

OSTEORADIONECROSIS ORAL HEALTH AND DENTAL TREATMENT

DANIEL E. JOLLY, DDS

Introduction

Osteoradionecrosis (ORN) also known as postradiation osteonecrosis (PRON), is a serious, debilitating and deforming potential complication of radiation therapy for the treatment of cancer of the head and neck. It has been defined as a necrosis or death of the bone of the mandible or maxilla that may occur following radiation therapy for cancer in the oral and perioral region. It is known to occur when bone, in this case the mandible and/or maxilla, are directly in the field of radiation. The reported incidence ranges from 2.6% to 22% but most commonly considered to be around 10% +/- 5%. Although it usually occurs in the mandible (lower jaw) it can occur in the upper jaw and it can occur following brachytherapy (radiation implants).

Diagnosis

Diagnosis of ORN depends primarily on clinical and radiographic changes in the bone. These signs and symptoms typically include ulceration of the mucosa, loosening of the teeth, exposure of the necrotic bone but rarely is pain a significant component of signs and symptoms. It is said to be present when exposure of the necrotic bone persists for more than 3 months.

Pathogenesis

The development of osteoradionecrosis was only recently under-

stood. Marx reported that it is not a primary bony infection occurring in irradiated bone. Rather, it is a deficiency in the internal physiological condition of the bone and in the metabolic process that is created when cellular structures within the radiated bone are damaged. The sequence of development of osteoradionecrosis is radiation, formation of hypoxic, hypovascular and hypocellular tissue (tissue low on oxygen supply with fewer than normal vessels and overall fewer tissue cells). Finally tissues can breakdown and a chronic non-healing wound can develop.

Studies have shown that the mandibular bone in ORN patients, when compared to irradiated but non-osteoradionecrotic bone and to non radiated bone, suggests that the inferior alveolar artery was obliterated or damaged to the extent that ischemia (low oxygen supply) occurred in the tissues in the area of distribution. Other bony changes in irradiated bone have also been reported.

From these reports it is now known that radiation affects the vascularity of the bone by eliminating or restricting the blood flow through arteries, arterioles and capillaries and reducing the overall cellularity (amount of tissue cells) of the bone (leukocytes, osteoblasts, hematopoietic tissue). This in turn leads to hypoxic tissue that is susceptible to damage followed by necrotic changes and ultimately osteoradionecrosis. The body has no way to carry nutrients, oxygen, infection fighting cells and replacement tissues to heal the damage. This can be likened in some way to a gangrene of radiated bone.

Specific etiology of ORN is generally considered to be from infection and/or trauma to the alveolar bone secondary to dental or oral pathologic conditions. Typically the concern is for dental caries to progress to the point of infecting the tooth nerve and later turning into a dental abscess which the body can not appropriately manage. In addition it can be induced by the extraction of teeth, even in the absence of active infection. The hypocellularity and hypovascularity permit the bacteria and other pathogens to develop without host defenses counteracting them. Periodontal disease has

Please see ORN on next page

In This Issue

A Time for Sharing.....	4
How to Manage Your Response to Daily Stressors.....	5
New Frontiers.....	6
Program Helps Families of Cancer Patients.....	6
With Sincere Appreciation.....	7

ORN continued from page 1

also been shown in this author's experience to lead to ORN, as well.

It is also assumed that non-tooth related oral trauma, such as that from a denture induced ulceration (denture sore), can permit the underlying bone to be exposed and infectious agents colonize that area, leading to an osteomyelitis, (infection of the bone). Non-infectious breakdown of alveolar bone, such as in an edentulous mandible without denture irritation, can lead to ORN, again in this author's experience, probably through general systemic weakness such as diabetes, osteoporosis, etc.

Prevention

Prevention of ORN is primarily through meticulous attention to pre-radiation treatment planning to eliminate oral disease such as caries, abscess and periodontal disease. Prevention also requires the patient to maintain excellent oral hygiene following radiation therapy. Additional preventive considerations include pilocarpine prescribed to assist salivary flow to minimize xerostomia, topical fluoride to control dental caries, and possibly the use of artificial salivary supplements.

Since radiation induced xerostomia is a primary causative factor in dental caries and ultimately ORN, maintenance of a moist oral environment is crucial to the prevention of ORN.

A significant challenge to the dentist is the determination, prior to radiation therapy, of what oral or dental condition pre-exists that requires treatment to limit the possibility of ORN following radiation therapy. Historically the extraction of all teeth in the field of radiation was undertaken to prevent dental disease leading to ORN. This alone can be debilitating to the patient, both physically and emotionally. Patients have been known to refuse radiation therapy for significant oral carcinoma when presented with this treatment plan. This situation can lead to early death from a disease state that might otherwise be controllable. Therefore, attention needs to be directed to eradication of dental and oral pathology, and potential oral pathology, prior to radiation therapy.

