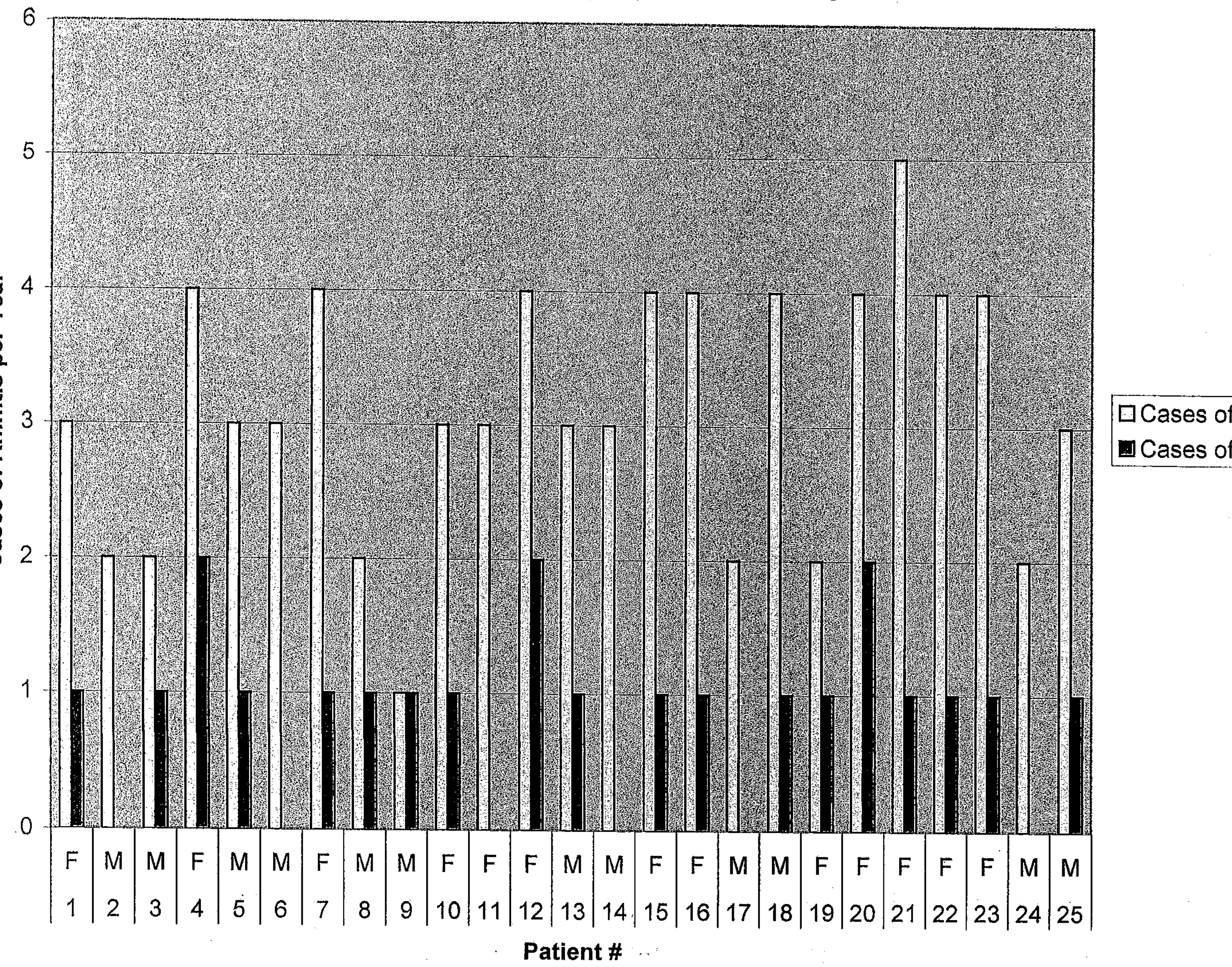
Patient #	Sex	Hx (Days)	# Tx	dur w/ tx	hx / yr	remission
1	F	14	5	7	3	1
2	M	7	3	4	2	0
3	M	10	4	5	2	1
4	F	12	6	7	4	2
5	M	5	2	2	3	1
6	M	7	3	4	3	0
7	F	15	6	8	4	1
8	M	8	1	1	2	1
9	M	5	2	3	1	1
10	F	12	4	7	3	1
11	F	15	1	12	3	0
12	F	13	4	8	4	2
13	M	5	2	4	3	1
14	M	5	3	6	3	0
15	F	10	4	6	4	1
16	F	15	3	4	4	1
17	M	7	1	2	2	0
18	M	6	3	4	4	1
19	F	12	6	7	2	1
20	F	12	4	8	4	2
21	F	13	5	7	5	1
22	F	14	5	8	4	1
23	F	10	5	6	4	1
24	M	6	1	2	2	0
25	M	9	2	3	3	1

Table 1: Data Collection Sheet



Duration of Rhinitis with and without Treatment
Duration of Rhinitis (Days)
16
14
12
10
8
6
4
2
0
0
5
10
15
20
25
30
Patient #
Natural Course of Rhinitis in Selected Population
Course of Rhinitis with ENT


Duration of Rhinitis with and without Treatment
Duration of Rhinitis (Days)
16
14
12
10
8
6
4
2
0
F M M F M M F M M F F F M M F F M M F F F F F M M
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Patient #
Natural Course of Rhinitis in Selected Population
Duration of Rhinitis with ENT


Cases of Rhinitis Per Year with and without Tx.
Cases of Rhinitis per Year
0
1
2
3
4
5
6
F M M F M M F M M F F F M M F F M M F F F F F M M
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Patient #
Cases of Rhinitis Per Year without Tx.
Cases of Rhinitis per year following Tx.

