AMERICAN HEALTH CONSULTANTS®

HOLISTIC NURSING UPDATE™

A Guide to Complementary and Alternative Therapies

American Health Consultants Home Page—http://www.ahcpub.com

CE for Nurses—http://www.ce-web.com

Cranberries and Urinary Health

By Lynn Keegan, RN, PhD, HNC, FAAN

WOMEN FREQUENTLY USE CRANBERRY JUICE AND THE EXTRACT from the ripe fruit (*Vaccinium macrocarpon*) to prevent and treat urinary tract infections (UTIs). The pilgrims first learned about cranberries from Native Americans whose folklore told of the benefits of ingesting cranberries for symptomatic relief of UTIs. Attempts to scientifically validate this lore have produced conflicting results.

Etiology and Prevalence of Urinary Tract Infections

The bacteria *Escherichia coli* is responsible for up to 90% of UTIs. *Staphylococcus saprophyticus* is the second major bacterial organism, causing 5-15% of cases in women. Other less common culprits include enteric gram-negative organisms such as *Klebsiella*, *Proteus mirabilis*, *Ureaplasma urealyticum*, and *Enterococci*. In most UTI cases, *E. coli*, which originates as a harmless microorganism in the intestines, spreads to the vaginal passage and then invades and colonizes the urinary tract. It is estimated that 25% of women have at least one UTI in their lifetime and others may have many more.[1] More than seven million Americans visit physicians' offices for UTIs each year.[2]

Conventional Therapy

Five strategies are either presently advocated or under investigation for prevention and treatment of recurrent UTIs: antibiotics, including natural peptides; functional foods (i.e., cranberries); vaccines; probiotics; and miscellaneous, including avoidance of spermicides and maintenance of good hygiene.

The majority of women referred to specialists are prescribed long-term, low-dose antibiotics. However, given the magnitude of this problem, it is safe to state that large numbers of women are experimenting with alternative remedies such as drinking cranberry juice or ingesting herbal remedies to enhance their immune response. Vaccine development remains a long way from human use and has yet to be developed for organisms other than *E. coli*. The use of probiotics to restore the normal vaginal flora and provide a competitive bacterial barrier to pathogens is advocated by many as an alternative prevention approach.[3]

Volume 1 • Number 8 • August 2000 • Pages 57-64

INSIDE

Mechanism of Action

In the 1920s, American scientists thought that cranberry juice acidified the urine. Cranberry extracts and juices contain hippuric acid, which during the 1920s was thought to exert a potent antibacterial effect against UTIs since bacteria prefer an alkaline pH for growth.[4] However, in a 1984 study, Sobota et al showed that cranberry prevents the adhesion of *E. coli* to the bladder epithelium, thus making it easier to wash bacteria out with the urine.[5] Two different constituents of cranberries inhibit *E. coli* adhesion: Fructose inhibits the type 1 fimbrial adhesion and proanthocyanidins seem to inhibit the P fimbrial adhesion of uropathogenic strains.[6]

Cranberry Juice Inhibits Bacterial Adherence

Attempts to account for the potential benefit derived from cranberry juice have focused on urine acidification and bacteriostasis. In the study mentioned above, Sobota demonstrated that cranberry juice is a potent inhibitor of bacterial adherence.[5] Seventy-seven clinical isolates of *E. coli* were tested. Cranberry juice inhibited adherence by at least 75% in more than 60% of the clinical isolates. Cranberry cocktail was also given to mice in place of their normal water supply for a 14-day period. Urine collected from these mice inhibited adherence of *E. coli* to uroepithelial cells by approximately 80%. Anti-adherence activity could also be detected in human urine. Fifteen of 22 subjects showed significant anti-adherence activity in the urine one to three hours after drinking 15 oz of cranberry cocktail.

