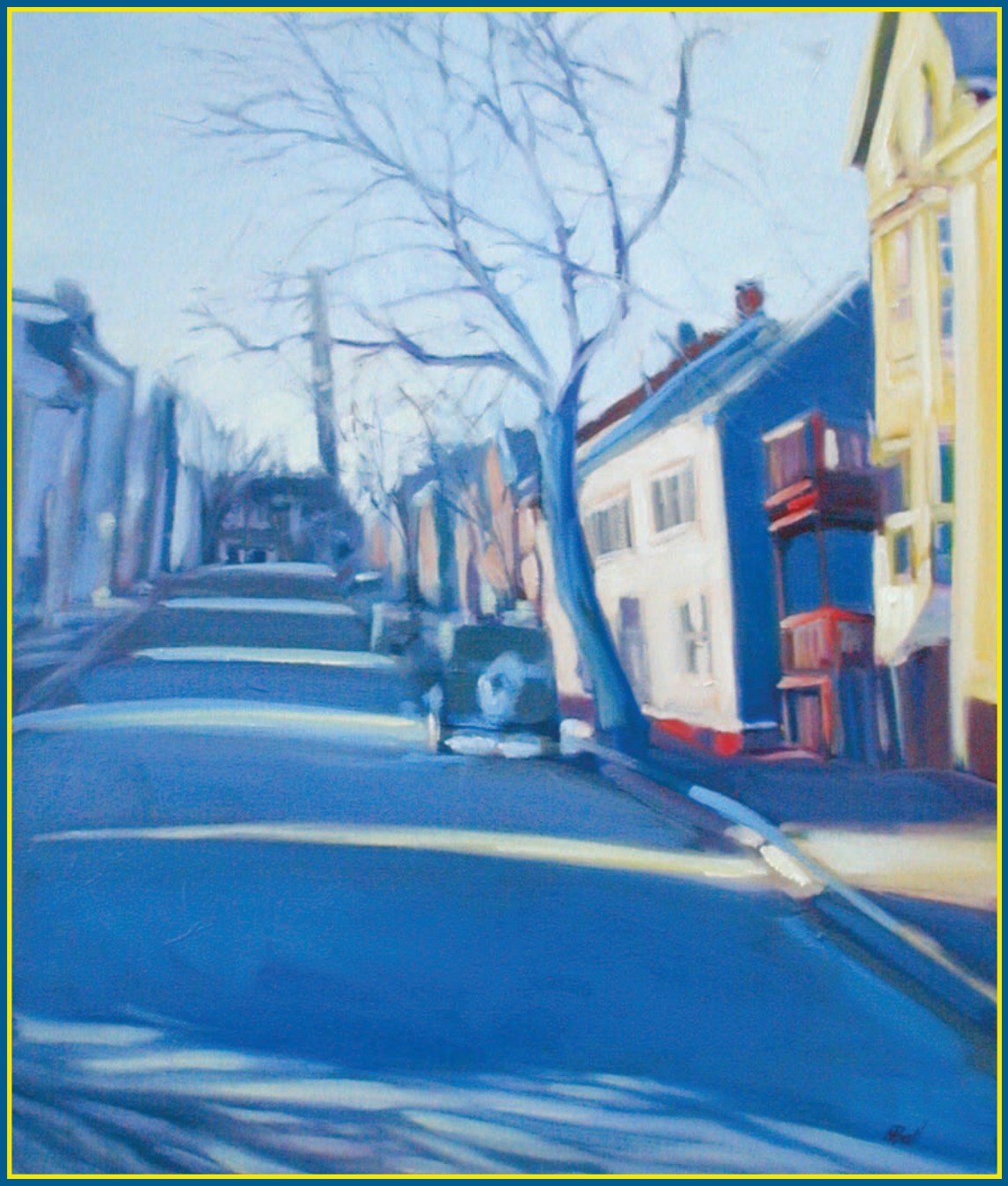
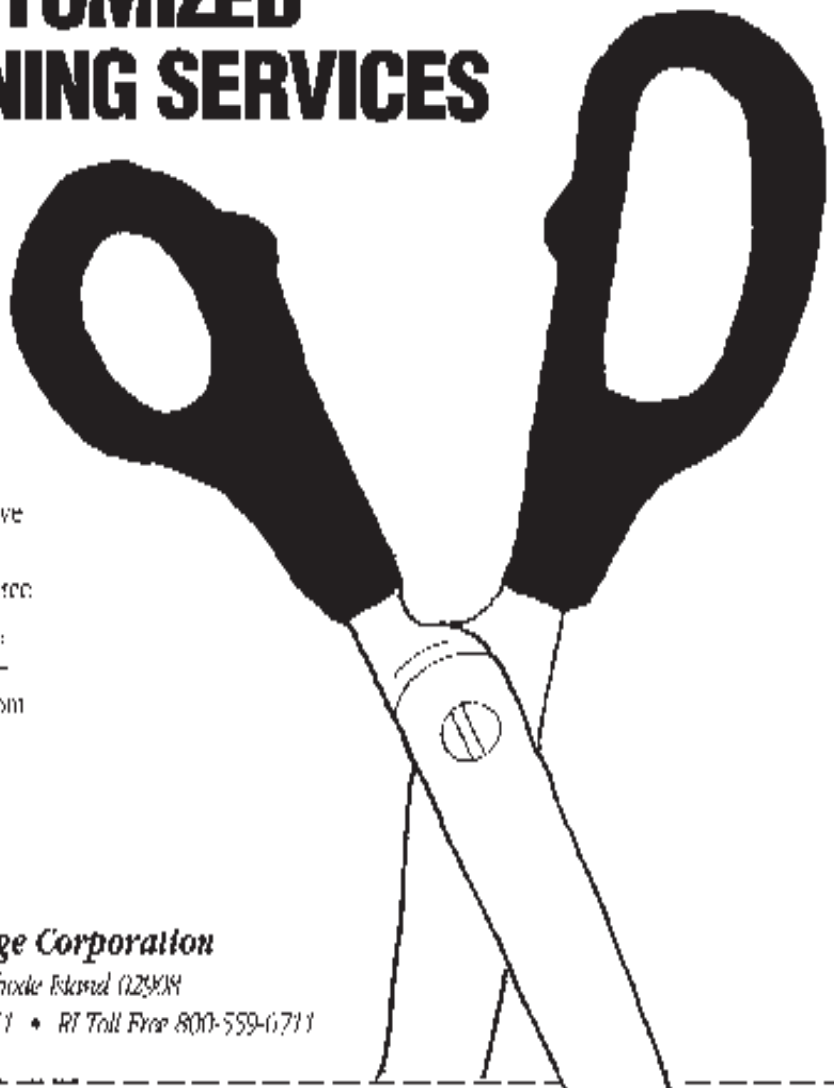
Medicine & Health
RHODE ISLAND

VOL. 88 NO. 2 FEBRUARY 2005



RHODE ISLAND MEDICAL SOCIETY'S INSURANCE BROKERAGE CORPORATION INTRODUCES CUSTOMIZED FINANCIAL-PLANNING SERVICES FOR THE HEALTHCARE PROFESSIONAL



Established by Rhode Island Medical Society for the benefit of the medical community to provide a cost effective and convenient means of providing necessary insurances, Insurance Brokerage Corporation is now a one-stop resource for area physicians. We've built our reputation for friendly, responsive and informed service as your broker for Professional Liability Insurance. We now invite you to benefit from our expertise in Life Insurance and Financial Planning Services.

Please return this coupon or call for a free, no-obligation review of your current coverage.

RIMS Insurance Brokerage Corporation

One Hayes Street, Providence, Rhode Island 02908

Phone (401) 272-1050 • Fax (401) 272-1051 • RI Toll Free 800-559-6711

☐ YES, I'd like a free review of my current coverage.

I'd like to know more about

- ☐ Disability Income Protection
- ☐ Education Funds
- ☐ Life Insurance
- ☐ 401K Plans
- ☐ Group Insurance
- ☐ Key Man Coverage
- ☐ Deferred Compensation
- ☐ Professional Liability
- ☐ Workers' Compensation
- ☐ Individual Retirement Accounts
- ☐ Estate Planning
- ☐ Annuities
- ☐ Pension and Profit Sharing

Please print.

Name _____

Business _____

Address _____

City _____ State _____ Zip _____

Bus. Phone _____

Res. Phone _____

RIMS Insurance Brokerage Corporation

One Hayes Street, Providence, Rhode Island 02908

Phone (401) 272-1050 • Fax (401) 272-1051 • RI Toll Free 800-559-6711

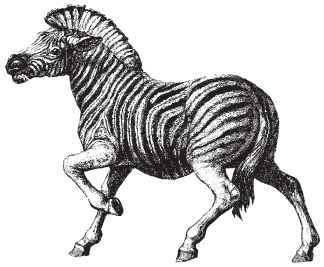
Cover: "Afternoon on a Side Street," oil, by Marjorie Ball, an East Greenwich artist who exhibits at the Donovan Gallery (Tiverton) and B&H Framing (East Greenwich). This painting was part of a "Scenes of Rhode Island" show at the Atrium Gallery, Rhode Island Department of Administration.
E-mail: MargieBall@aol.com

Medicine & Health
RHODE ISLAND
PUBLICATION OF THE RHODE ISLAND MEDICAL SOCIETY

VOLUME 88, NO. 2 FEBRUARY, 2005

Medicine and Health\Rhode Island *(USPS 464-820), a monthly publication, is owned and published by the Rhode Island Medical Society, 235 Promenade St., Suite 500, Providence, RI 02908, Phone: 401-331-3207. Single copies $5.00, individual subscriptions $50.00 per year, and $100 per year for institutional subscriptions. Published articles represent opinions of the authors and do not necessarily reflect the official policy of the Rhode Island Medical Society, unless clearly specified. Advertisements do not imply sponsorship or endorsement by the Rhode Island Medical Society. Periodicals postage paid at Providence, Rhode Island. ISSN 1086-5462. POSTMASTER: Send address changes to Medicine and Health\Rhode Island, 235 Promenade St., Suite 500, Providence, RI 02908. Classified Information: RI Medical Journal Marketing Department, P.O. Box 91055, Johnston, RI 02919, phone: (401) 383-4711, fax: (401) 383-4477, email: rimj@cox.net*

Commentaries



Gait Abnormalities Are Too Hard To Evaluate, So Why Bother?