Natural History of Rhinitis in Selected Population

# of days with Rhinitis

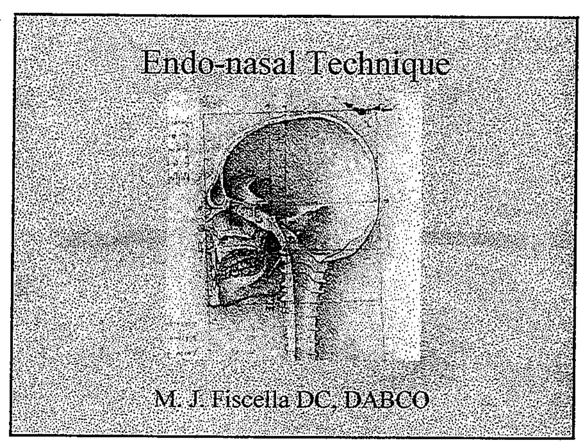
16
14
12
10
8
6
4
2
0

0 5 10 15 20 25 30

Patient #

Series1

Endo-nasal Technique



M. J. Fiscella DC, DABCO

History of Endo-nasal Technique

- Ancient European
- N. Cottam DC
  - U.S. Patent in 1928 for E.N.T. technique
- W. Fritz MD, ND
- T. Lake DC, ND
  - Endo-nasal, Aural and Allied Technique(1942)
- F. Finnell OD, DC
  - Politzer/Valsalva
  - Nasal Specific Technique
- R. Gibbons DC
  - 1950's repioneered technique for the DC
- K.E. Yochum DC
  - Nimmo technique
  - Chlorophyll / silver application

Endonasal Technique

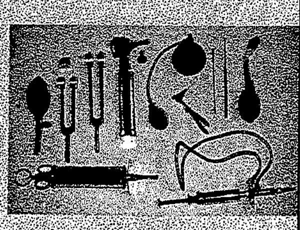
- Endonasal Specific
- Silver Applications
- Pharyngeal Sweep
- Manipulation of the Tonsils
- Cerumen Extraction
- Lymphatic Drainage
- Skull Manipulation

ENT Applications

- Encourage normal drainage
- Rhinitis / "common cold" - infectious and allergic
- Acute and chronic sinusitis
- Pressure headaches
- Mouth breathing
- Otitis media w/ effusions
- Hearing impairment (conductive loss)
- Eustachian deformities / blockage
- Halitosis
- Loss of smell

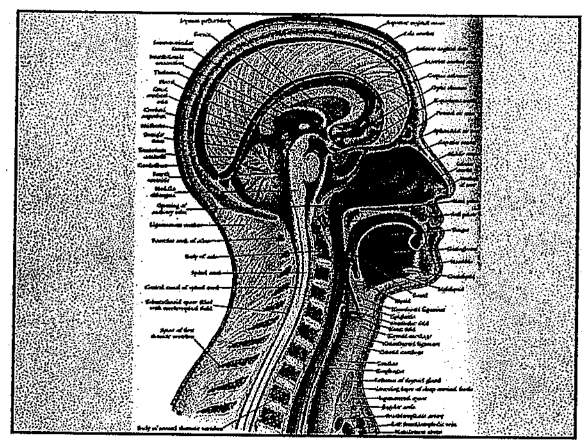
ENT Supplies

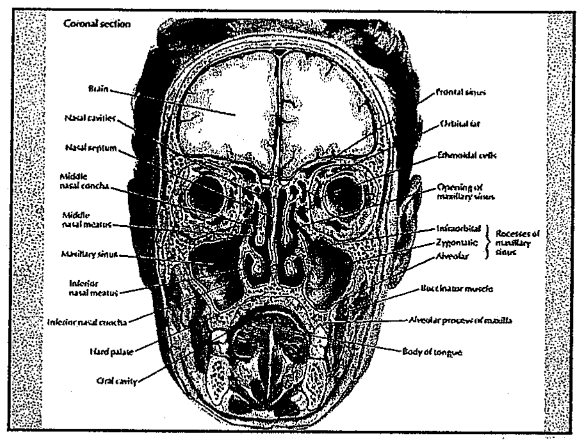
- Finger cots
- rubber bands
- probe
- sphygmomanometer bulb w/ extension
- cerumen spoon
- pneumatic bulb
- adult ear syringe
- nasal speculum
- tuning forks