In a follow-up study based on Sobota's results, researchers examined the effect of cranberry cocktail and juice on the adherence of *E. coli* expressing surface lectins of defined sugar specificity to yeasts, tissue culture cells, erythrocytes, and mouse peritoneal macrophages.[7] Cranberry juice cocktail inhibited the adherence of urinary isolates expressing type 1 fimbriae (mannose specific) and P fimbriae, but had no effect on a diarrheal isolate expressing a CFA/I adhesion. The cocktail also inhibited yeast agglutination by purified type 1 fimbriae. The inhibitory activity for type 1 fimbriated *E. coli* was dialyzable and could be ascribed to the fructose present in the cocktail; this sugar was about 10% as active as methyl α-D-mannoside in inhibiting the adherence of type 1 fimbriated bacteria. The inhibitory activity for the P fimbriated bacteria was non-dialyzable and was detected only after preincubation of the bacteria with the cocktail. Cranberry, orange, and pineapple juice also inhibited adherence of type 1 fimbriated *E. coli*, most likely because of their fructose content. However, the two latter juices did not inhibit the P fimbriated bacteria. The conclusion is that cranberry juice contains at least two inhibitors of lectin-mediated adherence of uropathogens to eucaryotic cells.

Clinical Trials

A six-month study in elderly women suggests that drinking 300 ml/d of cranberry juice cocktail reduced bacterial infections (bacteriuria) and associated influx of white blood cells into the urine (pyuria) by nearly 50%.[8] This study showed that consumption of cranberry juice is more effective in treating than preventing bacteriuria and pyuria. Along with earlier reports on the ability of cranberry juice to inhibit bacterial adherence to urinary epithelial cells in cell culture, this work found that drinking cranberry juice each day is clinically useful.

In the Program for the Analysis of Clinical Strategies, Brigham and Women's Hospital researchers sought to determine the effect of regular intake of cranberry juice beverage on bacteriuria and pyuria in elderly women.[9] In a randomized, double-blind, placebo-controlled trial, a volunteer sample of 153 women (mean age, 78.5 years) were randomly assigned to one of two groups. They either consumed 300 ml/d of a commercially available standard cranberry beverage or a specially prepared synthetic placebo drink that was indistinguishable in taste, appearance, and vitamin C content but lacked cranberry content. A baseline urine sample and six clean-voided urine samples were collected at approximately one-month intervals and tested quantitatively for bacteriuria and the presence of white blood cells. Subjects randomized to the cranberry beverage had odds of bacteriuria

Holistic Nursing Update is published monthly by American Health Consultants, 3525 Piedmont Rd., NE, Bldg. 6, Suite 400, Atlanta, GA 30305.

PUBLISHER: Brenda L. Mooney.
EXECUTIVE EDITOR: Leslie G. Coplin.
ASSOCIATE MANAGING EDITOR: Paula L. Cousins.
GST Registration Number: R128870672.

Periodical postage pending at Atlanta, GA.
POSTMASTER: Send address changes to ***Holistic Nursing Update,*** P.O. Box 740059, Atlanta, GA 30374.

AMERICAN HEALTH CONSULTANTS
THOMSON HEALTHCARE

Subscriber Information

Customer Service: 1-800-688-2421.
Customer Service E-Mail Address: customerservice@ahcpub.com
Editorial E-Mail Address: paula.cousins@ahcpub.com
World-Wide Web: http://www.ahcpub.com

Subscription Prices

United States
$199 per year (Student/Resident rate: $99).
Outside the United States
$229 per year plus GST (Student/Resident rate: $119 plus GST).
Back Issues
$33 per issue. Missing issues will be fulfilled by Customer Service free of charge when contacted within one month of the missing issue's date.
For CE credit, add $50.
For details on our CE program, contact: Customer Service, American Health Consultants, P.O. Box 740056, Atlanta, GA 30374. Phone: (800) 688-2421; fax: (800) 284-3291.

Accreditation

American Health Consultants is accredited as a provider of continuing education in nursing by the American Nurses Credentialing Center's Commission on Accreditation. Provider approved by the California Board of Registered Nursing. Provider Number CEP 10864, for approximately 12 contact hours.

Questions & Comments

Please call **Paula Cousins,** Associate Managing Editor at (816) 960-3730 between 8:30 a.m. and 4:30 p.m. ET, Monday-Friday.