For many years I've noticed that certain neurological problems are not addressed by doctors, and some seem not even to be considered. For example, in a summary of most common diagnoses seen in the Emergency Department at one community hospital, falls and faints didn't make the top 50 although they are the most common reason for ED visits by the elderly in the western world. Presumably they are coded elsewhere. I don't think the administrators were trying to hide a problem. It just didn't seem "neurologic" to them.

Falls are very common among the elderly. In a British survey published in 2002, 35% of community dwelling adults over age 65 and 45% of those over age 80 fall each year. In the UK special centers for evaluating falls and faints were created in the early 90's and have been demonstrated to be extremely cost effective by reducing falls and reducing hospital bed usage. And, of course, there are various grave consequences of falling, including fracture, decreased function due to the trauma itself and then the decompensation that often follows the injury. Furthermore, there are the potential complications, like pulmonary emboli, bedsores, in-hospital delirium, out-of-hospital analgesic induced confusion, and worsening of the gait itself, due to the "fear of falling" syndrome. This is all old news. What has increasingly bothered me has been my recognition that patients, admitted to the hospitals where I've worked because of falling or gait abnormality, usually didn't have their walking exam documented in the chart. Actually they never had their walking checked. The neurology consult request would usually read something like, "Can't walk, yet legs are strong." Of course, most consult requests don't give a reason for the consult at all, but among the ones that do, that's what they read like.

I have always found it perturbing that a problem so common and so serious as a gait abnormality would not even be assessed, and I always assumed that this was a universal problem, but I didn't have support for this until recently. In an article in the *Journal of the American Geriatrics Society* (Vol 52:1527) my belief was confirmed. In a cohort of 372 subjects over age 65 in "health management plans," 57 had documented falls. What was impressive to me was: that the number of actual falls was twice that documented when the patients were interviewed; that only 6% of the fallers had their orthostatic blood pressures checked; that only 7% had gait and balance checked; 25% had vision checked and 28% had neurologic assessments (although it is hard for me to understand what a neurological assessment without a gait evaluation is).

On rounds the evaluation of a fall or faint, or a "found on floor," is pretty standard. The diagnosis is "fit, faint or fall," and it's almost always the second or third and the evaluation is very straightforward: check orthostatic blood pressures and walk the patient. Why this isn't done is unknown. The main reason, I believe, is poor training. We attendings are not teaching our residents and students. This is **OUR** mistake which we, as teachers, must rectify. The patients see us either in the Emergency Dept or in our offices. In the ED it's usually after a fall or faint and the doctors are reluctant to walk the patient because the stretchers in the ED are very high to make it easier for the doctors there to examine the patient without bending over too much. While this is good, it makes it difficult to get the patient off the gurney and then back on, so the gait evaluation is postponed until the patient gets to the ward where the nurses will help get the patient out of bed. But this too doesn't happen because the nurse is busy, the patient is on the bed pan, the patient is too tired, or "the patient says he can't walk." If the patient can't be stood up to walk the orthostatic blood pressures can't be measured either. And so it goes until the physical therapist sees the patient. But the doctors, including the students, don't actually assess the gait in most cases.

I think that I know the reason why, although my opinion is not based on any data. I think that gait is not assessed either in the hospital or in the outpatient setting because doctors have not been taught how to do this. Gait is not simple to assess. It is a motor program that is altered by an infinite number of combinations of disturbances. There are brain changes from aging, stroke, Parkinson's disease or a host of other common problems. There are neuropathies that affect the information going to and from the brain. There are vestibular disturbances that affect balance and the perception of up and down. Vision plays a role. Arthritis (the usual villain everyone blames gait abnormalities on), bunions, myopathies, intoxications from medicines, poorly fitting shoes, etc. All affect gait and balance. I believe that doctors and students, lacking a vocabulary to describe the gait abnormality they see, let alone being able to classify it, don't do it because they can't translate what they see into language. If the gait is normal, terrific. "Gait-normal", or "WNL." But if the gait is not normal, what's different about it? Why does the patient limp? Is the stride length reduced? Is the gait altered from hip pain? Knee pain? Hip girdle weakness? How is an ataxic gait different from a spastic gait? And does it matter?

Well, it does matter greatly. I'm not advocating that gait diagnoses be made by interns, but I am advocating that gait abnormalities should be identified as being present or absent by primary care providers, interns and residents. I am advocating teaching doctors how to assess gait, and hopefully recognize the more common abnormalities. I am specifically asking every doctor to acknowledge that gait, especially in the elderly, is a major aspect of health and should be checked. When it is abnormal it requires evaluation. Sometimes gait can be improved and usually it can be made safer. It is the doctor's responsibility to check gait just as the doctor checks vital signs, and heart sounds. It is more likely that a gait abnormality will turn up on a routine evaluation of an elderly person than a new heart sound, and it is certainly more likely that an intervention, often as benign as physical therapy, will improve safety, hence quality of life. It is a lot

The Singular Benefits of Bathing

If a committee seeking a site for a new health resort were to have surveyed southwestern England, surely they would have unanimously chosen a particularly tranquil valley in Somerset Cotswolds. This charming valley on the Avon River, with its natural warm springs, was quickly established by the Romans as a rest and recreation retreat for their weary legions and later as a health resort for their aristocracy.

The Romans called the site, *Aqua Sulis*, waters dedicated to Sul, an ancient Celtic deity. They constructed magnificent marble-faced baths, a sudarium, temples, and adjacent inns for the visiting dignitaries, all built upon the archaeologic remnants of an older Celtic settlement, which had also recognized the salutary nature of the region.

When the Romans abandoned their favorite resort three centuries later, the site deteriorated until the West Saxons rebuilt it as an important city, calling it Bothonea, or Batha. A Christian abbey was constructed on the Roman ruins, and it was here that the Saxons crowned Edgar as their king in 973 CE. By the Middle Ages, the city, now known as Bath, was where the English cloth trade had prospered in addition to its mineral springs which continued to offer recreation, repose and hydrotherapy.

Bath's golden age was reached in the 18th Century when mansions were constructed for England's titled ranks, many of these new residences oriented about the lovingly restored mineral baths of the valley. The city, with its resplendent buildings, became England's architectural pride. Its warm mineral springs were said to be beneficial for persons suffering from rheumatism, gout, diseases of the liver, and scrofulous ailments. And of course, whenever there were mineral springs, there too would be both religious and curative facilities.

An Act of Parliament in 1597 recognized the therapeutic merit of Bath's mineral springs, identified them as a national resource and, in a gesture of conspicuous generosity, declared that the springs may also be used by "the diseased and impotent poor of England." Many of England's crippled did indeed make pilgrimages to Bath and thus the city witnessed a curious social admixture as both the very wealthy and the very impoverished congregated around the baths.

In 1716 a local committee was convened to seek ways to lessen the number of indigents congesting the streets of Bath. A law was passed declaring that only "true cripples" were permitted to enter the township to be benefited "by a trial of waters."

A charitable hospital was finally deemed necessary and funds were identified from an entirely new and prospering segment of the English middle classes: the factory owners of the evolving industrial revolution. An appeal was made to their sense of philanthropy but also to their dawning awareness that healthy workers were more productive than ailing workers. In 1737, adequate funds had been accumulated to construct an imposing hospital, now Bath General Hospital, expressly to dispense care for the disabled members of the working class.

Chronic lead poisoning [known variously as saturnism, *colica pictonum*, Devonshire colic, the dry gripes, painter's palsy or the dangles] was widespread in 18th Century Europe, particularly among residents who received their household water through lead pipes. Furthermore, workers in silver and lead mines as well as those employed in the pottery, pewter, cooking pots, rum, paint and cosmetics industries were constantly exposed to lead. A common syndrome of those adults burdened with long-standing lead poisoning consisted of increasingly painful, colicky abdominal pains associated with tenacious constipation, sallowness, fatigue and progressive weight loss. As the disorder advanced, weakness and eventually a flaccid paralysis of both arms dominated. The muscle weakness was most evident in the hands and wrists and the disease could readily be identified by the palsied wrist-drop of its victims.

Bath Hospital was distinguishable from other charitable institutions in Britain by its resolute commitment to accurate record keeping. The original hospital prospectus [1737] stated: "All physicians will allow that the greatest certainty that can be attained in the knowledge of the natures and virtues of any medicine arises out of the number of observations of the effect it has on human bodies in different circumstances." In essence they were declaring that the only way to know what worked and what didn't was to keep objective clinical records over the years.

In the interval between 1751 and 1758, for example, 1,590 workers were admitted to Bath Hospital: 108 presented with a clear history of occupational exposure to lead and all suffered from severe colic and paralysis. After an average hospital stay of 158 days, 100 [92.6%] were considerably improved and 52 of these were deemed to be totally cured. [It was noted, parenthetically, that about 14% of those considered cured had recurrence of their disease shortly after returning to their place of employment.]

What was the nature of the therapy offered at Bath Hospital? The patients were given an abundant diet, were bathed in the mineral springs three times a week and were required to drink over a pint of mineral water per day. Each patient was evaluated by a medical committee upon discharge to determine his outcome status.

The preservation of these clinical progress notes allowed current physicians to evaluate the merit, if any, of the treatments provided in a typical 18th Century mineral springs health facility. The initial expectation, of course, was that any improvement was ascribable solely to prolonged rest, removal of the workers from the factories [the source of their lead intoxication] and a general placebo effect. But a contemporary experiment, underwritten by NASA, demonstrated a variety of healthful physiological responses [in regulating internal water balance, kidney function and equilibration of the body's electrolytes] in individuals undergoing hydrotherapy. And recent testing at the Bristol Royal Infirmary demonstrated conclusively that mineral bath immersion alone increased the urinary excretion of lead in those workers suffering from lead poisoning.