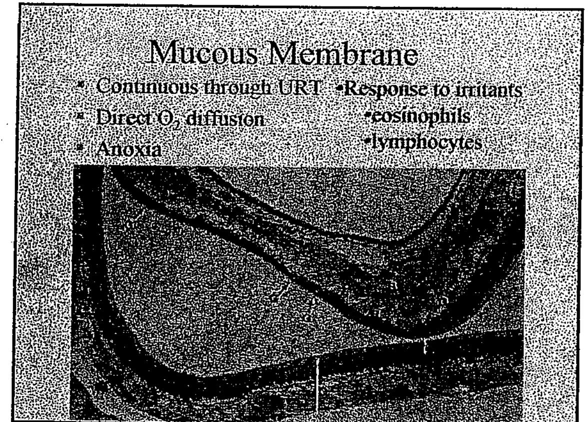


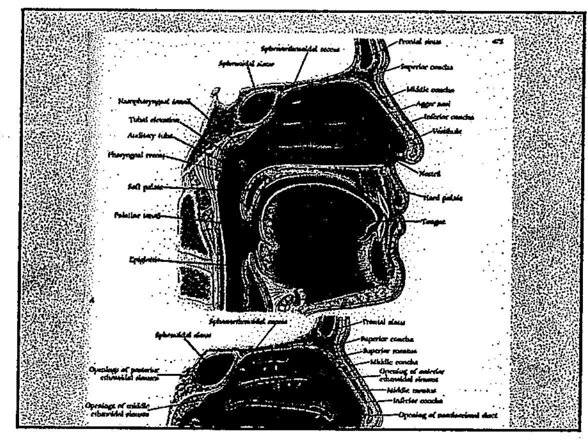
ENT Topical Solutions

- Silver
  - Colloidal
    - (500/1100ppm)
  - 10% solution
- Alkalol
- Mentholatum
- Phenolated Iodine
  - DAG
  - Swab & Gargle
- Chlorophyll
  - (aqueous)



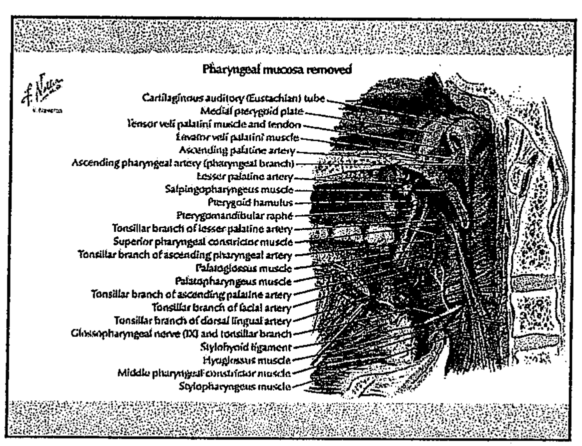






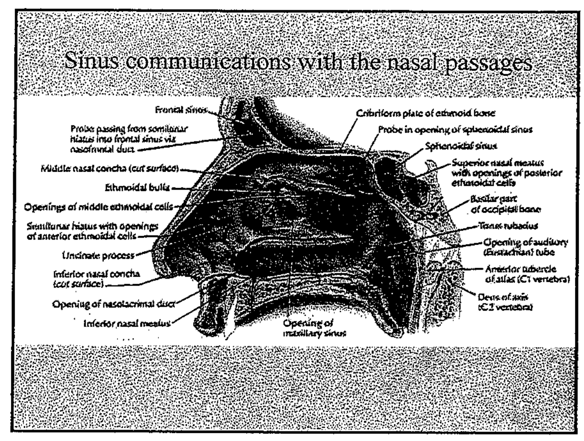
Eustachian Tube

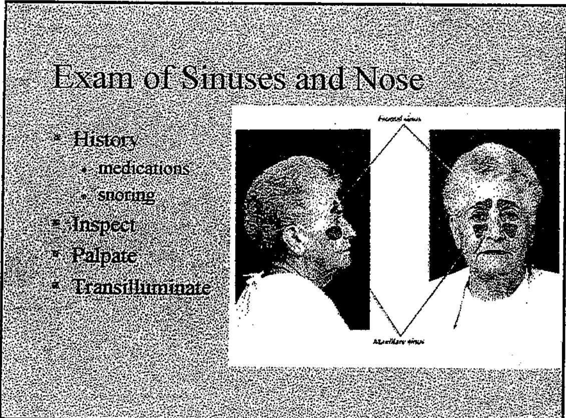
- Cartilage "horseshoe shaped" orifice
- Collapsible tube
- Mucous membrane surrounded
- Muscles contract to "milk" tube and equalize pressure
- Inflamed tissue can stick together
- stimulated to regain normal function w/ ENT procedure