A group of dental clinicians and researchers from the Netherlands and the United States (Bruins, Koole and Jolly) have undertaken studies to define treatment planning and decision making prior to radiation therapy. Conclusions from the first parts of this study have shown that there is a general consensus among dentists and dental oncology specialists in Europe, North America and Australia about treatment planning. In short, a patient receiving radiation therapy for head and neck cancer who presents with normally treatable dental disease (if it were in the healthy individual) but who demonstrates poor oral hygiene history requires dental extraction rather than attempts to restore or retain teeth. However, early stages of dental caries and very early periodontal disease can usually be managed successfully.

Use of Hyperbaric Oxygen

As both a prevention and treatment modality, hyperbaric oxygen, has been found useful. It is used prophylactically prior to dental extractions and prior to reconstruction of mandibular defects to improve the circulation in the bone thereby increasing cellularity and the ability of the bone to heal following the surgical procedure. It has been found that the use of hyperbaric oxygen is a means of revascularizing irradiated tissues and improving fibroblastic cellular density which enhances wound healing.

Hyperbaric oxygen (HBO) is also used to treat ORN. A study was done with patients who were diagnosed with ORN following radiation therapy in doses ranging from 60 - 90 Grays (Gy). This dosage is often described as 6,000-9,000 centigrays (cGy), or in older terms, 6,000-9,000 rads. The mean dosage was 69.6 Gy. The onset of ORN was noted to occur as early as immediately following radiation therapy or could be delayed in displaying symptoms up to as long as 128 months following RT. In this study the mean onset time was 12 or 28 months following radiation therapy depending on which treating facility provided the initial radiation therapy.

HBO has been used in more than one manner. Van Merksteyn used HBO in a

multiplace chamber at 3.0 ATM (3 atmospheric pressures or 3 times the pressure of air we breath at sea level) with the patient wearing a mask of 100% oxygen during each of 90 minute treatments. There were 30 pre-operative treatment sessions (or dives) followed by 10 post-operative sessions. Another study placed patients in a chamber at 2.5 ATM of pure oxygen for 90 minute treatments with the individualized sessions based on pre-treatment consultation.

Irradiated head and neck cancer patients needing dental extractions may benefit from HBO. HBO may also be indicated as a therapy prior to reconstruction of the mandible and other facial structures. Treatment would usually consist of 20 "dives" prior to dental extraction or reconstruction, followed by the primary closure or extraction and then 10 post-operative dives. (A "dive" is a term given to the period of time when the hyperbaric chamber is slowly pressurized with air. Once at the correct pressure, the patient would begin breathing 100% oxygen)

The author has used this approach at The Ohio State University Medical Center, Hyperbaric Medicine Unit. Patients were given 20 dives at 2.4 ATM of pure oxygen for 90 minutes (excluding pressurization and depressurization time) prior to dental extractions then an additional 10 dives immediately following extraction of teeth, radical alveolectomy and primary closure. Utilizing this approach, the author has treated more than two dozen patients, in the last decade, and none have developed ORN.

Discussion

Osteoradionecrosis is a serious possible sequela of radiation therapy for head and neck carcinoma. Prevention is the most important component of the management of potential ORN. Prevention consists of several options:

1. Extraction of diseased and at-risk teeth prior to radiation therapy. Diseased and at-risk teeth are described as those with caries extending into the pulp chamber, those with periapical lesions, periodontal pockets over 4-5 mm, furcation involvements of Grade 2 and mobility of Grade 2 or more.

ORN continued on page 3

ORN continued from page 2

Extractions should be performed a minimum of 2 weeks prior to the beginning of radiation therapy. Teeth that should be treated are those within a field of radiation expected to exceed 50 Gy.

2. Prescription of pilocarpine at a dose and schedule of 5 mg three times daily (up to 30 mg total daily dose) beginning one hour prior to the first radiation dose and continuing potentially life-long. Some evidence suggests that beginning pilocarpine prior to radiation therapy could lessen the need for the medication following radiation therapy.

3. Topical fluoride should be provided in a brush-on gel or in a custom tray and used twice daily for 15 minutes. The fluoride can be either a 0.4% stannous fluoride or 1% neutral sodium fluoride preparation.

4. Strict adherence to regular toothbrushing three times daily and flossing daily is of the utmost importance.

5. Edentulous patients should be closely monitored for dehiscence or tissue breakdown of the mucosa under a denture. Denture ulcerations should be treated by leaving the denture out of the mouth until mucosal coverage is complete. Denture soft tissue adjustments and occlusion must be carefully monitored to minimize trauma. Following extractions and radiation therapy denture fabrication should be deferred up to a year or more depending on alveolar healing and overall oral and systemic health.