Skepticism is a wonderful thing as long as it is applied objectively and even-handedly both to those therapies which seem scientifically rational as well as to those time-honored therapies which, at first glance, don't meet the criteria of being

Stroke Prevention

Nadir Khan MD, Timothy P. Murphy MD, Richard A. Haas, MD, Gregory M. Soares MD, Gregory J. Dubel MD

Carotid stenosis is present in 75% of men and 62% of women 65 years of age or older.[1] Approximately 750,000 cases of stroke occur annually with an estimated cost of $ 53.6 billion. According to the American Heart Association and American Stroke Association approximately 140,000 **carotid endarterectomy** (**CEA**) procedures are performed annually in the USA. Since the late 1950s CEA has been the most common vascular procedure performed on patients with or without symptoms of stroke.

As an alternate, **carotid artery stenting** (**CAS**) has been employed to open the narrowed segment in patients who are not good surgical candidates and in patients with high risk of stroke. Articles have shown that CEA benefits symptomatic patients with carotid artery stenosis.[2,3] Similarly, trials have shown benefits of CAS to be comparable to CEA.[4,5,6] Randomized multi-center clinical trials are comparing CEA and CAS in carefully defined clinical settings.[7] On 31st August 2004 the **Food and Drug Administration** (**FDA**) approved the first carotid artery stent and distal protection device and Medicare will reimburse certain post-marketing analysis patients for this procedure.

Risk Factors

The best predictor of future cerebral events is history of prior neurologic events. The risk of developing stroke within 90 days of a **transient ischemic event** (**TIA**) is 10.5 %.[8] Age older than 60 years, diabetes mellitus, TIA lasting longer than 10 minutes, focal symptoms of weakness such as speech impairment, heavy smoking, atrial fibrillation, and decreased physical activity are risk factors of stroke.[9,10]

Surgical Management of Stroke: Carotid Endarterectomy: History of Carotid Endarterectomy (CEA)

In 1914 Ramsey Hunt described the clinical syndrome of stroke due to cervical carotid disease. DeBakey performed the first successful CEA in 1953[11] while Eastcott[12] performed the first CEA with carotid artery cross clamping in May 1954.

Carotid Endarterectomy Utilization

The number of CEAs increased from the 1950s until around the mid-1980s when case series [7,13,8,14] indicated high rates of perioperative complications and stroke-death rates related to CEA. In 1988 the Rand corporation[9,15] showed that 32 % of the CEAs performed in the US in Medicare recipients were performed for inappropriate indications. A study showed that the annual rate of CEA in USA and Canada fell from 1984 to 1989 from 126 to 66 per 100,000 adults 40 years of age or older in California, from 65 to 40 per 100,000 in New York, and from 40 to 15 per 100,000 in Ontario, while from 1989 to 1995 a dramatic increase in CEA rates occurred, from 66 to 99 per 100,000 in California, from 40 to 96 per 100,000 in New York, and from 15 to 38 per 100,000 in Ontario.[16] The rise in the annual rates of CEA in the mid-1990s correlates to trials published in the early 1990s, such as the **North American Symptomatic Carotid Endarterectomy Trial** (**NASCET**) in 1991 and **Asymptomatic Carotid Atherosclerosis Study** (**ACAS**) in 1994.[2,17] By 1997, approximately 144,000 CEAs were performed annually in the United States in the non-Federal hospitals.[18]

Trials on Symptomatic Patients

In 1991 Barnett et al published results of the NASCET study on beneficial effects of CEA in symptomatic patients with stenosis of 70-99 % that were randomized to CEA or aspirin (1300 mg/day): CEA reduced the 2-year risk of ipsilateral stroke or death from 26% to 9%.[2] The perioperative stroke and death rate were 5.8% and 0.6%, respectively.[2] The same group showed data from 1987 to 1996 on CEA in patients with moderate carotid stenosis (50-69 %): CEA only moderately reduced the risk of stroke, while patients with stenosis less than 50 % did not benefit from surgery, relative to medical therapy.[19]

The European Carotid Surgery Trial (**ECST**) randomized 3024 patients who had one transient or mild symptomatic ischemic vascular event within 6 months.[3] The overall outcome of major stroke or death was 37.0% in surgery-group and 36.5% in control-group patients, while the frequency of a major stroke or death at 3 years was 26.5% for the control group and 14.9% for the surgery group, an absolute benefit from CEA of 11.6%.

Once the NASCET and ECST trials were published the Veterans Affairs Cooperative Symptomatic Carotid Stenosis Trial[20] was stopped because it showed similar results to earlier trials.

Therefore, CEA for symptomatic high-grade stenosis was shown to be effective especially when performed in high-volume centers by highly skilled surgeons with low complication rates.

What about Asymptomatic Patients?

The benefit of CEA in asymptomatic patients remains controversial. The ACAS trial suggested a benefit of CEA in patients with stenosis > 60 %.[17] Ipsilateral stroke or any preoperative stroke or death rate was 5.1% for surgical group (CEA only) versus 11.0% for patients treated medically (daily aspirin and risk factor management). Major ipsilateral stroke or any preoperative stroke or death was 3.4% for surgical group versus 6.0% for patients treated medically. When contralateral strokes were included, the trend toward better outcomes with surgery was not statistically significant.[17] The Mace

Trial was stopped due to a significant high number of **myocardial infarctions (MI)** and TIAs in surgical group, though the stroke and death rate was 0 % over 20 months.[21] The Veterans Affairs Cooperative Study (patients with ≥50% stenosis) yielded a CEA 30-day permanent stroke or death rate of 4.3 %.[22] At mean follow-up of 47.9 months there was a trend toward reduction in ipsilateral stroke in the surgical group (4.7% versus 9.4%), but no statistically significant difference in combined stroke or death rates.[22]

The **Asymptomatic Carotid Surgery Trial (ACST)** randomized 3120 asymptomatic patients with "substantial carotid narrowing" to immediate CEA or indefinite deferral of any CEA.[23] The 30-day stroke or death risk was 3.1% for immediate CEA patients. Combining the perioperative events and the non-perioperative strokes, net 5-year riss was 6.4% versus 11.8% for all strokes, 3.5% versus 6.1% for fatal or disabling strokes, and 2.1% versus 4.2% just for fatal strokes.[23] In summary, excellent surgical results are needed for modest benefits to be realized. Though CEA is clearly beneficial for symptomatic patients, its value in asymptomatic patients is less clear and has shown highly variable benefit, especially with regard to overall disabling stroke or death.

High Risk of Carotid Endarterectomy

NASCET[2] and ACAS[17] demonstrated perioperative thirty-day mortality rates of 0.6 % and 0.1 % in study patients, respectively. During the time the NASCET and ACAS were ongoing the perioperative mortality among Medicare patients undergoing CEA in all nonfederal institutional settings was 1.4 - 3 %, with 1.4% at trial hospitals and 1.7% -2.9 % in non-trial hospitals.[24] CEA has reduced the risk of carotid territory ischemic stroke ipsilateral to a recently symptomatic severe carotid stenosis. This benefit, however, is potentially negated by the risks of stroke and death associated with the operation. In a systematic review of mortality and the risk of stroke and/or death due to CEA for symptomatic carotid stenosis in 51 studies published since 1980, the overall mortality came out as 1.62%, and the risk of stroke and/or death was 5.64%.[25]

Patients with co-morbidities like lung, liver, renal failure; unstable angina and recent MI's were excluded from the NASCET and ACAS trials though these patients may have a significantly higher risk of stroke with CEA. Patients who are trial ineligible (NASCET and ACAS criteria) have shown a stroke/death rate of 3.6 % versus 1.5 % in trial eligible patients.[26] Patients who undergo CEA with conditions of acute myocardial infarction, congestive heart failure, diabetes mellitus, an acute stroke, male sex and age >80 show diminished long term survival.[27]

The perioperative morbidity and mortality rate of CEA in patients treated for restenosis with prior CEA is 11%. [28]

THOUGH CEA IS CLEARLY BENEFICIAL FOR SYMPTOMATIC PATIENTS, ITS VALUE IN ASYMPTOMATIC PATIENTS IS LESS CLEAR AND HAS SHOWN HIGHLY VARIABLE BENEFIT, ESPECIALLY WITH REGARD TO OVERALL DISABLING STROKE OR DEATH.

Interventional Management of Carotid Occlusive Disease

There are several potential advantages of endovascular management of carotid stenosis: increased patient comfort, significant cost savings due to shorter recuperation period and no cervical incision, thus eliminating the risk of cranial nerve palsies, wound infections or neck hematoma. The morbidity and mortality of endovascular treatment may be lower in patients at high risk for surgery. CAS usually does not require general anesthesia, thus allowing the patients' clinical status during the procedure to be monitored.