(defined as organisms numbering ≥ 10^5/ml) with pyuria that were only 42% of the odds in the control group (P = 0.004). Their odds of remaining bacteriuric-pyuric, given that they were bacteriuric-pyuric in the previous month, were only 27% of the odds in the control group (P = 0.006). These findings suggest that ingestion of cranberry beverage reduced the frequency of bacteriuria with pyuria in older women.

The Cochrane Renal Group, a subset of the Cochrane Database System Review Company in Edinburgh, UK, developed a search strategy to assess the effectiveness of cranberries for the treatment of UTIs.[10] Companies involved with the promotion and distribution of cranberry preparations were contacted; electronic databases and the Internet were searched using English and non-English language terms; and reference lists of review articles and relevant trials were also searched. The selection criteria included all randomized or quasi-randomized controlled trials of cranberry juice or cranberry products for the treatment of UTIs. Trials of men, women, and children were included. Reviewers independently assessed whether the studies met the inclusion criteria. Further information was sought from the authors of papers containing insufficient information to make a decision about eligibility. The reviewers' found no trials that fulfilled all of the inclusion criteria and concluded that no well-designed randomized trials assessing the effectiveness of cranberry juice for the treatment of UTIs have been conducted.

In a second Cochrane investigation on UTI prevention, a small number of poor quality trials gave no reliable evidence of the effectiveness of cranberry juice and other cranberry products.[11] The large number of dropouts/withdrawals indicated that cranberry juice may not be acceptable long-term. Other cranberry products, such as cranberry capsules, may be more acceptable. On the basis of the available evidence, the researchers could not recommend cranberry juice for the prevention of UTIs in susceptible populations.

The use of cranberries has also been tried in other groups. One study examined the effect of cranberry prophylaxis on rates of bacteriuria and symptomatic UTI in children with neurogenic bladder receiving clean intermittent catheterization.[12] The double-blind, placebo-controlled, crossover study included 15 children who received cranberry concentrate or placebo concentrate for six months (three months receiving one concentrate, followed by three months of the other). During each weekly home visit, a sample of bladder urine was obtained by intermittent catheterization. Signs and symptoms of UTI, medication usage, and juice consumption were recorded. During consumption of cranberry concentrate, the frequency of bacteriuria remained high. Of the 151 samples obtained during consumption of placebo, 75% (114) were positive for a pathogen (≥ 10^4 colony-forming units/ml) compared with 75% (120) of the 160 samples obtained during consumption of cranberry concentrate. *E. coli* remained the most common pathogen during placebo and cranberry periods. Three symptomatic infections each occurred during the placebo and cranberry periods. No significant difference was observed in the acidification of urine in the placebo group vs. the cranberry group (median, 5.5 and 6.0, respectively). The frequency of bacteriuria in patients with neurogenic bladder receiving intermittent catheterization was 70% and cranberry concentrate had no effect on bacteriuria in this population.

In another study, seven juices (cranberry, blueberry, grapefruit, guava, mango, orange, and pineapple) were examined; only cranberry and blueberry prevented bacterial bladder adhesion.[13] Although blueberries have not been as thoroughly studied as cranberries, they also may prove to be an alternative treatment for UTI.

Conclusion and Recommendation

Cranberry juice and extract have biologic effects against bacterial adhesion in the bladder. No significant adverse effects have been noted in this long-used folk remedy that is both safe and well tolerated. For those concerned about the high sugar content of cranberry juice, oral capsule extracts are an available option.

To assess cranberry juice's effectiveness in treating UTIs, well-designed, parallel-group, double-blind trials comparing cranberry juice and other cranberry products vs. placebo are needed. Outcomes should include reduction in symptoms, sterilization of the urine, side effects, and adherence to therapy. Dosage (amount and concentration) and duration of therapy should also be assessed. This area is ripe for more investigation by inquisitive holistic nurse researchers. Studies could relate to dose intake, use of cranberry products in control and experimental groups combined with antibiotics, or contrasting and comparing the effects of cranberry in children, adults, and the elderly. ❖

References

1. Kuzminski LN. Cranberry juice and urinary tract infections: Is there a beneficial relationship? *Nutr Rev* 1996;54(11Pt2):S87-S90.
2. Rand V. Cranberry for the prevention of urinary tract infection. *Altern Med Alert* 1999:116-117.
3. Reid G. Potential preventive strategies and therapies in urinary tract infection. *World J Urol* 1999;17: 359-363.