6. Saliva substitutes can be used to relieve xerostomia. The subjective reports of some patients suggest that water has as much beneficial effect and is less costly than commercial products.

Summary

Osteoradionecrosis (ORN) is a potentially debilitating complication of radiation therapy in the treatment of carcinoma in and around the oral cavity. Treatment of ORN is by surgical resection of all necrotic tissue and primary closure of the mucosa. This is supplemented with HBO given in 90 minute sessions at approximately 2.5 ATM of pure oxygen for 20 session prior to surgical intervention and followed by 10 additional post-

operative dives. Antibiotics, such as penicillins or similar spectrum antibiotics, may be utilized pre-operatively and for approximately 1 week postoperatively.

Editor's Note: Daniel E. Jolly, DDS is Professor and Director of the General Practice Residency program at The Ohio State University College of Dentistry and University Medical Center. He has actively practiced dental care for people with cancer for over 20 years and educated dental students, dental residents, dentists, dental hygienists and others over those same 2 decades. Dr. Jolly is an active member of the International Society for Oral Oncology and is currently Second Vice President of the American Association of Hospital Dentists.

REFERENCES

- Beumer J 3rd, Harrison R, Sanders B, Kurrasch M. Postradiation dental extractions: a review of the literature and a report of 72 episodes. *Head Neck Surg* 1983; 6: 581-6.
- Bras J, de Jonge HK, van Merkesteyn JP. Osteoradionecrosis of the mandible: pathogenesis. *Am J Otolaryngol* 1990; 11:244-50.
- Bruins H, Koole R, Jolly DE. Pretherapy dental decisions in patients with head and neck cancer. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1998; 86: 256-67.
- Bruins K, Jolly DE, Koole R. Preradiation dental decisions in patients with head and neck cancer. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 1999; 88: 406-12.
- Davis JC, Dun JM, Gates GD, et.al. Hyperbaric oxygen: a new adjunct in the management of radiation necrosis. *Arch Otolaryngol* 1979; 105:58-61.
- Epstein J, van der Meij E, McKenzie M, Wong F, Lepawsky M, Stevenson-Moore, P. Postradiation osteonecrosis of the mandible. *Oral Surg Oral Med Oral Path* 1997; 83(6):657-662.
- Epstein JB, Rea G, Wong FL, Spinelli J, Stevenson-Moore P. Osteonecrosis: study of the relationship of dental extractions in patients receiving radiotherapy. *Head Neck Surg* 1987; 10:48-54.
- Epstein JB, Wong FLW, Stevenson-Moore P. Osteoradionecrosis: clinical experience and a proposal for classification. *J Oral Maxillofac Surg* 1987; 45:104-110.
- Farmer JC, Shelton DL, Angelillo JD, Ferguson BJ. Treatment of radiation induced tissue injury by hyperbaric oxygen. *Ann Otolaryngol* 1987; 87:707-15.
- Fattore L, Strauss RA. Hyperbaric oxygen in the treatment of osteoradionecrosis: a review of its use and efficacy. *Oral Surg Oral Md Oral Pathol* 1987; 63:280-6.
- Friedman RB. Osteoradionecrosis: causes and prevention. *NCO Monogr* 1990:145-9.
- Galler C, Epstein JB, Guze KA, Buckles D, Stevenson-Moore P. The development of osteoradionecrosis from sites of periodontal disease activity: report of 3 cases. *J Periodontol* 1992; 4:310-6.
- Galler G, Epstein JB, Guze KA, Stevenson-Moore P. The development of osteoradionecrosis from sites of periodontal disease activity: report of 3 cases. *J*

Periodontol 1992;63:310-6.

Kluth EV, Jain PR, Stuchell RN, Frich JC Jr. A study of the factors contributing to the development of osteoradionecrosis of the jaws. *J Prosthet Dent* 1988; 59:194-201.

Li JH, Peh WC, Sham JS. Maxillary osteonecrosis after radiotherapy for nasopharyngeal carcinoma. *Clin Oncol (R Coll Radiol)* 1994; 6:135-6.

Lozza L, Cerrotta A, Gardani G, De Marie M, Di Russo A, Kenda R, Tana S, Valvo F, Zucali R. Analysis of the risk factors for mandibular bone radionecrosis after exclusive low dose-rate brachytherapy for oral cancer. *Radiother Oncol* 1997; 44:143-7.

Mainous EG, Hart GB. Osteoradionecrosis of the mandible: treatment with hyperbaric oxygen. *Arch Otolaryngol* 1975; 101:173-7.

Mansfield MJ, Sanders DW, Heinbach RD, et al. Hyperbaric oxygen as an adjunct in the treatment of osteoradionecrosis of the mandible. *J Oral Surg* 1981;39:585-9.