Balloon Angioplasty without stenting

Percutaneous Transluminal balloon angioplasty (PTA) for carotid artery stenosis was first reported by Kerber et al. in 1980.[29] In 1987, Theron et al. published the first large series of internal carotid angioplasty in 48 patients with *de novo* atherosclerosis or post-surgical restenosis.[30] Of the 523 carotid PTA procedures reported through 1995, the overall technical success rate is 96.2% with a 2.1% rate of morbidity and no deaths.[31]

Balloon angioplasty in symptomatic carotid stenosis of >70% been shown to have a technical success rate of 92%, a 30-day mortality of 0%, and a major morbidity rate of 4.9%.[28][32] This compares to an operative stroke and death rate of 5.8 – 7% and mortality rate of 0.6 – 1.3% in the NASCET and ECST trials, respectively.[32] Angioplasty of the carotid artery is an effective alternative method to vascular surgery, particularly for patients with co-morbidities that elevate the risks of surgery. The rate of restenosis with balloon angioplasties in the first 2 years is reported to be between 0-16% while in CEA series approximately 10% occur in the first year.[33,34,35]

Carotid Stenting

The purported advantages of stent placement over simple angioplasty include avoiding plaque dislodgment, intimal dissection, elastic vessel recoil and late restenosis. Vitek demonstrated a technical success rate of 98 % in 404 patients with 30-day morbidity/mortality rate of 1.9% and major and minor stroke rate of 0.7% and 5.8%, respectively.[36]

Wholey looked at the worldwide experience of 5,210 carotid stent

procedures involving 4,757 patients and demonstrated a technical success of 98.4% with a 30-day minor stroke rate of 2.72%, major strokes 1.49%, mortality rate of 0.86% and a restenosis rate of 1.99% at 6 months and 3.46% at 12 months.[37] Patients who meet NASCET criteria but fail eligibility due to co-morbidities show a morbidity rate of 2.0 – 7.9% and mortality rates of 0.6 – 2.0% which is favorable, compared to ECST (7%/1.3%) and NASCET (5.8%/0.6%) CEA trials.[38,39,40]

In a high-risk group with significant coronary artery disease, bilateral disease, contralateral carotid occlusion, prior CEA, ulcerated plaques, and calcified lesions, patients who are eligible for NASCET have demonstrated a low, 2.7% risk of procedural strokes after carotid stenting.[41]

CEA vs. Stenting: Non-randomized

Nonrandomized trials have attempted to compare CEA and carotid stenting. Considering the patient population for carotid stenting includes non-surgical candidates it has shown comparable results in non-randomized trials. The major stroke rate with stenting is 0.9 % verses 0.6% in CEA group and 3.7% in the stenting group verses 3.6% in the CEA group.[42]

Randomized Control Trials

Since 1996, there have been 11 large carotid stent series published: the total number of patients was 1,311. Procedure-related mortality rates, major stroke rates, and minor stroke rates compare favorably with NASCET and ECST. In a multicenter clinical trial, CAVATAS, patients with carotid stenosis randomized to endovascular treatment (balloon or stent) or CEA showed that major events within 30 days did not differ significantly between endovascular treatment and surgery (6.4% versus 5.9%, respectively, for disabling stroke or death; 10.0% versus 9.9% for any stroke lasting more than 7 days, or death.[4] Cranial neuropathy risk was 8.7% in surgery patients).[4] The rate of severe (70-99%) ipsilateral carotid stenosis at 1 year after treatment is more common with endovascular treatment than surgery (14% versus 4%), however no substantial difference in the rate of ipsilateral stroke is noted with survival analysis up to 3 years.[4] The Wallstent trial was stopped prematurely due to safety considerations. It demonstrated a perioperative stroke or death risk of 4.5% for surgery versus 12.1% for stenting and 1 year major stroke risk of 0.9% for surgery versus 3.7% for stenting.[43]

Brooks et al described a randomized single-center community hospital experience in symptomatic patients with > 70 % stenosis. The 2-year stroke or death rate is 2% for surgery versus 0% for stenting.[5]

The SAPPHIRE[6] trial examined high-risk patients (severe congestive heart failure, ejection fraction < 30 %, open heart surgery needed within 6 weeks, recent myocardial infarction, or unstable angina). CAS with the use of an embolic protection device resulted in a 4.4 % perioperative stroke and death rate for stenting versus 7.3% with CEA.[6]

Stent Delivery platforms

On August 31st Guidant announced that the FDA approved their new stent system, the RX ACCULINK™ Carotid Stent System and RX ACCUNET™ Embolic Protection System, for use in opening blocked arteries in the neck. It is to be used in patients who are symptomatic or whose carotid artery is at least 80% blocked, and who are not good candidates for the surgery. The distal protection device acts like a filter during carotid stenting procedure and is used to capture any particles that may be released and prevent them from going to the brain and causing a stroke. The SAPPHIRE[6] and the CREST[7] trials randomized high- and low-risk patients with carotid artery stenosis to stenting or surgery groups and use distal protection devices in stent patients

Conclusion

Carotid Stenosis is a leading cause of preventable ischemic stroke. Randomized trials have shown a clear benefit of surgery versus medical therapy for symptomatic > 50 % stenosis, but less clear-cut benefits for asymptomatic patients. Trials comparing CEA to CAS show comparable major procedural mortality and morbidity, with possible low cost, without cosmetic damage and related complications of incision, and minor risk benefits to CAS. Data comparing CAS to medical therapy for symptomatic and asymptomatic patients are pending.

References

1. O'Leary DH, Polak JF, Kronmal RA, et al. *Stroke* 1992; 23: 1752-60.
2. The North American Symptomatic Carotid Endarterectomy Trial Collaborators. *NEJM* 1991;325:445-53.
3. European Carotid Surgery Triallists' Collaborative Group. *Lance*t 1998; 351:1379-87.
4. Endovascular versus surgical treatment in patients with carotid stenosis in the Carotid and Vertebral Artery Transluminal Angioplasty Study (CAVATAS). *Lancet* 2001; 2;357:1729-37.
5. Brooks WH, McClure RR, Jones MR, et al. *J Am Coll Cardiol* 2001;15;38:1589-95.
6. Yadav J. (SAPPHIRE) American Heart Association. 2002. Chicago, Illinois.
7. Hobson RW 2nd. *Semin Vasc Surg* 2000;13:139-43.
8. Muntner P, Garrett E, Klag MJ, Coresh J. *Stroke* 2002;33:1209-13.
9. Johnston SC, Gress DR, Browner WS, Sidney S. *JAMA* 2000;284:2901-6.
10. Wolf PA, D'Agostino RB, Kannel WB, et al. *JAMA* 1988;259:1025-9.
11. DeBakey M, Crawford E, Cooley D, Morris GJ. *Ann Surg* 1959;149:690–710.
12. Eastcott H, Pickering G, Rob C. *Lancet* 1954;267: 994–6.
13. Muuronen A. *Stroke* 1984;15:959-64.
14. Warlow C. *Stroke* 1984;15: 1068-76.
15. Winslow CM, Solomon DH, Chassin MR, et al. *NEJM* 1988;318:721-7.
16. Tu JV, Hannan EL, Anderson GM, et al. *NEJM* 1998;339:1441-7.
17. Executive Committee for the Asymptomatic Caroid Atherosclerosis Study. *JAMA* 1995; 273:1421-8.
18. Hsia DC, Moscoe LM, Krushat WM. *Stroke* 1998;29:346-50.
19. Barnett HJ, Taylor DW, Eliasziw M, et al. *NEJM* 1998;339:1415-25.
20. Mayberg MR, Wilson SE, Yatsu F, et al. *JAMA* 1991;266:3289-94.
21. MACE Investigators. *Mayo Clin*

Proc 1992;67:513-8.
22. Hobson RW 2nd, Weiss DG, Fields WS, et al. *NEJM* 1993;328:221-7.
23. Halliday A, Mansfield A, Marro J, et al. *Lancet* 2004;363:1491-502.
24. Wennberg DE, Lucas FL, Birkmeyer JD, et al. *JAMA* 1998;279:1278-81.
25. Rothwell PM, Slattery J, Warlow CP. *Stroke* 1996;27:260-5.
26. Lepore MR Jr, Sternbergh WC 3rd, Salartash K, et al. *J Vasc Surg* 2001;34:581-6.
27. Estes JM, Guadagnoli E, Wolf R, et al. *J Vasc Surg* 1998;28:577-84.
28. Meyer FB, Piepgras DG, Fode NC. *Neurosurg* 1994;80:781-7.
29. Kerber CW, Cromwell LD, Loehden OL. *Am J Neuroradiol* 1980;1:348-9.
30. Theron J, Raymond J, Casasco A, Courtheoux F. *Am J Neuroradiol* 1987;8:495-500.
31. Kachel R. *J Endovasc Surg* 1996;3:22-30. Review.
32. Gil-Peralta A, Mayol A, Marcos JR, et al. *Stroke* 1996;27:2271-3.
33. Kachel R. *J Endovasc Surg* 1996;3:22-30. Review.
34. Theron JG, Payelle GG, Coskun O, et al. *Radiol* 1996; 201:627-36.
35. Schoser BG, Becker VU, Eckert B, et al. *Cerebrovasc Dis* 1998;8:38-41.
36. Vitek J, et al. AANS/CNS/ASITN Vol. 43. 1999, Nashville, Tennessee: 41.
37. Wholey MH, Wholey M, Mathias K, et al. *Catheter Cardiovasc Interv* 2000;50:160-7.
38. Wholey MH, Jarmolowski CR, Eles G, et al. *Endovasc Surg* 1997;4:326-38.
39. Yadav JS, Roubin GS, Iyer S, et al. *Circulation* 1997;95:376-81.
40. Roubin GS, Yadav S, Iyer SS, Vitek J. *Am J Cardiol* 1996;78(3A):8-12.
41. Mathur A, Roubin GS, Iyer SS, et al. *Circulation* 1998;97:1239-45.
42. Jordan WD Jr, Schroeder PT, Fisher WS, McDowell HA. *Ann Vasc Surg* 1997;11:2-8.
43. Alberts MJ. *Stroke* 2001;32:325-9.

Nadir Khan MD, is a Research Fellow, Department of Diagnostic Imaging, Brown Medical School.

Timothy P. Murphy MD, is Associate Professor, Department of Diagnostic Imaging, Brown Medical School.

Richard A. Haas, MD, is Associate Professor, Department of Diagnostic Imaging, Brown Medical School.

Gregory M. Soares MD, is Assistant Professor, Department of Diagnostic Imaging, Brown Medical School.

Gregory J. Dubel MD, is Assistant Professor, Department of Diagnostic Imaging, Brown Medical School.

Correspondence:
Nadir Khan, MD
Department of Diagnostic Imaging
Rhode Island Hospital
593 Eddy Street
Providence, RI-02903
Phone: (401) 444-5194
Fax: (401) 444-8756
e-mail: Nkhan@lifespan.org

First Steps: A Program For Medical Students To Teach High School Students About Breastfeeding

Julia R. Frew and Julie Scott Taylor, MD, MSc, IBCLC, PhD

The authors presented these results at the Academy of Breastfeeding Medicine Annual Meeting, October 2004, in Orlando, Florida. The presentation won an award for "Best Platform Research Presentation."

Despite the benefits of breastfeeding for mothers, infants, and society, breastfeeding rates in the United States are considerably lower than the goals set by Healthy People 2010.[1,2] Data suggest that a mother's decision depends heavily on her attitudes and beliefs about breastfeeding - attitudes and beliefs formed long before pregnancy.[3,4] Several investigators have assessed adolescents' knowledge and perceptions of breastfeeding and found numerous misconceptions, leading in some cases to negative attitudes.[4-8] These studies indicate that high school students are poorly informed but interested in learning about the benefits of breastfeeding.