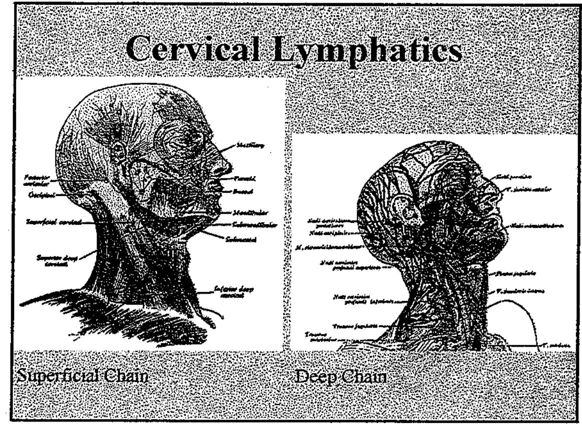


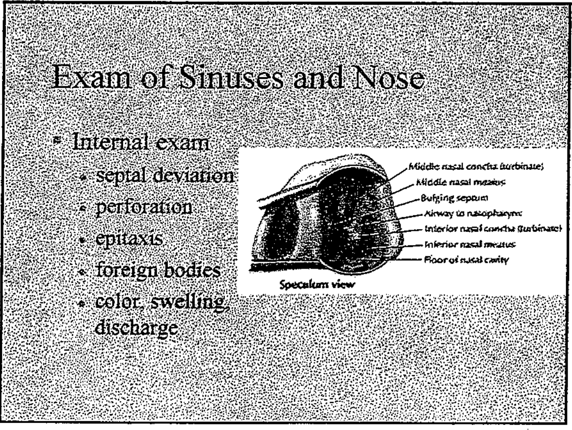
Communication in Nasal Meatus

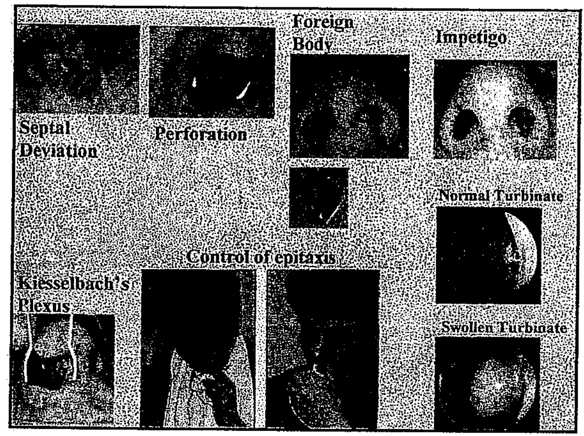
- Superior
  - Sphenoid sinus
- Middle
  - Frontal sinus
  - Maxillary sinus
  - most important w/ silver implants
- Inferior
  - Naso-lacrimal duct

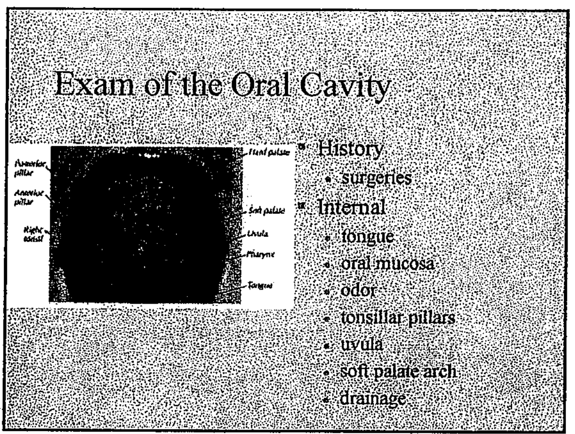


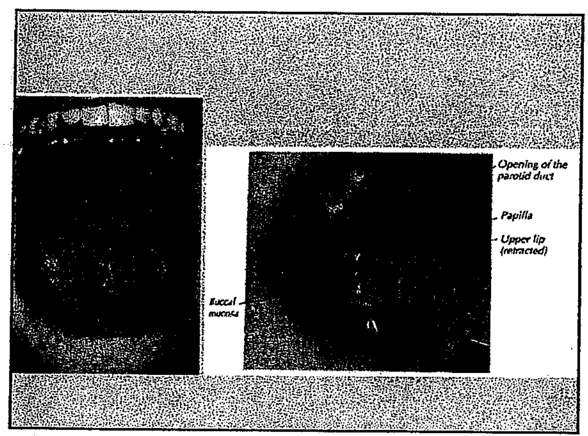


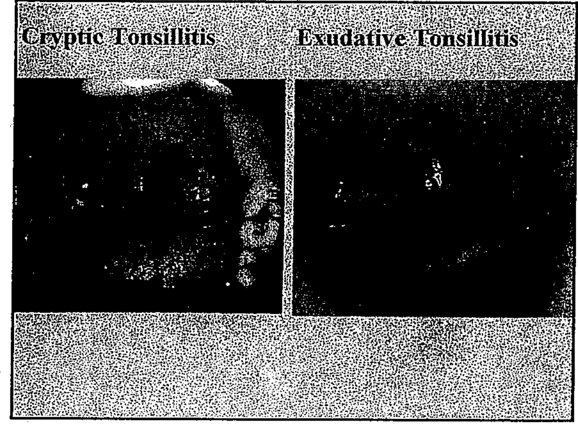


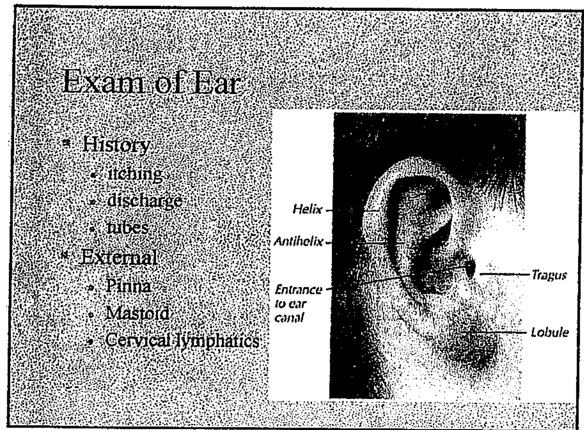


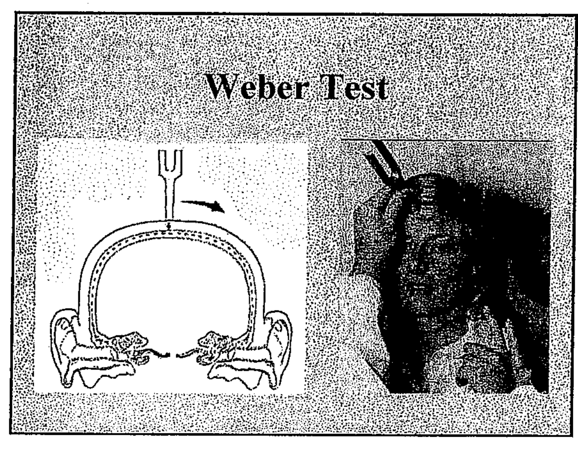

Septal Deviation
Perforation
Foreign Body
Impetigo
Normal Turbinate
Control of epitaxis
Kiesselbach's Plexus
Swollen Turbinate