Marx RE. Osteoradionecrosis: a new concept of its pathophysiology. *J Oral Maxillofac Surg* 1983;41:283-7.

Marx, RE. Osteonecrosis of the jaws: a review and update. *Hyperbaric Oxygen Rev* 1984; 5:78-127.

Marx RE, Ames JR. The use of hyperbaric oxygen in bony reconstruction of the irradiated and tissue deficient patient. *J Oral Maxillofac Surg* 1982;40:412-20.

Marx RE, Johnson RP, Kline SN. Prevention of osteoradionecrosis: a randomized prospective clinical trial of hyperbaric oxygen vs penicillin. *J Am Dent Assoc* 1985; 111:49-54.

Mitchell HJ, Logan PM. Radiation induced changes in bone. *Radiographics* 1998; 18:1125-36.

Murray CG, Daly TE, Zimmerman SO. The relationship between dental disease and radiation necrosis of the mandible. *Oral Surg Oral Med Oral Pathol* 1980; 49:99-104.

Murray DG, Herson J, Daly, TE. Radiation necrosis of the mandible: a 10 year study. Part I - Dental factors: onset, duration, and management Factors influencing the onset of necrosis. *Int J Radiat Oncol Biol Phys* 1980;6:543-8.

Patel P, Raybould T, Maruyama Y. Osteoradionecrosis of the jaw bones at the University of Kentucky Medical Center. *J Ky Med Assoc* 1989; 87:327-331.

Schweiger JW. Oral complications following radiation therapy: a five year retrospective report. *J Prosthet Dent* 1987; 58:78-82.

Toljanic JA, Ali M, Haraf DJ, Vokes EE, Moran WJ, Graham L. Osteoradionecrosis of the jaws as a risk factor in radiotherapy: a report of an eight year retrospective review. *Oncol Rep* 1998; 5:345-49.

Van Merkesteyn JPR, Bakker DJ, Borgmeijer-Hoelen AMMJ. Hyperbaric oxygen treatment of osteoradionecrosis of the mandible: experience in 29 patients. *Oral Surg Oral Med Oral Pathol* 1995;80:12-6.n.

DISCLAIMER: Support for People with Oral and Head and Neck Cancer, Inc. does not endorse any treatments or products mentioned in this newsletter. Please consult your physician before using any treatments or products.

A TIME FOR SHARING

In May of 1998, I was diagnosed with metastatic squamous cell carcinoma to the neck from an unknown primary source. I immediately underwent surgery at Stanford University Hospital. A neck dissection removed 28 lymph nodes. Following surgery, I went through 30 days of radiation treatment, since no primary site was located during the dissection.

At the beginning of the second week of radiation, the saliva reduction and food taste problems began. I had lost 32 pounds and was having a great deal of difficulty in stopping the weight loss and getting enough fluids. I would lose five to six pounds during the night from dehydration. I kept a diary of the deterioration of my quality of life, including food and drinks that tasted better and worse as the time passed. Nothing tasted the same, and some things tasted worse than anything described in your worst nightmare. Gradually it got better, but for me it took over a year for my taste to come back to semi-normal. Nobody but a survivor can truly understand the effect that this process has on your quality of life. People can have sympathy, but not true empathy.

I am a physicist/chemist by education and a lover of good food and wine by avocation. I never set out to develop a product, but this is exactly what happened as I was forced to survive my own situation. What follows is my story of how I designed a product to help me cope with the side effects associated with my neck cancer.

The first stage, during radiation, was a thickening of the mucous/saliva. My doctors prescribed a pain-relieving mouthwash and a simple rinse combination of baking soda and salt. The mouthwash and rinse seemed to help my throat, but didn't seem to help at night with the thick mucous in my throat. I began developing my product by mixing the same ratio of salt to baking soda recommended by my doctors, and I continued to dilute it with water until it became a pleasant drinking experience that

assisted in breaking up the mucous in my throat.

The next stage in the process of radiation therapy was the "dry mouth," which occurred as the saliva glands dried up. My surgeon presented me with various options to help this situation and referred me to various publications that explained the choices. However, I rejected these options and decided to find my own method of adjusting to xerostomia (dry mouth). I tried adding synthetic saliva to my concoction and found that I achieved a drinkable liquid. A sip of the liquid with each bite of food would soften the food (I love crackers and cheese). The drink also helped to make food taste pleasant, and I could carry it everywhere with me for my "dry mouth" problem.

At this point, I did an extensive study of the ratio of agents in over the counter synthetic saliva, and added similar ingredients to my mixture until I achieved a very smooth but relatively tasteless liquid. The combination at room temperature seemed to give the maximum pleasure during a meal, as a sip with each bite broke down almost all foods to a consistency, like normal saliva without changing the flavor. As a matter of fact, in my opinion, the odor absorption of the mixture appears to enhance the food flavor.