Few published studies have evaluated breastfeeding educational interventions with non-pregnant adolescents. One randomized controlled trial assessed high school students' breastfeeding knowledge and attitudes before and after a 50-minute breastfeeding education session given by a breastfeeding peer counselor and found significant increases in positive breastfeeding beliefs and attitudes among female, but not male, students.[9] Another study evaluated the effect of a television and newspaper breastfeeding promotional campaign on adolescent females and found that the television commercial had a positive effect on attitudes, but no effect on knowledge.[10]

This pilot initiative had four objectives: to educate both medical and high school students about breastfeeding, to provide hands-on teaching experience for medical students, to connect high school students with mentors in the health professions, and to create the foundation for a long-term collaboration between **Brown Medical School (BMS)** and the **Metropolitan Regional Career and Technical Center (the Met).**

The Met is a group of 6 small public high schools in Providence, Rhode Island. The student body is 40% Hispanic, 30% African-American, 26% White, and 1% Asian. All students are required to apply to college and most attend; many are the first in their families to do so.

Initial Contacts

Our three primary contacts at the Met were the Director of Health and Wellness, the Director of Guidance, and the **LTI (Learning Through Internships)** Coordinator. Initially, the BMS faculty and medical student and Met staff met to discuss goals and plan sessions. Met staff were concerned that "how-to" information about breastfeeding might lead non-pregnant high school students to desire pregnancy. The BMS student and faculty member felt that some specific information, such as the benefits of breastfeeding, was critical to promoting positive attitudes toward breastfeeding. Everyone agreed that high school students would respond well to a focus on the controversial marketing techniques of infant formula companies and their impact on breastfeeding.

High School Curriculum

The Met high school was selected, in part, because of its curriculum. Students are divided into "advisories" of approximately 15 students each. Each advisory remains together from grades 9 to 12, and is led by a teacher who works with the same group of students for all 4 years. Students spend 3 days per week on the Met campus in their advisories and two days per week in the community, engaging in Learning Through Internships (LTIs) at local organizations.

Each day on the Met campus begins with a "Pick Me Up", a 30-minute presentation given by students, staff, or community members to an entire Met

Table 1. Attitudes about Breastfeeding among High School Students (n=37).

Survey Item	Pre (Mean)*	Post (Mean)*	p value**
Breastfeeding is the best food for a baby.	2.94	2.14	0.003
Formula feeding is just as healthy as breastfeeding a baby.	2.91	3.17	0.475
Breasts are meant for breastfeeding.	3.24	3.06	0.244
Breastfeeding is disgusting.	3.62	3.68	0.641
Working women are unable to breastfeed.	3.57	3.38	0.333
Employers should help women continue to breastfeed when they go back to work.	3.12	2.79	0.133
Formula companies should be allowed to advertise in whatever way they choose.	2.81	2.86	0.822
The United States should have laws about how formula companies can advertise.	3.11	2.81	0.218
Mothers should breastfeed in private.	3.23	3.17	0.935
It's okay for a woman to breastfeed her baby anywhere.	2.89	2.61	0.239

*Likert scale:
1=Strongly Agree
2=Agree
3=Undecided
4=Disagree
5=Strongly Disagree

**Wilcoxon signed-ranks test

school, a group of approximately 50-75 students. Local politicians, artists, activists, and business people have shared their experiences with students in these sessions. The Pick Me Up was chosen as an ideal forum for our breastfeeding presentations.

Breastfeeding Curriculum

The foundation for our presentations was "Breastfeeding: First Step to Good Health", an education activity package for grades K-12 created in 1995 by the New York State Department of Health, supported by a grant from the United States Public Health Service Bureau of Maternal and Infant Health.[11] Activities for each grade level are designed to be integrated into science, health, language arts, and social studies. The activities for grades 9-12 focus on cultural attitudes toward breastfeeding. Lessons include the benefits of breastfeeding, the pros and cons of breastfeeding in developing countries, infant formula company advertising strategies, and specifics of how to breastfeed.

Presentation

A BMS student gave Pick Me Up presentations to two different groups of 50-60 students, each several weeks apart. In each case, the principal of the school involved attended, as did many of the advisors and staff. The first Pick Me Up was arranged through the principal of that school, while the second was arranged through a student.

The Family Medicine faculty and the medical student presenter created a 20-minute, 12-slide PowerPoint presentation. The first half of the interactive presentation was designed to solicit students' responses to the question, "What do you already know about breastfeeding?" and follow with information on the benefits of breastfeeding for mothers and babies. One slide contained the names of celebrity breastfeeding mothers, while another illustrated breastfeeding rates in the US and in other nations. The second half of the presentation was devoted to a discussion of infant formula company marketing strategies, with illustrations of advertisements from around the world. (Figure 1). Students were asked to consider how these advertisements might affect new parents.

Evaluation

An evaluation form, adapted from the original curriculum, was used to assess students' attitudes about breastfeeding before and after the Pick Me Ups. The one-page anonymous written survey contained 10 items and could be completed in less than 5 minutes. Staff members passed out the surveys to students after each Pick Me Up, and collected them in advisories later that day.

Mentoring

The Met's LTI Coordinator and several Met students visited the BMS Department of Family Medicine to solicit volunteers for LTIs (twice weekly ongoing internships) with Met students. Faculty members of one Family Medicine clinic with a primarily maternal-child health patient population elected to mentor an LTI student for the academic year.

Results

Students attending the first presentation were attentive, asking questions about breastfeeding based on information from the experiences of family members or friends. The celebrity breastfeeding slide provoked surprise. After initial giggles, students answered questions appropriately and identified how advertisements might undermine parents' confidence in breastfeeding. The principal and advisors offered responses themselves and called on students when necessary.

In the second presentation, the presenter found it difficult to elicit responses from the students, and the principal and advisors of this group were less involved in engaging the students. The principal questioned aloud what relevance breastfeeding had to her students.

In both cases the response rate for the evaluation surveys was less than 50% after multiple collection attempts. The evaluations that were returned showed some impact on students' attitudes about breastfeeding. (Table 1) Overall, students expressed positive attitudes toward breastfeeding both before and after the presentation. Students' responses to the statement "Breastfeeding is the best food for a baby" were significantly more favorable after the presentation.

One Met student became involved in a mentoring relationship with BMS through an LTI. She plans to focus her Senior Thesis project on creating a breastfeeding promotion brochure targeting minority teenagers, and spends one day per week shadowing doctors in

Figure 1. Presentation slide on infant formula company marketing strategies.

a Family Medicine Clinic.

Discussion

This project is an example of a collaboration between a medical school and a high school, based on the goals of health education (in this case, breastfeeding promotion), teaching experience for medical students, and career mentoring for high school students.

Successes of the project included the use of an excellent but underutilized K-12 curriculum to engage high school students in a 30-minute discussion on breastfeeding. Focusing the content on formula company marketing strategies held students' interest, and students left with new knowledge about infant nutrition. One unexpected benefit was exposing high school students to female physicians and medical students who were also mothers. Two physicians and one medical student attended the first presentation with their infants. When a group of teenage girls gathered around the babies and learned that the adults accompanying the babies were doctors, one girl asked, "Then whose babies are these?" In addition, at least one long-term mentoring relationship has been established between a Met student and BMS physicians with the potential for future relationships. The medical student presenter improved her skill at tailoring health information to specific populations.

Limitations included the complexity of coordinating medical school and high school schedules, the lack of high school student participation in discussion (particularly at the second presentation), and low survey response rates. Logistical barriers related to medical school course schedules restricted the number of BMS students who could participate in the project. The 50-60 students attending each presentation impeded interactive discussion. Low survey response rates probably represent a combination of students who chose not to respond and respondents who did not return completed evaluations.

Future plans are to continue the relationship between BMS and the Met by scheduling more presentations, preferably with smaller groups of students, and considering more ways in which BMS physicians and students can mentor Met students interested in careers in medicine. The presentation slides are available, complete with speaker notes, for others to revise and use.

References

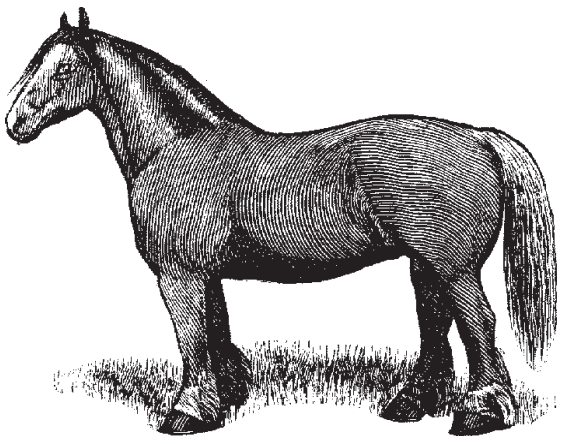
1. American Academy of Pediatrics, Work Group on Breastfeeding. Breastfeeding and the use of human milk. *Pediatrics* 1997; 100:1035-9.
2. US Department of Health and Human Services. *Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health.* 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
3. Shaker I, Scott JA, Reid M. Infant feeding attitudes of expectant parents: Breastfeeding and formula feeding. *J Adv Nurs* 2004; 45:260-8.
4. Leffler D. US high school age girls may be receptive to breastfeeding promotion. *J Hum Lact* 2000; 16: 36-40.
5. Berger A, Winter, ST. Attitudes and knowledge of secondary school girls concerning breast feeding. *Clin Pediatr* 1980; 19:825-6.
6. Ellis DJ. Secondary school students' attitudes and beliefs about breastfeeding. *J Sch Health* 1983; 53:600-4.
7. Forrester IT, Wheelock G, Warren AP. Assessment of students' attitudes toward breastfeeding. *J Hum Lact* 1997; 13:33-7.
8. Goulet C, Lampron A, Marcil I, Ross L. Attitudes and subjective norms of male and female adolescents toward breastfeeding. *J Hum Lact* 2003; 19:402-10.
9. Martens PJ. The effect of breastfeeding education on adolescent beliefs and attitudes: a randomized school intervention in the Canadian Ojibwa community of Sagkeeng. *J Hum Lact* 2001; 17:245-55.
10. Friel JK, Hudson NI, Banoub S, Ross A. The effect of a promotion campaign on attitudes of adolescent females towards breastfeeding. *Can J Public Health* 1989; 80:195-9.
11. New York State Department of Health. Breastfeeding: first step to good health—a breastfeeding activity package for grades K-12. Albany: New York State Health Research Inc. 1995.