4. Murray MT, Pizzorno JE. *Encyclopedia of Natural Medicine*. Rocklin, CA: Prima Health Publications: 1998.
5. Sobota AE. Inhibition of bacterial adherence by cranberry juice: Potential use for the treatment of urinary tract infections. *J Urol* 1984;131:1013-1016.
6. Zafriri D, et al. Reduction of bacteriuria and pyuria after ingestion of cranberry juice. *JAMA* 1994;271: 751-754.
7. Zafriri D, et al. Inhibitory activity of cranberry juice on adherence of type 1 and type P fimbriated *Escherichia coli* to eucaryotic cells. *Antimicrob Agents Chemother* 1989;33:92-98.
8. Fleet JC. New support for a folk remedy: Cranberry juice reduces bacteriuria and pyuria in elderly women. *Nutr Rev* 1994;52:168-170.
9. Avorn J, et al. Reduction of bacteriuria and pyuria after ingestion of cranberry juice. *JAMA* 1994;271: 751-754.
10. Jepson RG, et al. Cranberries for treating urinary tract infections. *Cochrane Database Syst Rev* 2000;2:CD001322.
11. Jepson RG, et al. Cranberries for preventing urinary tract infections. *Cochrane Database Syst Rev* 2000;2:CD001321.
12. Schlager TA, et al. Effect of cranberry juice on bacteriuria in children with neurogenic bladder receiving intermittent catheterization. *J Pediatr* 1999;135: 698-702.
13. Ofek I, et al. Anti-*Escherichia coli* adhesion activity of cranberry and blueberry juices. *New Engl J Med* 1991;324:1599.

CE Objectives

After reading this issue of *Holistic Nursing Update*, the continuing education participant should be able to:

1. Converse in a scholarly manner about issues germane to holistic nursing.
2. Apply the principles of holistic philosophy and practice to clinical settings.
3. Discuss why some alternative and complementary therapies are used and why others are rejected.
4. Validate the effectiveness of holistic care and modalities through generation of research ideas.

Reiki for Relaxation and Pain Relief

By Dónal P. O'Mathúna, PhD

THE TERM "REIKI" (PRONOUNCED "RAY-KEY") COMES from two Japanese words, *rei*, meaning universal spirit, and *ki*, meaning life energy.[1] Other therapies based on the existence of a non-physical life energy include Therapeutic Touch (the energy being called prana)[2] and the traditional Chinese medical interpretation of acupuncture (based on chi).[3] Patients will ask about Reiki, and some medical professionals will consider incorporating Reiki into standard care. Nurse clinicians need some knowledge of this therapy.

Common Usage

Reiki is an alternative manual healing therapy growing in popularity among clinicians, especially nurses. Reiki can be used "for treating heart attacks, emphysema, varicose veins, hemorrhoids, prostate problems, hiccups, nosebleeds, accidents, and emotional and mental problems."[4] Most commonly, Reiki is used to promote healing, wholeness, and enlightenment. A survey of Canadian Reiki patients reported using it primarily for emotional difficulties and self-development.[5] Conventional journals have carried articles recommending Reiki to improve patient well-being.[1,6,7] One hospital already does so for all preoperative patients, except those of one dissenting physician.[8] Numerous hospitals and health care agencies have conducted Reiki in-services.[9]

Historical Background

Reiki is an ancient Buddhist practice, rediscovered in Japan by Mikao Usui during the mid-1800s. Reiki is still practiced according to the "Usui System." Usui allegedly earned a theology doctorate from the University of Chicago and was principal of Doshisha University in Japan. No records exist of his involvement in any capacity with either university.[10]

Usui entered a Buddhist monastery searching for insight into healing. Reiki was revealed to Usui during a spiritual experience on a Japanese mountaintop after fasting for 21 days.[10] One of his disciples trained Mrs. Hawayo Takata, who introduced Reiki to the Western world around 1940. Only Mrs. Takata was allowed to teach Reiki in the West until 1975. Since then, knowledge and practice of Reiki has grown substantially.[4]

Mechanism of Action

Reiki is based on the belief that all life depends on a

universal, nonphysical energy. Health requires a sustained and balanced flow of this energy throughout the body. Disturbances result in physical, emotional, or mental problems.