It was only after a year of talking to my physicians about my formula that they convinced me to start Life Quality Product, Inc. This company is devoted to developing products to help people with cancer live better lives, and our first product is my drinking liquid, which we call, "Enabling Waters."

To enhance Enabling Waters I incorporated colloidal micro minerals into the mixture, which some scientists believe has an effect on the prevention of cancer. By including the micro minerals in smaller proportions, the harsh taste of the minerals is also covered up, allowing a day's requirement (assuming consumption of 64 ounces

of "Enabling Waters" per day) to be a pleasant experience rather than a medicinal experience. Currently, I am working on include vitamins and minerals in Enabling Waters, so that people can get their daily recommended nutritional requirements from drinking this water. One unanticipated benefit of the water is that I'm finding I drink much more water, which has health benefits in meeting the recommended minimum volume of 64 ounces of water per day for optimal hydration.

We are getting very positive responses from people so far. However, I'm finding that everybody has a slightly different response to the Enabling Waters mix, and I'm trying to change the formula to produce a product which may help the greatest number of people with head and neck cancer.

I'm 63, and cancer has changed my life in a number of ways as well as helping me to appreciate each day a little bit more. Importantly, I know that the threat of recurrence is always a possibility. I plan to live many years longer, but of one thing I am sure; I want those years to be as full of life and pleasure as possible. Inventing this product has made me feel like I have the opportunity to help others. I still drink 6-8 (16-ounce) bottles of Enabling Waters per day, and I still find it helps me to live a better life. I continue to perform my duties as President of a technology firm in Silicon Valley, but my heart and mind lay with our new company, Life Quality Products, Inc.

Bill Liggett
Hollister, CA

Note: For more information and to obtain a free sample, please contact Bill Liggett at (831) 636-1898; E-mail: wliggett@ix.netcom.com After my own experiences with cancer, I'm a strong believer that the best ideas for products to help cancer survivors are those that come from survivors of the disease. Please feel free to share your ideas about what products could help you live a more comfortable life. n.

How to Manage Your Response to Daily Stressors by Robin Hecht

Stress management has become a catch-all phrase that encompasses biofeedback, meditation, massage and hypnosis, along with a mix of many other tried and true traditions and trendy fads, as well. Stress management, in a nutshell, is about how an individual can choose to respond to everyday stress in a healthy, positive way. It's not about managing stress, per se, but rather monitoring one's response to stress. The distinction is an important one. Waiting on an endless line at the bank; enduring the training of a new clerk at the retail shop when you're strapped for time; finding yourself on the receiving end of a rude tirade; are all opportunities for you to learn and perfect the fine art of self-management.

Ancient eastern physical arts are a rich source for self-management tools. In fact, Yoga, Buddhism and Taoism are wellsprings for modern stress management practices. Much of what forms the foundation of everyday stress management practice--meditation, breathing exercises, mindfulness and the cultivation of inner awareness through physical postures--have their origins in the East. Acceptance, adaptation, adjustment and accommodation are fundamental to a basic understanding of these three approaches. The string on a musical instrument must not be too taut, not too slack, but tuned just right. Striking this happy medium between one's self and one's surroundings is the objective of effective stress management.

A key concept of Yoga is that the body, mind and spirit are intricately linked through the breath. Inhaling and exhaling, it all centers on the breath. A human being can survive for a great length of time without food; a shorter time without water, but without the vital life-force of breath, life cannot be sustained.

The Chinese call it "Chi" and the Indians call it "Prana." This vital life-force permeates and suffuses everything with energy. It is the essence of the breath, but it manifests as more than breath, alone. It is the flow of the ocean tides; the breezes that blow; the rain that nourishes the earth.

Since we can control the breath with regular practice, we can calm the mind and naturally regulate the many self-healing functions of the body. On a philosophical level, it is interesting to note that yogis believe that when we control the breath through "pranayama" (translated from Sanskrit, "yama" means control, "prana" is vital life-force), we quiet the mind, and once the mind is as unruffled as a still body of water, we have the opportunity to experience our true nature. Our true nature is peace.

Below are two examples of "stress-busters" to help you manage your daily stressors. Each will take about sixty seconds to practice.

Progressive Relaxation

Standing, seated, or lying down on your back, this exercise can be done in any position, at any time. Take your mind and go all the way down to your feet. Suggest to yourself, silently the following thought. "My feet are relaxed... my feet are relaxed... my feet are completely relaxed."