Julia R. Frew is a fourth year Brown Medical School student.

Julie Scott Taylor, MD, MSc, IBCLC is Director of Predoctoral Education, Department of Family Medicine, Brown Medical School.

Correspondence:

Julia R. Frew
Department of Family Medicine
Memorial Hospital of Rhode Island
111 Brewster Street
Pawtucket, RI 02860
Phone: (508) 226-1707
Fax: (401) 729-2923
e-mail: Julia_Frew@brown.edu



Ultra-Rapid Aortic Stenosis Progression In End Stage Renal Disease

Roger D. Raymond, MD, and Edward J. Choi, MD

In the past, calicific **aortic stenosis (AS)** in the elderly was felt to be a degenerative process from wear and tear upon deformed aortic cusps.[1,2] However, over the last decade new pathophysiology has been described. Studies have shown infiltration of macrophages and T-lymphocytes, excess tissue adhesion molecules, elevated C-reactive protein and metalloproteinases consistent with an inflammatory process.[3,4,5] Additionally lipoprotein deposition and calcification supports a concomitant atherosclerotic process.[6] In some cases renal failure will exaggerate the valvular calcification. With so many variables, the rate of progression of AS may vary considerably from patient to patient.

Case Reports

The two following patients both appeared to develop AS after severe renal failure and their progression certainly occurred at an ultra-rapid pace.

Case 1 is a 65 year-old male who presented with polycystic kidneys and a myocardial infarction in 1988. He had no heart murmur. A left heart catheterization revealed normal **left ventricular (LV)** function, no aortic valve gradient and a **right coronary artery (RCA)** stenosis that was successfully angioplastied. An interim echocardiogram (2D-ECHO) in 2001 showed only aortic valve sclerosis and no valvular gradient just prior to starting hemodialysis. His cardiac catheterization was repeated in May 2002 after a bout of rapid **atrial fibrillation (AF)** with a minimal elevation of troponin. He had a 10mm Hg gradient across the aortic valve and no flow-limiting **coronary artery disease (CAD).** However, he developed **congestive heart failure (CHF)** in November 2002. His ECHO and cardiac catheterization were repeated, revealing a mean valve gradient of 45 mm Hg by ECHO and a mean valve gradient of 25 mm Hg with a valve area of 1.3 cm^2 by cardiac catheterization (a discrepancy due to pressure recovery in a narrow aorta). In August 2003, he had recurrent resistant CHF. Cardiac catheterization at another facility then showed low pressure AS with a 25 mm Hg gradient, an aortic valve area of 0.85 cm^2, a drop in the **ejection fraction (EF)** to 40%, and 50% RCA restenosis. A dobutamine ECHO showed adequate contractile reserve. He was referred for **aortic valve replacement (AVR)** and single vessel **coronary artery bypass grafting (CABG)** of the RCA with good results. He is much improved now 15 months post-op. Interestingly, the pathology report of the resected aortic valve described acute inflammation within the substance of the valve with focal accumulation of fibrin and no definite bacteria identified by gram stain.

Case 2 is a 63 year-old female with insulin-dependant **diabetes mellitus (DM)** and **chronic renal failure (CRF).** She presented with transient asymptomatic 3rd degree av nodal ventricular block in 1998. No murmur was noted. An ECHO revealed normal LV function and mild sclerodegenerative aortic valve disease without a gradient. She returned in June 2002 with resistant CHF and hypotension. Her EKG was now normal. However a diagnostic cardiac catheterization revealed a mean aortic valve gradient of 55 mm Hg with an aortic valve area of 0.43 cm^2, and a mitral valve gradient of 18 mm Hg with a mitral valve area of 0.8 cm^2. Her EF and coronaries were normal. She improved after double valve replacement, but expired suddenly the following year.

Clinicians need to be aware of possible ultra-rapid progression in AS, particularly in patients with renal failure.

Both patients had no apparent AS when starting **hemodialysis (HD).** However, in the span of just a few years (one and four respectively), both patients developed severe symptomatic AS with resistant CHF that improved only after AVR.

Discussion

In the past, the progression of AS was felt to be a degenerative process related to the physical effects of turbulance on deformed cusps. Pathologists described thickening of valvular collagen and calicification at the base of the cusps, leaving the margins more mobile. Progression was often insidious with the valve area decreasing by an average of 0.04cm^2/yr to 0.1cm^2/yr in one study.[6]

Over the past decade, similarities between AS and atherosclerosis have been reported. The initial valve lesion is a deposition of lipids, which are oxidized similarly to atherosclerosis.[4,5] In the past few years, statins have been associated with slower progression of AS.[7] Animal studies have shown that high cholesterol diets increased macrophage and osteoblast bone markers on the aortic valve.[7] Another important component in the pathogenesis of AS (as in atherosclerosis) is an inflammatory response with T-lymphocyte and macrophage infiltration.

Recent renal literature has cited renal failure with its alterations in calcium and parathyroid homeostasis as another risk factor for AS progression.[8] Valvular calcification occurs in areas of lipoprotein deposition and has been identified with more hemodynamic progression in AS.

Conclusions

Our two patients highlight extreme examples for rapid progression when all risk factors are present, and suggest perhaps a synergistic effect in some cases. Both patients had minimal if any evidence of AS upon presentation but in the span of two years progressed to severe AS with resistant CHF responding only to AVR. Clinicians need to be aware of possible ultra-rapid progression in AS, particularly in patients with renal failure.

References

1. Crawley IS, Morris DC, Silverman DD. Valvular Heart Disease. In: Hurst JW. *The Heart, Arteries and Veins*. 4th ed. New York: McGraw-Hill, 1978: 1034.
2. Otto CM, Kuusisto J, Reichenbach DD, et al. Characterization of the early lesion of 'degenerative' valvular aortic stenosis: Histological and immunohistochemical studies. *Circulation* 1994; 90: 844-53.
3. Wallby L, Janerot-Sjoberg B, Steffensen T, Broquist M. T lymphocyte infiltration in non-rheumatic aortic stenosis: A comparative descriptive study between tricuspid and bicuspid aortic valves. *Heart* 2002; 88: 348-51.
4. Schonenberger A, Winkelspecht B, Kohler H, Girndt M. High prevalence of aortic valve alteration in hemodialysis patients is associated with signs of chronic inflammation. *Nephron Clin Pract* 2004; 96: c48-55.
5. Olsson M, Dalsgaard CJ, Haegerstrand A, et al. Accumulation of T lymphocytes and expression of interleukin-2 receptors in nonrhematic stenotic aortic valves. *JACC* 1994; 23: 1162-70.
6. Bellamy MF, Pellikka PA, Klarich KW, et al. Association of cholesterol levels, HMG CoA reductase inhibitor treatment and the progression of AS in the community. *JACC* 2002; 40: 1723-30.
7. Rajamannan NM, Subramaniam M, Springett M, et al. Atorvastatin inhibitis hypercholesterolemia induced cellular proliferation and bone matrix production in the rabbit aortiv valve. *Circulation* 2002; 105: 2660-5.
8. Perkovic V, Hunt D, Griffin SV, et al. Accelerated progression of calcific aortic stenosis in dialysis patients. *Nephron Clin Pract* 2003; 94: c40-45.

Roger D. Raymond, MD, is cardiologist, Rhode Island Hospital, and Clinical Associate Professor, Brown Medical School.

Edward J. Choi, MD, is a Cardiology Fellow, Brown Medical School.

Correspondence:

Roger D. Raymond, MD
Rhode Island Hospital
University Cardiology Foundation
2 Dudley Street, Suite 360
Providence, RI 02905
Phone: (401) 453-6754
Fax: (401) 444-3327
E-mail: rraymond@lifespan.org

Information for Contributors, *Medicine & Health/Rhode Island*

Medicine & Health/Rhode Island is a peer-reviewed publication, listed in the *Index Medicus*. We welcome

Contributions

Contributions report on an issue of interest to clinicians in Rhode Island: new research, treatment options, collaborative interventions, review of controversies. Maximum length: 2500 words. Maximum number of references: 15. Tables, charts and figures should be camera-ready. Photographs should be black and white. Slides are not accepted.

Creative Clinician

Clinicians are invited to describe cases that defy textbook analysis. Maximum length: 1200 words. Maximum number of references: 6. Photographs, charts and figures may accompany the case.

Point of View

Readers share their perspective on any issue facing clinicians (e.g., ethics, health care policy, relationships with patients). Maximum length: 1200 words.

Advances in Pharmacology

Authors discuss new treatments. Maximum length: 1200 words.

Advances in Laboratory Medicine

Authors discuss a new laboratory technique. Maximum length: 1200 words.

Medical Myths

Authors present an iconoclastic, research-based analysis of long-held tenets. Maximum length: 1200 words.

For the above articles: Please submit 4 hard copies and an electronic version (Microsoft Word or Text) with the author's name, mailing address, phone, fax, e-mail address, and clinical and/or academic positions to the managing editor, Joan Retsinas, PhD, 344 Taber Avenue, Providence, RI 02906. phone: (401) 272-0422; fax: (401) 272-4946; e-mail: retsinas@verizon.net

Images in Medicine

We encourage submissions from all medical disciplines. Image(s) should capture the essence of how a diagnosis is established, and include a brief discussion of the disease process. Maximum length: 250 words. The submission should include one reference. Please submit the manuscript and one or two cropped black and white 5 by 7 inch prints with the author's name, degree, institution and e-mail address to: John Pezzullo, MD, Department of Radiology, Rhode Island Hospital, 593 Eddy St., Providence, RI 02903. Please send an electronic version of the text to: JPezzullo@lifespan.org.