Reiki allegedly corrects life energy imbalances and blockages, making people aware of the life energy flowing through them. The following description from one of Mrs. Tanaka's disciplines is typical: "Reiki is a natural consciousness-expanding technique that will put you in touch with your real self—with your own eternal being."[4]

Whether Reiki is a healing therapy or a religious practice is uncertain, as the International Center for Reiki Training's description demonstrates: "It is the God-consciousness called Rei that guides the life force called Ki in the practice we call Reiki. Therefore, Reiki can be defined as spiritually guided life force energy."[11]

Procedure

A person relaxes in any position to receive Reiki. Practitioners gently rest their hands in specific ways on approximately 12 standard sites throughout the body, which may vary slightly among practitioners. Reiki practitioners begin with the head and spend a few minutes at each site, with a complete session taking 60 to 90 minutes. Eventually, practitioners may expand the therapy beyond the standard 12 sites.

More advanced practitioners claim to be as effective when physically absent from patients, simply visualizing their hand movements with patients (called distance healing). Practitioners are believed to act as passive channels for the life energy, which comes from its universal source. Practitioners do not direct the energy, which guides itself solely to where it is needed.

Practitioner Training

Reiki training involves opening trainees' life energy channels (or chakras) in special training sessions called "attunements." Only Reiki Masters (or Level III practitioners) may perform attunements, viewed by many as "sacred ceremonies."[9,10,12] The Master makes special hand movements around the trainee to open the energy channels. Trainees' hands become warm, signaling they are ready to channel life energy as Level I practitioners.

After some experience, Reiki Level II can be attained with another attunement when the practitioner "intuitively" receives special symbols, believed to be healing gifts from personal beings called spirit guides.[10,13] The symbols increase the practitioner's healing powers. Practitioners draw the symbols on patients' bodies, or visualize them, while silently chanting the symbol's name. Level II must be attained before Reiki distance healing is possible.[4,10] Becoming a Reiki Master requires another attunement during which additional symbols are received for use in the Level I initiation rituals.

Clinical Studies

Literature searches for "Reiki" in MEDLINE, CINAHL, Dissertation Abstracts, the Cochrane Library, and the Registry of Nursing Research revealed four clinical trials, with their references leading to three more. Two hypothesized that Reiki would change the blood's oxygen-carrying capability as reflected by hemoglobin and hematocrit levels with mixed results.[14,15]

One examiner reported slower wound healing in patients receiving a combination of Reiki, Therapeutic Touch, LeShan (a distance healing technique said to raise people's conscious awareness of healing processes), and Intercessory Prayer.[16] After 10 days, one of 15 subjects given 4 mm skin biopsy wounds and treated was fully healed, compared to seven fully healed out of 15 untreated subjects.

Two studies tested the widespread claim that Reiki powerfully induces relaxation. The first used distance Reiki to induce relaxation monitored by skin resistance response (SRR) measurements.[13] Three Reiki practitioners treated 15 healthy subjects recruited from relaxation courses at the researchers' institute. Practitioners attempted to either relax or arouse subjects' autonomic activity for 30-second intervals in a randomly determined sequence (25 minutes altogether). SRR changes during relaxation or arousal intervals did not differ significantly. In the other study, nursing students received either hands-on Reiki ($n = 22$) or mimic-Reiki ($n = 20$).[17] No significant differences were found for perceptions of anxiety, personal power, or well-being using two questionnaire instruments.

Two clinical studies examined Reiki's pain-relieving effects. Impacted third molars were extracted from 21 patients in a randomized, double-blind, within-subject crossover study.[18] Subjects were randomly assigned to one group for the removal of one lower third molar, and about two weeks later crossed over to the other group for the removal of their second lower third molar. Subjects took 1,000 mg acetaminophen orally at 3, 6, and 9 hours postoperatively. Practitioners were "several miles" away and commenced either Reiki or LeShan treatments at hour 3, alternating hourly for six hours. A visual analogue scale assessing pain intensity and a Likert scale assessing pain relief were administered hourly from hour 3 to 9 (subjects unsupervised at home). The treatment group had significantly lower pain intensity and significantly higher pain relief at hours 4 through 7 ($P < 0.05$) and hours 8 and 9 ($P < 0.01$).