Scan the body progressively, with this same suggestion, substituting the following parts as you consciously direct all the cells of the body to relax: shins and calves; knees and thighs; feet and legs; fingers and hands; wrists and forearms; hands and arms; pelvis and pelvic organs; abdomen and abdominal organs; rib cage and upper chest; lower, middle and upper back; shoulders and neck; jaws and cheeks; mouth and lips; ears and eyes; forehead and temples; sides of head and crown of head. Adapt the exercise to your particular body and its' needs.

Enjoy the sensation of consciously relaxing all the muscle groups, at will. As your sensitivity and skill increase in this practice, you will become more aware of when you hold tension, what provokes you to hold tension and how to effectively rid yourself of tension by using the breath to exhale and dissolve it away.

Meditation Practices

There is no need to do anything when one

first begins to meditate. One could almost say that to meditate is to cultivate a state of "non-doing." Below is an example of beginner meditation.

Establish a time each day, at the same time of day, when you will meditate. First thing upon arising in the morning is an excellent time, as the mind is clear and uncluttered. If you're not able to do this in the morning, choose a time that is more convenient for you. Consistency of practice is essential. Meditating in the same physical location each day will also assist you in staying on a regular meditation schedule. Let's choose an early morning time for this example. You've set your alarm clock two minutes earlier than usual. You shut off the alarm.

Take your pillow and fold it in half and use it to support the buttocks so that you can sit on your bed in a comfortable position with the spine straight and unsupported by a wall. Cross your legs Indian-style, if it feels comfortable. If you prefer to sit in a chair, do so.

Draw the spine up with an inhalation. The spine is straight, but not stiff. The shoulders are back, down and relaxed. The head is centered; the face is relaxed; and the eyes are closed. The hands are resting comfortably on the knees, palms facing up or down.

Bring your awareness to the breath. Notice the rate, depth and rhythm of the breath. Simply follow the breath. After a minute has passed, gently blink the eyes a few times, allowing yourself to adjust to the light. Notice how you feel after meditating.

Learn to create spaciousness in your life. Breathe and use every opportunity you can...to relax. Remember that it is through a relaxed effort that you gain the most benefits in your practice. You are your own best guide on the journey towards self-awareness.

Editor's Note: Robin Hecht is a certified Yoga teacher and Massage Therapist. She teaches Beginners' Yoga at her studio in Syosset, New York. For more information, call 516-937-0410.n.

NEW FRONTIERS by Nena O'Neill

The first all-day Symposium for oral and head and neck cancer survivors and their families and friends, was held at Memorial Sloan-Kettering Cancer Center in New York City on March 31, 2000. Sponsored by The Head and Neck Service of Memorial and the Post Treatment Resource Center, the Symposium covered everything you always wanted to know - or not know - about head and neck cancer and then some. The meeting offered not only a comprehensive array of up-to-date information but also hope for survivors and those yet untreated, concerning the excellent cure rate and new modalities of treatment. Topics ranged from the nature and incidence of the disease through treatments and included films on the most advanced prostheses. Health care professionals, cancer survivors, and their families and friends set a record attendance of 250 participants.

Ms. Karrie Zampini, Director of the Post Treatment Resource Center, a six-year-old organization at Memorial, kicked off the conference with a welcome to all who came: survivors, friends and family, staff and even one patient in his hospital gown, toting his IV.

Dr. Jatin Shah, Chief of The Head and Neck Center at Memorial, gave a detailed presentation of all aspects of head and neck cancer from the nature and incidence of the disease to the contribution of lifestyle factors and new developments in diagnoses. Despite the severity and consequences of the location of head and neck cancers, we learned that, if caught early, the cure rate is a resounding 80 to 90%. Although the road may be difficult, there is more hope today than ever before for living with more comfort and life enjoyment after treatment.

The development of therapeutic modalities today range from the traditional triumvirate -surgery, radiation, chemotherapy - to the use of immunology and gene therapy. Curative vs palliative care and prevention were discussed along with the new popularity of combined modalities of treatment, i.e. concurrent chemotherapy with radiation.

Following Dr. Shah were presentations by five different health care specialists about

organ preservation, treatment modalities, radiation and reconstruction — each presenter, a model of thoroughness with visuals and more detailed material. By far the most dramatic presentation was a video of several survivors presented by Dr. Ian Zlotolow on maxillofacial rehabilitation. Individually, the patients, appearing very normal, spoke about their conditions. Later each was shown removing and replacing his or her prosthesis and talking about his or her feelings. This video was extremely effective. No one would have guessed the degree of disability. I found it reassuring to know that no matter how drastic and disfiguring my condition might become, there was some ingenious way to make it livable.