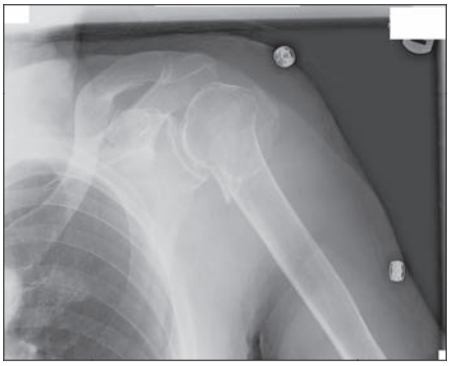


FIGURE 1.

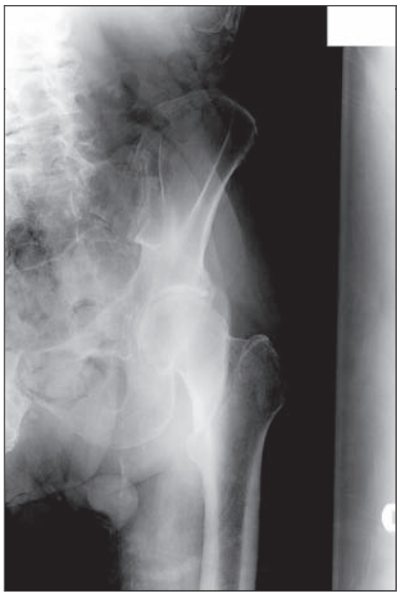


FIGURE 2.

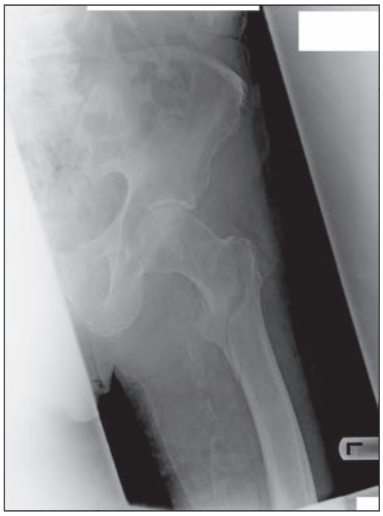


FIGURE 3.

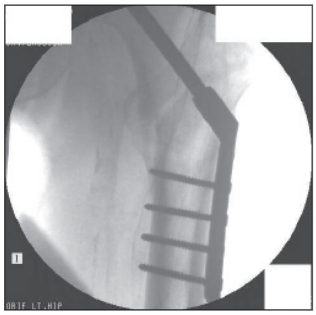


FIGURE 4.

Left Humerus and Intertrochanteric Fracture in an Elderly Man

This patient is an 84 year-old man with a past medical history of dementia, Parkinson's disease, and cerebrovascular stroke with mild left hemiparesis. He had recently fallen, fracturing his left humerus (Figure 1), and was admitted to a nursing home for skilled care and rehabilitation. The night of his admission, he fell again, displacing his humerus fracture. He also sustained an intertrochanteric fracture of the left proximal femur (Figures 2,3). An open reduction with internal fixation was performed (Figure 4), and the patient was discharged to a nursing home for skilled care and rehabilitation.

Osteoporosis is frequently a contributing factor to fractures in the elderly. Currently 50% of women and 18% of men older than 50 years will sustain a fracture secondary to osteoporosis.[1] These patients may incur significant morbidity and mortality if not treated in a timely fashion. However, co-morbid illnesses require that these patients undergo a thorough preoperative evaluation. Postoperatively, physical rehabilitation often takes place in the skilled nursing facility where a multidisciplinary team addresses medical, physical, social, and nutritional needs. It is generally recommended that patients receive calcium supplementation to prevent further bone loss. The use of bisphosphonates should also be encouraged. Post-operative deep vein thrombosis prophylaxis with low molecular weight heparin or adjusted dose warfarin has also been recommended.[2]

– RAMONA RHODES, MD, AND AMAN NANDA, MD

REFERENCES

1. Cornell CN, Lane JM, Ponyton AR. Orthopedic management of vertebral and long bone fractures in patients with osteoporosis. *Clin Ger Med* 2003; 19(2).
2. Geerts WH, Heit JA, Clagett GP, et al. Prevention of venous thromboembolism. *Chest* 2001; 119(1).

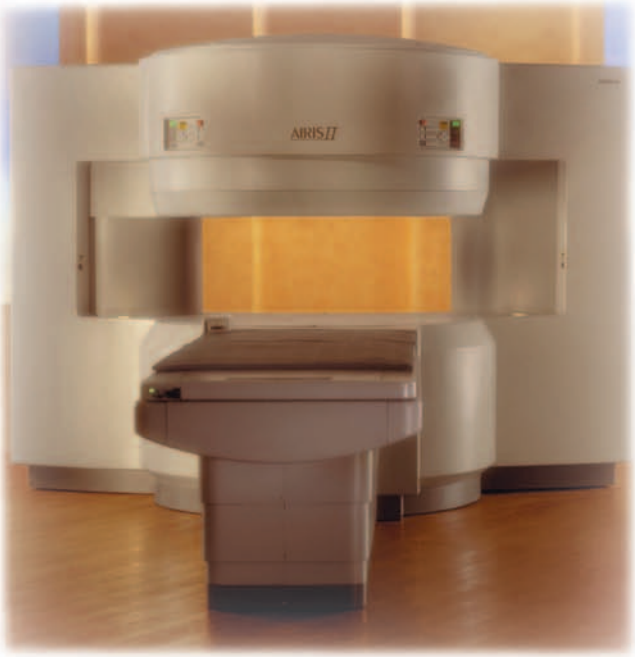
Ramona Rhodes, MD, is a Fellow in Geriatric Medicine, Brown Medical School.
Aman Nanda, MD, is Assistant Professor in Medicine, Brown Medical School.

CORRESPONDENCE:

Ramona Rhodes, MD
Phone: (401) 444-5248, Fax: (401) 444-3397
E-mail: rrhodes@lifespan.org

X-RAY ASSOCIATES

MRI AND MEDICAL IMAGING CENTERS ...*The MRI and Imaging Experts*



Our OPEN MRI units are the most Clinically Powerful MRI Systems Available.

All of our MRI Scanners are equipped with the most advanced imaging software and options available, which provide:

- Clear, High Resolution, Thin Section Images
- Cutting Edge – MR Bolus Angiography
- Advanced MR Arthrography with Fat Suppression Technology
- Faster exam times allowing for maximum patient comfort

- Our OPEN MRI Scanners have a Success Rate of 99% with anxious and claustrophobic patients
- Fellowship trained, On-Site Radiologists with sub-specialization in neurologic, orthopedic and body MRI
- Specializing in MRI, CT, Ultrasound and X-Ray

Southern Rhode Island's Most Advanced, Out-Patient Imaging Center Serving the Community for Over 30 Years

Johnston	Cranston	Wakefield	Middletown
401 351-1570	401 943-1454	401 792-9840	401 842-0707
1524 Atwood Ave.	1140 Reservoir Ave. (MRI)	481 Kingstown Rd.	345 Valley Road
Atwood Medical Bldg., Suite LL5	1150 Reservoir Ave. (Main)	(next to Chelo's)	

ADVANCED OPEN MRI ▪ HIGH FIELD PATIENT FRIENDLY MRI ▪ CT SCAN
MAMMOGRAPHY ▪ ULTRASOUND ▪ X-RAY ▪ BONE DENSITY TESTING ▪ FLUOROSCOPY

The Name of Choice in MRI

Open MRI
of New England, Inc.

- Open-Sided and 1.5 Tesla High Field Systems
- Fast appointments and reports
- Instant internet access to studies
- 5 Easy locations in Cumberland, East Providence, North Smithfield, Warwick & Westerly

Open MRI *of New England, Inc.*

ADVANCED
Radiology, Inc.

- "Multislice" CT systems by GE
- Digital xray, bone density and ultrasound
- Fast appointments and reports
- Instant internet access to studies

ADVANCED *Radiology, Inc.*

MAIN OFFICE:
525 Broad St • Cumberland
Tel. 725-OPEN (6736) Fax 726-2536

1002 Waterman Ave • East Providence
Tel 431-5200 Fax 431-5205

501 Great Road •North Smithfield
Tel 766-3900 Fax 766-3906

335 Centerville Rd • Warwick
Tel. 732-3205 Fax 732-3276

101 Airport Rd • Westerly
Tel 315-0095 Fax 315-0092

The Ocean State Adult Immunization Coalition is now accepting preliminary orders from practices for the 2005 Adult Influenza Purchasing Cooperative.

Benefits to You:

- **Buying power of large group**
- **Less staff time to manage vaccine purchase**
- **Single point of contact**

For inquiries or to place an order, contact Carole Horsman at 528-3266 or by email at chorsman@riqio.sdps.org.

MIRIAM HOSPITAL AND RHODE ISLAND HOSPITAL MORBIDITY AND MORTALITY CONFERENCES, CASE OF LEMIERRE SYNDROME

MARY HOHENHAUS, MD

Acknowledgements: James Atkinson, MD, Achal Dhupa, MD, Eric J. Gartman, MD, Douglas W. Martin, MD

Chief Complaint: "I feel crummy."

History Of Present Illness: This 24-year-old woman was in her usual state of health until 10 days prior to admission when she developed a sore throat and anterior neck swelling. She recently babysat for her young nephews, who had been ill with fever and cough. She had no other significant symptoms, and the sore throat and swelling spontaneously resolved during the course of the next week. However, over the following 3 days she became increasingly fatigued, lightheaded upon standing, and developed a throbbing sensation at the back of her head and neck. She noted subjective fever and chills, as well as decreased appetite with early satiety. She also felt short of breath and as though she was breathing quickly. The patient's mother commented that her eyes looked yellow. She presented to the Miriam Hospital Emergency Department for evaluation.

Review of Symptoms: No cough. No headache or neck stiffness. No nausea, vomiting, or abdominal pain. No change in stool color. No dysuria.

Prior Medical History: Obesity.

Medications: None.