A pilot project used hands-on Reiki with 20 subjects experiencing moderate pain at 55 sites for a variety of reasons.[19] Subjects used various pharmaceutical and alternative pain reducing therapies concurrently. Reiki was administered in a dimly lit room accompanied by burning candles and soft music. Pain scores were significantly lower after therapy compared to immediately before therapy (2.25 reduction on a visual analogue scale; 1.25 reduction on a Likert scale; $P < 0.0001$). A control group was not used.

Adverse Effects

No patient adverse effects have been reported. Proponents claim Reiki cannot cause harm as the energy adjusts itself to provide only the needed effects. An Australian nursing journal printed a letter claiming Reiki training caused a nurse much anxiety and discomfort.[20] A storm of controversy erupted subsequently, with some nurses reporting similar negative effects and others defending Reiki as completely harmless.[21]

Conclusion

The few Reiki studies have diverse designs and often include other therapies. Confounding factors could account for the improvements found. The authors of one Reiki study concluded: "Despite the growing interest in Reiki, no strong evidence is yet available regarding its effectiveness."[12]

Recommendation

Reiki's growing popularity probably reflects the importance of meaningful, personal interactions between healthcare providers and patients. Controversy regarding Reiki's spiritual roots, and the secrecy associated with many aspects of Reiki, require particular caution before suggesting Reiki to patients. ❖

References

1. Bullock M. Reiki: A complementary therapy for life. *Am J Hospice Palliative Care* 1997;14:31-33.
2. O'Mathúna DP. Therapeutic touch for wound healing. *Altern Med Alert* 1998;1:49-52.
3. Udani J, Ofman J. Acupuncture for smoking cessation. *Altern Med Alert* 1998;1:64-67.
4. Ray B. *The 'Reiki' Factor: A Guide to the Authentic Usui System*. St. Petersburg, FL: Radiance; 1988.
5. Kelner M, Wellman B. Who seeks alternative health care? A profile of the users of five modes of treatment. *J Altern Complement Med* 1997;3:127-140.
6. Sawyer J. The first Reiki practitioner in our OR. *AORN J* 1998;67:674-677.
7. Van Sell SL. Reiki: An ancient touch therapy. *RN* 1996;59:57-59.
8. Alandydy P, Alandydy K. Using Reiki to support surgical patients. *J Nurs Care Qual* 1999;13:89-91.
9. Barnett L, Chambers M. *Reiki Energy Medicine: Bringing Healing Touch into Home, Hospital, and Hospice*. Rochester, VT: Healing Arts Press; 1996.
10. Stein D. *Essential Reiki: A Complete Guide to an Ancient Healing Art*. Freedom, CA: Crossing Press; 1995.
11. International Center for Reiki Training. Available at: http://www.reiki.org/reikifaq/whatisit.html. Accessed October 1, 1999.
12. Mansour AA, et al. A study to test the effectiveness of placebo Reiki standardization procedures developed for a planned Reiki efficacy study. *J Altern Complement Med* 1999;5:153-164.
13. Schlitz MJ, Braud WG. Reiki-plus natural healing: An ethnographic/experimental study. *PSI Research* 1985;4:100-123.
14. Wetzel MS. Reiki healing: A physiologic perspective. *J Holistic Nursing* 1989;7:47-54.
15. Wirth DP, et al. Haematological indicators of complementary healing intervention. *Complement Ther Med* 1996;4:14-20.
16. Wirth DP, Barrett MJ. Complementary healing therapies. *Int J Psychosom* 1994;41:61-67.
17. Thornton LM. A study of Reiki, an energy field treatment, using Rogers' science. *Rogerian Nurs Sci News* 1996;8:14-15.
18. Wirth DP, et al. The effect of complementary healing therapy on postoperative pain after surgical removal of impacted third molar teeth. *Complement Ther Med* 1993;1:133-138.
19. Olson K, Hanson J. Using Reiki to manage pain: A preliminary report. *Cancer Prev Control* 1997;1: 108-113.
20. Anonymous. A warming about Reiki healing. *Aust Nurs J* 1994;1:4.
21. Tattam A. Reiki—healing and dealing. *Aust Nurs J* 1994;2:3,52.