The afternoon session was devoted to quality of life issues and health maintenance. Humorous and poignant stories were told by a panel of survivors including Nancy Leupold, editor of this newsletter. Each shared his or her strategies and philosophies for coping and living. Paramount were being your own best advocate and noting that healing is an inside job. These survivors demonstrated their ingenuity, courage and resilience in coping with treatment and post treatment problems and ultimately enjoying life more fully.

Ms. Zampini spoke compassionately and most perceptively to the all-important psychosocial aspects, especially the fear of facing a life-threatening illness and coping with the roller coaster ride of post treatment complications.

In six hours the audience, both professional and lay, were educated, updated, and inspired with the ingenious remedies and modalities used to treat and alleviate this kind of cancer. The technological advances in diagnoses and treatment that were presented, the courage of survivors, and the dedication of doctors and staff at Memorial Sloan-Kettering Cancer Center gave me hope and inspiration as I am sure it did everyone who attended. I am grateful to all who participated and I consider this symposium a model to be followed for all types of cancer. The outlook is hopeful and I eagerly look forward to a repeat update next year.ⁿ

Program Helps Families of Cancer Patients

Cancer caregivers face the physical, emotional and financial challenges of caring for their loved ones while maintaining their careers and family lives. Now caregivers don't have to cope with this difficult time alone. *Strength for Caring*, a new educational program designed to provide families with the skills and resources they need to care for a loved one with cancer, is now available to cancer caregivers through local hospitals and advocacy organizations across the nation.

Strength for Caring is a free, comprehensive, half-day workshop conducted by trained nurses or social workers. Sessions address the needs of caregivers by helping them to understand cancer and its treatment; manage common symptoms such as fatigue and pain; meet the physical and emotional needs of patients with cancer; deal with changing family roles; improve their own physical and mental health.

The program also steers caregivers to community resources available for patients and their families, such as counseling centers and transportation and home care services. With an enhanced understanding of cancer and knowledge of available resources, the caregiver is able to provide better care to the patient, themselves and their families.

The role of the family caregiver has changed dramatically over the years to include providing advanced care in the home. In fact, after discharge from the hospital, many patients continue to receive complex treatments, such as home-administered chemotherapy, intravenous therapies and elaborate post-surgical care. Research indicates that community based education and support for caregivers may help to relieve the stress of this demanding role.

The *Strength for Caring* programs are modeled after a successful program developed at the University of Pennsylvania School of Nursing. The programs are sponsored by Ortho Biotech Inc., a pharmaceutical company that specializes in treatments for cancer patients.

Interested caregivers can learn more about the *Strength for Caring* program by calling 1-888-ICARE80 or visiting www.oncolink.upenn.edu/sfc.n.

**Support for People with Oral and Head and Neck Cancer
is grateful for the generosity of its contributors.
Thanks to their support, SPOHNC is able to maintain and extend its
program of support to cancer survivors, their families and friends.
With sincere appreciation to all.**

Founders \$5000+

*Aventis Pharmaceuticals
MGI PHARMA*

Benefactors \$1000+

*American Cancer Society
Eastern Division
Laclede, Inc
NOMOS Corporation
Simms Family Foundation
Arizona Community Foundation
Terrance J Smith &
Marjorie K. Smith Family Fund*

Patrons \$500+

Guy J. Petruselli, MD

Sponsors \$100+

*Barbara Drew
Cathy Hotchkiss
Martha Hughes
Katherine Leupold
Pierre & Doreen Mitchell
William Parks
G. Frederick Perkins, Jr.*

*Filis G. Settle
Southern Waste Systems
Sheryl Strear
Betsy Wilson
(Let's Face It)*

Donors \$50+

*Allan Bloom
Randall & Caroline Bosch
Dianne Clarke
James Darwin, Capt. USN (ret.)
James V. & Agnes Glynn
Martin Kemp
David Lippman DDS &
Charles Valicenti DDS
Philip LoPresti, MD
Eileen Mc Donnell
Thomas McGuire
Patti Meershaert
Raffaella Monaco
Lawrence Pate
Carol Peery
Alice I. Peters
Judith R. Pritchett
Jobeth Seder
(Helix Medical)*

*Sam Stevens
Bruce Strasser
Rosemary & Richard Thull*

Boosters \$10 +

*Linda Amendola
Joann Bate
Mary Ann Bonifacio
Grace Bunce
Charles & Mary Burke
Marilyn Butler
Bruce Carlson
Linda M. Caruso
John Cordaro
Carole Davis
Jacqueline & Leonard DiCarro
D. R. Dunlap
Lewis Fagen
Kimberly Giannosa
Valerie Goldstein
Joan S. Gover
Carmen Grotzky
Page Guardabassi
David Haddock
Martin Harris
James Herrick*