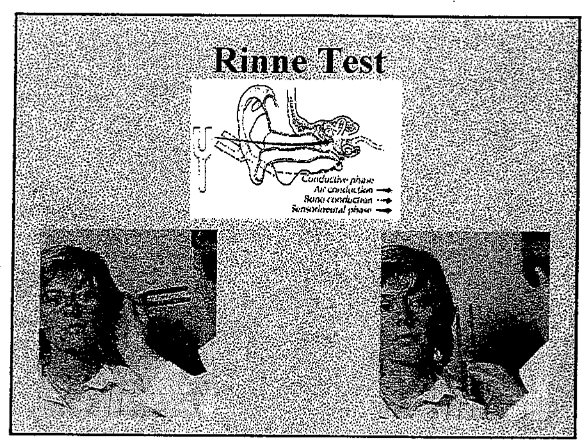

Exam of the Oral Cavity
History
surgeries
Internal
tongue
oral mucosa
odor
tonsillar pillars
uvula
soft palate arch
drainage

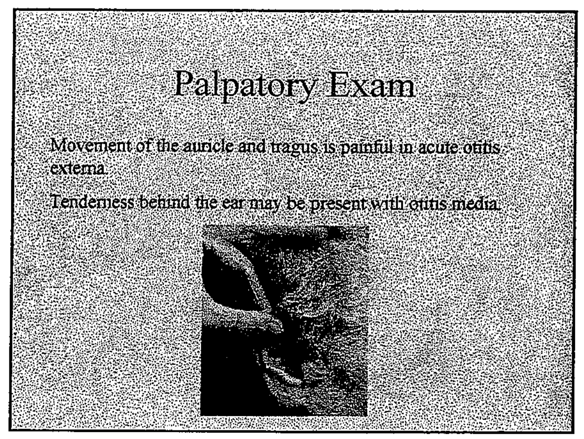

Opening of the parotid duct
Papilla
Upper lip (retracted)
Buccal mucosa

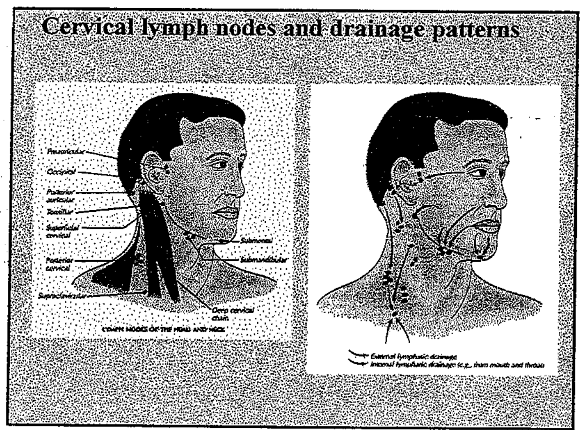

Cryptic Tonsillitis
Exudative Tonsillitis

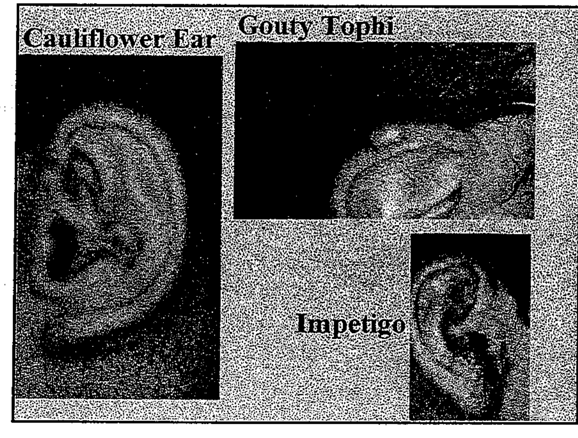

Exam of Ear
History
itching
discharge
tubes
External
Pinna
Mastoid
Cervical lymphatics
Helix
Antihelix
Tragus
Entrance to ear canal
Lobule