Focus on Organizations

International Center for Reiki Training

The International Center for Reiki Training is a nonprofit organization that has established and maintains standards for Reiki teaching and certification.

International Center for Reiki Training
21421 Hilltop Street, Unit #28
Southfield, MI 48034
phone: (800) 332-8112 or (248) 948-3112
fax: (248) 948-9534
web site: http://www.reiki.org

With Comments from Lynn Keegan, RN, PhD, HNC, FAAN

Effects of Detoxification in Disease-Free People

Source: MacIntosh A, Ball K. The effects of a short program of detoxification in disease-free individuals. *Altern Ther Health Med* 2000;6:70-76.

Context: Some health philosophies, such as Ayurvedic medicine, yoga, and naturopathy, consider removal of toxins from the body an integral part of achieving and maintaining good health. These health belief systems accept the premise that symptoms of poor health may be related to toxin build-up and that these symptoms can occur in people who are free of disease as well as those who have been diagnosed with an illness. Detoxification generally conjures up the idea of an alcoholic or drug addict "drying out"; however, some health systems use the process for many other conditions.

Objective: This pilot study explored whether a seven-day detoxification program could improve well-being and enhance activity in liver detoxification pathways.

Methods: In this patient-outcome-focused, noncontrolled clinical intervention, 25 disease-free participants were recruited. The 25 subjects, ranging from 23 to 40 years old, were naturopathic medical students recruited from a second-year nutrition class. Pre- and post-intervention measures were taken using the Metabolic Screening Questionnaire (MSQ) as a subjective assessment of well-being, and drug challenge tests (using caffeine) to assess hepatic detoxification capacity. The detoxification program consisted of consuming a specific hypoallergenic diet and at least two quarts of filtered water daily. Participants made no other changes in their diet or exercise program. The changes in well-being were assessed using the MSQ, a short symptom questionnaire concentrating on symptoms that might be related to toxicity. Laboratory assessment was done on saliva and intestinal permeability.

Results: The MSQ scores reflected a significant ($P < 0.011$) reduction in total symptomatology over the seven-day period for a statistically significant 47% reduction in the MSQ scores. This improvement in patient-assessed health occurred concurrently with a 23% increase in liver detoxification capacity, as reflected by the caffeine clearance measure. There was an increase in the urinary sulfate to creatinine ratio after treatment, indicating a trend toward improved liver function.

Conclusion: This simple, subject-administered detoxification program resulted in significant reduction in participant symptomatology. The tendency toward improvement in liver detoxification measure is consistent with the hypothesis that improved liver detoxification capacity contributes to well-being.

Comment: This simple pilot study has merit in that it provides a refresher of information about the importance of periodic fasts and cleansings and offers a study mechanism to build upon. Without a control group and a more varied sample it is not possible to make generalizations from this study. The almost self-selected sample of naturopathic students, already committed to the concept of dietary cleansing, is a decided weakness in the study; however, the objective tests of blood and urinary chemistries are strengths. An enthusiastic nurse researcher could easily build on this study by selecting a non-biased sample, adding a control group, and perhaps increasing the length of the study to two weeks. Other potential variations might include doing the study in subjects with varying chronic disease diagnoses and building in another dimension, such as exercise, to the detoxification program in non-ill subjects. ❖

Behavioral Self-Management and Headache-Related Distress

Source: Hoodin F, et al. Behavioral self-management in an inpatient headache treatment unit: Increasing adherence and relationship to changes in affective distress. *Headache* 2000;40:377-383.

Context: In outpatient settings, previous research has demonstrated that relaxation and other cognitive behavioral variables help control occurrence of headaches. Other research has documented that group treatment is no less effective than individual therapy, and that depression is associated with migraines. However, these relationships have not been explored in inpatient settings where patients come for intensive medical interventions to treat intractable, chronic headaches.