*Dorothy Hill
David J. Isenberg
Pauline & Earl Kalahahele
Gail Kitselman
Leona Locke
Mel Lombos
Gloria Maschmeyer
Rhonda Mautner
Marjorie Nobles
Betty O'Neill
Sandra G. Phillips
Morton Pollawitz
Philip & Eleanor Rader
Thelma Rathgeber
James Roach
Jacqueline R. Robertson
Carol Ross
Joan Roth
Caroline Saylor
Rose Towler
Theresa Vitale
Les Wagner
Gail Wilkes*

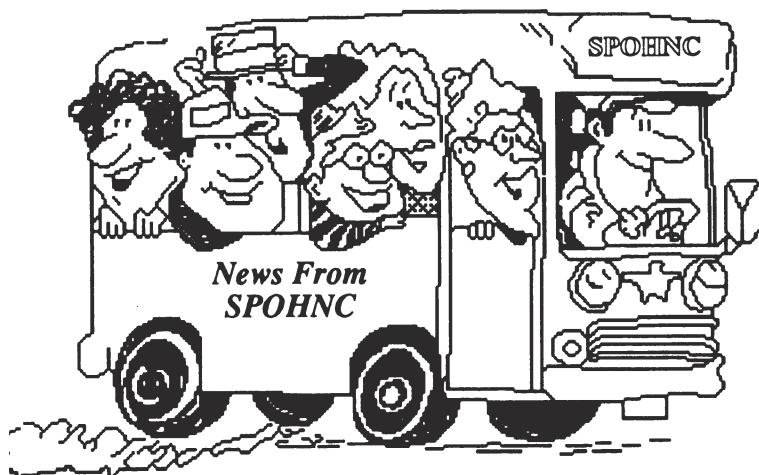
*These contributions reflect
gifts received by SPOHNC
from January 1, 2000
through May 19, 2000*

Meet SPOHNC's Corporate Founders

Aventis Pharmaceuticals (formerly Rhône-Poulenc Rorer) headquartered in Parsippany, NJ, focuses its activities on important therapeutic areas such as oncology, cardiology, allergy and respiratory, arthritis, diabetes, anti-infectives, and the central nervous system.

MGI PHARMA, is a pharmaceutical company that acquires, develops and markets differentiated specialty pharmaceutical and medical products for therapeutic markets of unmet need. MGI's current portfolio is comprised of products that address special needs in the fields of cancer and rheumatology.

News From SPOHNC Goes on Vacation



Enjoy your summer. See you again in September



S•P•O•H•N•C

RENEW
YOUR SUBSCRIPTION TO
News From SPOHNC

**Please check
your address label for the
date of expiration.**

To find out if there is a support group in your area
Call 1-800-4-Cancer or your local American Cancer Society.

**MOVING FORWARD
A RESOURCE PROGRAM FOR PEOPLE TREATED
FOR HEAD AND NECK AND ORAL CANCERS
Will meet on Thursday, June 8, 2000 at 2:30 P.M.
Post-Treatment Resource Program
Memorial Sloan-Kettering Cancer Center
Rockefeller Research Laboratories, 430 East 67th Street, New York, NY
For information, counseling or reservations, please call 212 717-3527**

For more information and directions, please call S.P.O.H.N.C at (516) 759-5333

**RESERVATIONS NECESSARY
Syosset Public Library
225 South Oyster Bay Road
Syosset, NY 11791
June 8, 2000
Will meet on the second Thursday of the month - 7:00 P.M.
SUPPORT FOR PEOPLE WITH ORAL AND HEAD AND NECK CANCER**

S.P.O.H.N.C



SUPPORT FOR PEOPLE WITH
ORAL AND HEAD AND NECK CANCER
S.P.O.H.N.C, INC.
P. O. BOX 53
LOCUST VALLEY, NY 11560-0053

PRESIDENT
Nancy E. Leupold
VICE PRESIDENT
James J. Sciubba, DMD, PhD
SECRETARY
Jean O. Cashin
TREASURER
Walter E. Boehmler

BOARD OF DIRECTORS
Walter E. Boehmler
Jean O. Cashin
Louis Frillmann
Nancy E. Leupold
James J. Sciubba, DMD PhD
Karrie Zampini, CSW

MEDICAL ADVISORY BOARD
Linda K. Clarke, R. N.
Keith Heller, M.D.
David M. Huchton, M.D.
Alex Keller, M.D.
Eugene N. Myers, M.D.
David Myssiorek, M.D.
Herman Oliver, M.D.
David G. Pfister, M.D.
Jed Pollack, M.D.
James J. Sciubba, DMD, PhD
Elliot W. Strong, M.D.
Denise M. Vey Voda, DDS
David P. Wolk, M.D.

NEWSLETTER EDITOR
Nancy E. Leupold

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
LOCUST VALLEY, NY
PERMIT NO. 28