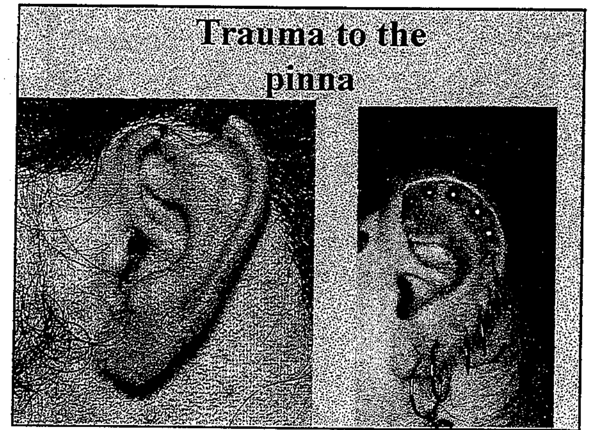

Weber Test

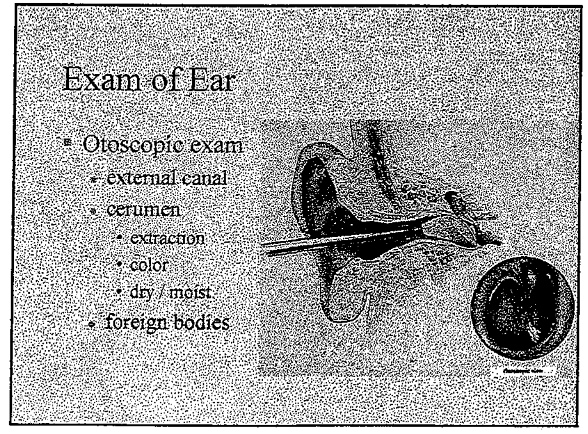

Rinne Test
Conductive phase
Air conduction
Bone conduction
Sensorineural phase

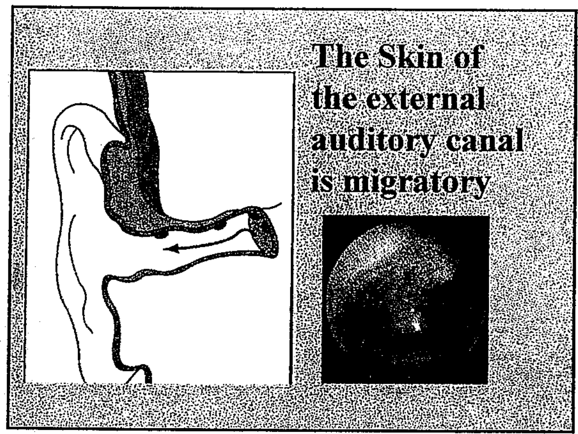

Palpatory Exam
Movement of the auricle and tragus is painful in acute otitis externa.
Tenderness behind the ear may be present with otitis media.

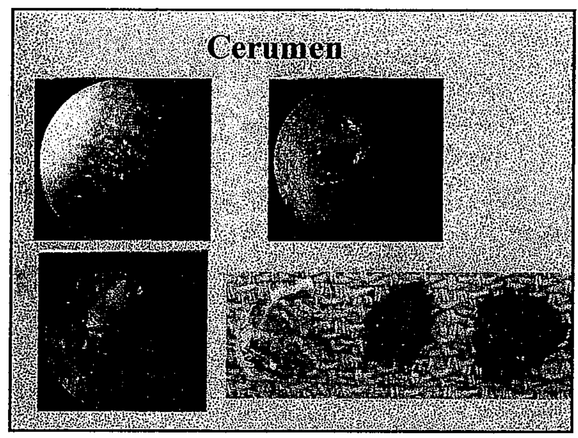

Cervical lymph nodes and drainage patterns

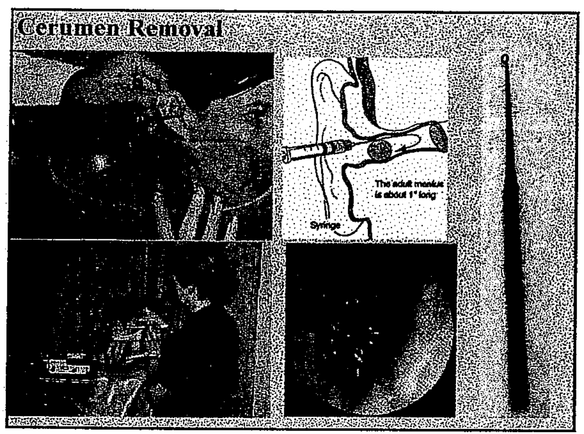

Cauliflower Ear
Gouty Tophi
Impetigo

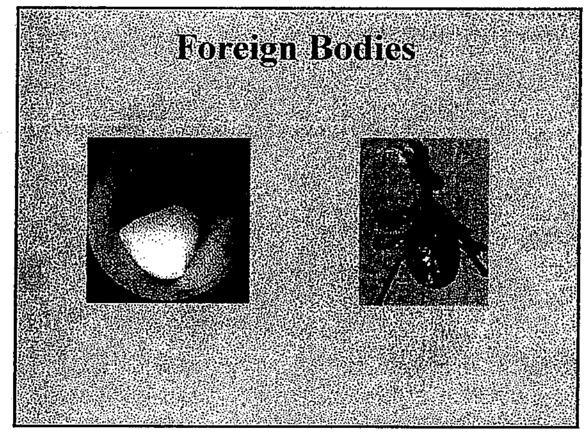

Trauma to the pinna

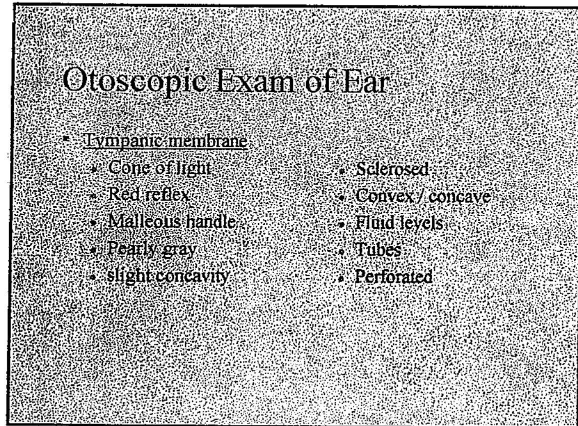

Exam of Ear
Otoscopic exam
external canal
cerumen
extraction
color
dry / moist
foreign bodies