Objective: To evaluate prospectively the contribution of a psychological self-management program to the amelioration of headache-related distress of patients with intractable migraine treated in a comprehensive, multidisciplinary, inpatient program.

Subjects: Data from 221 patients were used. The mean age was 39 years and 77% were women. The headache diagnosis for 86% of the sample was a migraine variant (chronic daily headache); the remaining 14% had a combination of chronic post-traumatic headache, cluster headaches, and facial pain.

Methods: On admission and at discharge subjects completed the Beck Depression Inventory (BDI) and a seven-day retrospective self-reporting questionnaire that assessed the frequency of severe headaches and health behavior compliance in two categories: relaxation and lifestyle modification. Each patient received intensive medical therapy including intravenous DHE-45 or other intravenous medication, or both. Cognitive behavioral treatment was delivered in five group settings per week. Training included methods of relaxation and self-monitoring of associated changes in finger temperature and self-rated subjective tension. Other topics included relaxation tapes, sleep regulation, self-pacing, exercise, and pain management skills.

Results: Adherence increased significantly for relaxation practice and lifestyle modification (diet, exercise, and sleep regulation) for headache prevention ($P < 0.00001$). BDI scores decreased significantly ($P < 0.00001$), and a greater decrease in depression by the end of the program was reported by those subjects who practiced relaxation most compared with those who practiced relaxation least.

Conclusion: Low baseline adherence rates for health behavior increased significantly during the final week of inpatient treatment. Behavioral self-management, not headache reduction, were significantly associated with patients' reduction in affective distress. The finding that the practice of relaxation was associated with reducing depression gives credence to the importance of relaxation to the overall well-being of patients.

Comment: It was interesting to note how the BDI scores decreased during the course of hospitalization. Yes, this may have been correlated to the relaxation that was taught and encouraged during the hospitalization, but it also may be related to the fact that somebody was actually paying attention to the patient's disorder and actively trying to help her cope with her problem. It would be good to repeat and modify this study by adding a two-week and two-month follow-up testing period. Could it be that the depression decrease only occurs during the attention-receiving inpatient period, but rises again once the patient returns to the setting from which he or she comes? ❖

Acute Intracranial Hemorrhage Caused by Acupuncture

Source: Choo DC, Yue G. Acute intracranial hemorrhage caused by acupuncture. *Headache* 2000;40:397-398.

Context: Acupuncture is a traditional form of therapy in Asia for various illnesses, and in particular, for pain relief. It is gaining acceptance as an alternative therapy in Western countries. There are serious adverse affects of acupuncture reported in the literature including pneumothorax, hepatitis, and endocarditis.

Case Report: A report from the Department of Medicine at Loma Linda University in Southern California cites the case of a 44-year-old Chinese man who presented with a severe headache. The patient experienced sudden onset of severe occipital headache minutes after the insertion of an acupuncture needle at the "feng fu" trigger point. This point is located 3 cm below the external occipital protuberance. The acupuncturist re-moved the needle after the onset of the severe headache. There were no other neurological symptoms. The patient presented to the emergency department seven hours after the onset of headache. Physical exam was negative with the exception of nuchal rigidity and a positive Kernig sign. Immediate noncontrast computed tomography (CT) scan of the head showed hemorrhage in the fourth ventricle and small amounts of blood in the third and frontal horns of the lateral ventricles. Lumbar puncture revealed bloody fluid in all three tubes.

The patient was admitted for observation and pain management. For the next 28 days the severe occipital headache required opioids initially and acetaminophen subsequently to control the pain. A repeat CT scan 10 days later showed complete resolution of the hemorrhage. In a five-month follow-up visit, the patient's headache and nuchal rigidity were completely resolved and he was back at work.

Comment: Although this report depicts a rare complication, complications of acupuncture can and do occur. In this instance, needle insertion caused acute subarachnoid and intracranial hemorrhage. Therapists who perform acupuncture and patients who receive it should be aware that the technique is not risk free. Adequate medical facilities need to be nearby to manage potential complications. ❖

In Future Issues:

The Effects of Soy Protein

Reflective Nursing

Tai Chi for Rehabilitation