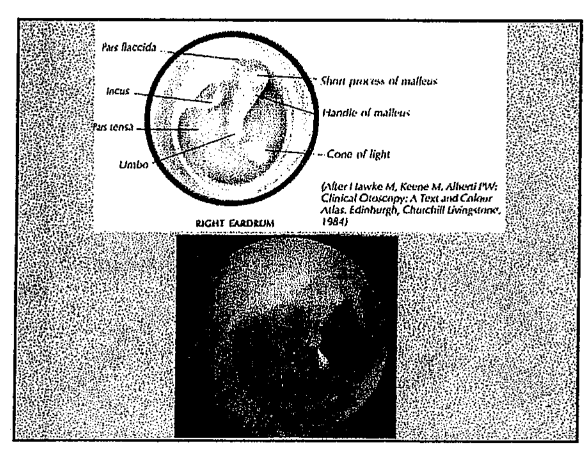

The Skin of the external auditory canal is migratory

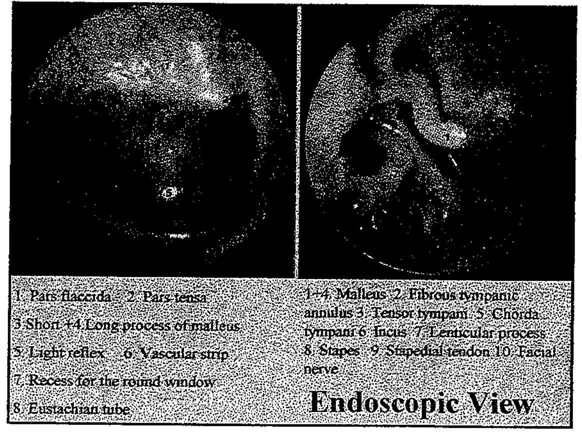

Cerumen

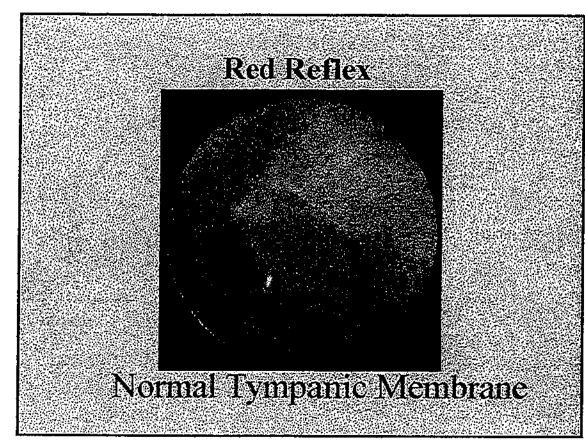

Cerumen Removal
The adult meatus is about 1" long
Syringe

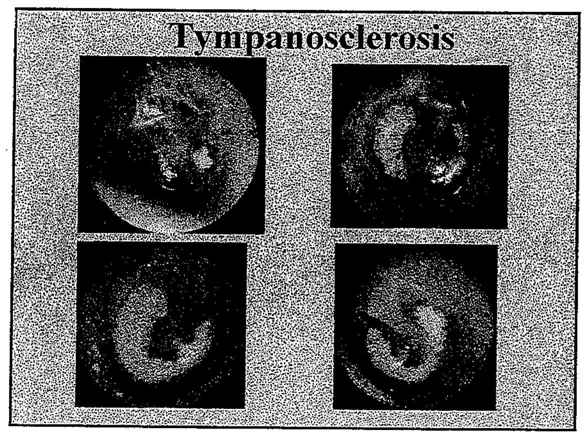

Foreign Bodies

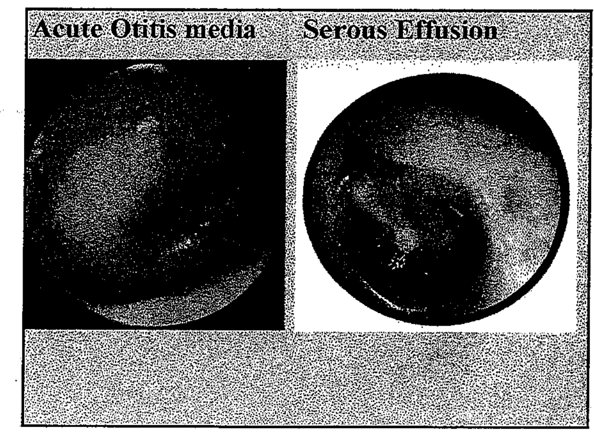

Otoscopic Exam of Ear
Tympanic membrane
Cone of light
Red reflex
Malleous handle
Pearly gray
slight concavity
Sclerosed
Convex / concave
Fluid levels
Tubes
Perforated


Pars flaccida
Incus
Pars tensa
Umbo
Short process of malleus
Handle of malleus
Cone of light
RIGHT EARDRUM
(After Hawke M, Keene M, Alberti PW: Clinical Otoscopy: A Text and Colour Atlas. Edinburgh, Churchill Livingstone, 1984)







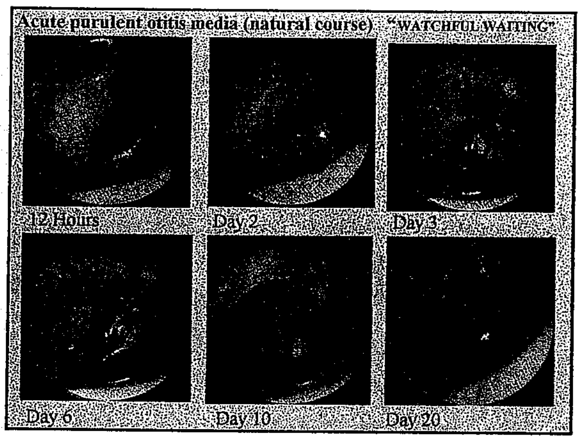


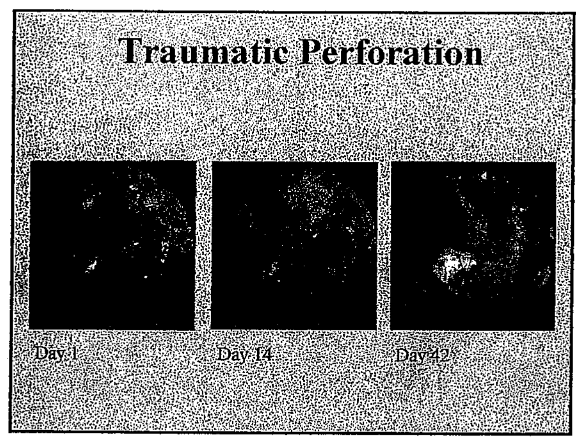
Risk Factors
Otitis media acute/serous

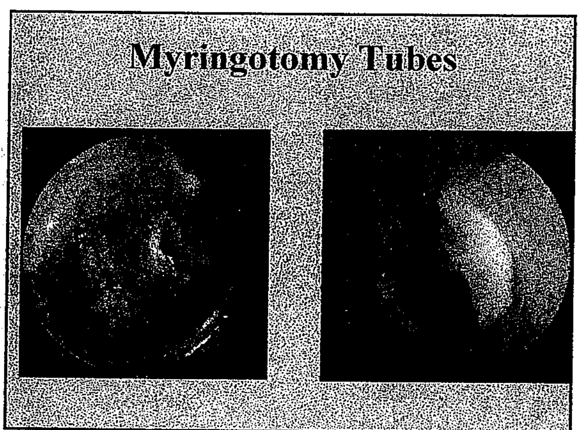
- Seasonal (predominant in winter)
  - American Journal of Public Health, 1980; 70:593
- Diet
  - milk, wheat, egg, peanuts, soy
    - Annals of Allergy, 1994; 73:215-219
- Infant Feeding
  - breast feeding is less than bottle fed
    - Nutr. Rev., 1983; 41(8):241
  - increased with pacifiers (restrict use to 1st 10 months of life)
    - Pediatrics, 1995; 96:884-888

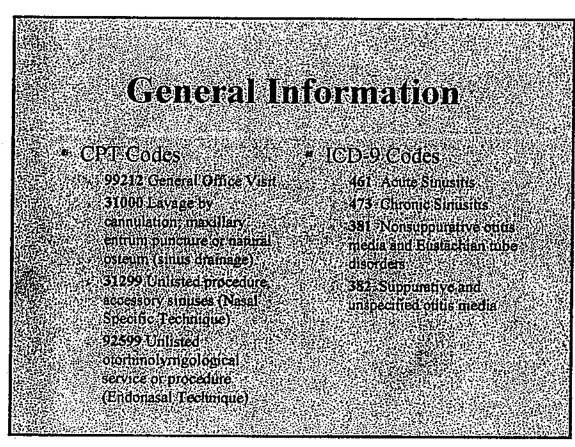
Risk Factors
Otitis media acute/serous
(continued)

- Cranial Facial distortions
  - Increase with fetal alcohol syndrome (93%) and Down's syndrome (60%)
    - Pediatrics, 1998; 82(2):147-154
- Allergies
  - Second hand smoke
    - J.A.M.A., 1983; 249(8):1022-1025
- Day Care environment
  - 2-4 times greater
    - Allergy, 984; (4):309-315









Product Information

- Mild Silver Protein (Silver Nucleate)
  - Nurnberg Scientific Lab Supplies (800) 826-3470 Fax-(503) 246-0360
- Colloidal Silver (500 ppm, 1100 ppm)
  - Advanced Bio Institute (800) 866-6786 Fax-(714) 540-0873
- DAG (Phenolated Iodine in an Irish moss extract w/ organic borates)
  - Health Line Products (425) 836-3309 Fax-(425) 868-5393
- Swab & Gargle (Iodine, Benzocaine, Phenol, & Thymol)
  - Health Line Products (425) 836-3309 Fax-(425) 868-5393
- Alkalol (Mucous solvent and cleaner)
  - Alkalol Company, Taunton, MA 02780-0952
- Mentholatum Ointment
- Topical Anesthetic Ointment
  - Vitaminerals Inc. (800) 242-4068

Works Cited

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- Bickley, Lynn S. MD Bates' Guide to Physical Examination and History Taking. Lippincott, Philadelphia. 1999.
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