Allergies: No known drug allergies.

Social History: Lived with her mother. Patient was not employed. Denied tobacco and drug use. Rare alcohol consumption. Not sexually active for more than 1 year.

Family History: Mother with hypertension, sister with Type II diabetes.

Physical Exam:
Temp = 36.3C BP = 111/50 HR = 125 RR = 22 SaO2 = 97% room air
General: Morbidly obese young adult female, comfortable at rest.
HEENT: Icteric sclerae, conjunctivae pink. Oropharynx moist, erythematous, but no lesions or exudates.
Neck: Mild tenderness to palpation of lateral right neck, but no palpable lymphadenopathy.
CVS: Tachycardic but regular. No murmurs, rubs, or gallops.
Lungs: Clear to auscultation bilaterally, no wheezes or rales.
Abdomen: Obese. Positive bowel sounds, soft, nontender, nondistended. No organomegaly.
Extremities: No axillary or groin lymphadenopathy. 2+ pulses, no cyanosis, clubbing, or edema.
Skin: Hyperpigmentation of axillary skin, no rashes or lesions.
Neurologic: Alert and oriented. Cranial nerves grossly intact. Nonfocal.

Labs:
CBC:
WBC count: 30,600 per mL
Hemoglobin: 9.5 g/dL
Hematocrit: 28.3%
Platelet count: 143,000 per mL
Mean corpuscular volume: 73.9 FL
RDW: 19.1%
Morphology: 2+ microcytosis
Differential: 79% neutrophils, 17% band forms, 4% lymphs, + toxic granules
Chem 7:
Sodium: 129 mmol/L
Potassium: 3.2 mmol/L
Chloride: 92 mmol/L
Bicarbonate: 23 mmol/L
BUN: 13 mg/dL
Creatinine: 1.2 mg/dL
Glucose: 143 mg/dL
Liver panel:
AST: 316 IU/L
ALT: 150 IU/L
Total bilirubin: 5.5 mg/dL
Direct bilirubin: 3.8 mg/dL
Alkaline phosphatase: 164 IU/L
Albumin: 1.9 g/dL
Total protein: 6.3 g/dL
Amylase: 28 U/L
Lipase: 34 IU/L
Iron studies:
Iron: 29 µ/dL
Total iron binding capacity: 269 µ/dL
Transferrin: 6 %
Ferritin: 466 ng/mL
Urinalysis:
Bilirubin: 3+
Urobilinogen: 4+
Leukocyte esterase: 25/µL
WBC: 3/hpf
Mono spot: negative
Rapid strep: negative
CXR: Multiple bilateral pulmonary parenchymal nodules
EKG: Sinus tachycardia, rate 135

Hospital Course: The patient received 2 liters normal saline in the emergency department without improvement in her tachycardia, and she was admitted to the medicine service. A **computed tomography (CT)** scan of the chest was negative for pulmonary embolism but consistent with septic emboli. Ceftazidine was started empirically. Blood cultures obtained at admission were positive for Gram negative rods within 24 hours. She became febrile to 38.9C

the morning after admission.

Infectious disease and pulmonary consults were obtained. Metronidazole and gentamicin were added. Given the antecedent pharyngitis and presence of Gram negative rods, a diagnosis of septic thrombophlebitis of the internal jugular vein was entertained. The patient became increasingly tachycardic and tachypneic. CT angiography was negative for pulmonary embolism in the large vessels, but the study was limited secondary to the patient's body habitus. The lung fields demonstrated a ground glass appearance suggestive of pulmonary edema or acute respiratory distress syndrome.

On hospital day 3, the patient's hemoglobin dropped to 8.2, and transfusion was ordered in an attempt to relieve her tachycardia and tachypnea. During infusion of the second unit of packed red blood cells, the patient became tachypneic to the 50s with significantly increased work of breathing, and was intubated. A blood gas was not obtained. Workup for transfusion reaction was negative.

She was transferred to the Intensive Care Unit, where she required 48 hours of pressor support and was started on stress-dose steroids. Transfusion reaction workup was negative. The Gram negative rods were ultimately identified as Fusobacterium species, and antibiotic coverage was changed to ampicillin/sulbactam. Transesophageal echo showed no vegetations.

Nonocclusive thrombosis of the right internal jugular vein was confirmed by ultrasound, and heparin therapy was initiated. No abscess was seen by CT. Surgery consultation was obtained, but invasive intervention was not deemed necessary. Right upper quadrant ultrasound and HIDA scan to evaluate abnormal liver enzymes showed only diffuse gallbladder wall thickening and delayed filling. Hepatitis serologies were negative. Liver enzymes returned to normal without intervention. Serial chest x-rays showed gradual resolution of pulmonary edema and airspace disease. Her hemoglobin reached a nadir of 6.6 g/dL without evidence of bleeding or hemolysis, and was attributed to dilutional effects of volume resuscitation superimposed on an underlying anemia. She received 3 units packed red blood cells without incident.

The patient was extubated on hospital day 7 and returned to the medicine service on day 8. She improved and was discharged to home on hospital day 15 on oral metronidazole and warfarin. She was seen in primary care followup 2 weeks after discharge and continued to do well.

Discussion:

1. What is the natural history of Lemierre syndrome?

Lemierre syndrome—septic thrombophlebitis of the internal jugular vein—is typically caused by *Fusobacterium necrophorum*, a Gram-negative rod that is part of the normal flora of the mouth, female genital tract, and gastrointestinal tract. The organism rarely causes disease in healthy subjects unless there is a disturbance in normal mucosal barriers. It occurs most commonly in older teens and young adults.

A primary infection, usually pharyngitis or tonsillitis, permits local bacterial invasion of the lateral pharyngeal space with a secondary thrombophlebitis of the internal jugular vein approximately 1 week later. Initial symptoms may be subtle, such as mild pharyngeal erythema, or be limited to a sore throat. Fever may occur at any time during the course. Neck swelling and tenderness along the sternocleidomastoid muscle are the most common physical findings, appearing in just over half of cases in a series of 109 patients by Chirinos et al.

Metastatic complications are common, with the lungs the most frequent site of septic emboli (nearly 80% of cases). Pleural effusion is also common, reported in 43%. Respiratory failure can occur. The joints (hips, shoulders, and knees) are the next most common target. Splenomegaly and hepatomegaly appear in approximately 15%, and mild hyperbilirubinemia with modest elevations in liver enzymes was reported in a third of cases.

In the preantibiotic era, Lemierre syndrome carried a high mortality rate (18 of 20 patients in Lemierre's original series). Early treatment with antibiotics greatly reduces mortality and limits metastatic complications. Sepsis and death still occur, especially with a delay in diagnosis and antibiotic treatment.

Historically, Lemierre syndrome was well known to physicians. Lemierre himself wrote that the constellation of sore throat, fever, and septic emboli of the lungs or joints "constitute a syndrome so characteristic that mistake is almost impossible." The introduction of penicillin vastly reduced its incidence, but some theorize that current trends toward more judicious prescribing of antibiotics may lead to an increase in cases.

2. What is the management of Lemierre syndrome?

Antibiotic coverage (typically metronidazole or clindamycin) is paramount, and may be required for 3 to 6 weeks to eradicate the infection. The internal jugular vein can be evaluated by ultrasound, CT, or MRI, but CT may be the preferred initial study for its ability to delineate local anatomy and detect abscess.

Anticoagulation is controversial because restoration of blood flow may allow extension of the infection. Some authors recommend anticoagulation only if the cavernous sinus is threatened. Ligation or excision of the affected vein – the mainstay of treatment in the preantibiotic area – may still have a role in patients with uncontrolled sepsis and extension of thrombophlebitis despite appropriate medical treatment.

Chirinos JA, et al. The evolution of Lemierre syndrome. *Med* 2002: 81;458-65.

Kristensen LH, Prag J. Human necrobacillosis, with emphasis on Lemierre's syndrome. *Clin Infec Dis* 2000;31:524-32.

Marek M, et al. A case of Lemierre's syndrome. *Eur J Emer Med* 2003;10:139-42.

Correspondence:
Mary Hohenhaus, MD
E-mail: Mhohenhaus@lifespan.org

Still Puzzled About Which Electronic Medical Record Software is Right For Your Practice?

Rhode Island Health Information Technology and Vendor Fair Is Bringing All The Pieces Together For One Day Only!

Saturday, March 5, 2005 from 8 am to 5 pm at the Radisson Airport Hotel in Warwick FREE Admission ~ Space Is Limited!

The Rhode Island Medical Society and Quality Partners of Rhode Island are hosting this exciting information technology and vendor fair for physicians and practice managers interested in learning more about EMR software and which product best suits your specific practice needs.

Attendees will have the opportunity to speak with a variety of EMR vendors and hear from nationally recognized physician leaders promoting the use of information technology in medical practice.

David Kibbe, MD, director of the American Academy of Family Physicians Center for Health Information Technology, will share his keen insights on EMRs during the keynote address. Dr. Kibbe, a family physician from Chapel Hill, NC, is the founder of Canopy Systems, Inc., an Internet application service provider that specializes in care coordination solutions.

Thomas E. Sullivan, MD, founding chair of the American Medical Association e-Medicine Advisory Committee and immediate past president of the Massachusetts Medical Society will host a highly educational and entertaining "bake-off" comparison of vendors.

Program

8 am - 9 am
Breakfast & Vendor Exhibit Hall
Opens For The Day

9 am - 10 am
Keynote Address
David Kibbe, MD

10 - 12 noon
Testimonials on EMR
Implementation
by Rhode Island Physicians

12 noon - 1 pm
Lunch

1 pm - 5 pm
Facilitated Vendor Demonstrations
Thomas Sullivan, MD

Space is Limited ~ FREE Admission
Pre-Registration Required

To register, please call Sue Silvia
at (401) 528-3242
or e-mail ssilvia@riqio.sdps.org

THE IMPACT OF POVERTY ON PREVENTION PRACTICES AND HEALTH STATUS AMONG PERSONS WITH ASTHMA

COLLEEN CARON, PHD, ANNIE GJELSVIK, PHD, AND JAY S. BUECHNER, PHD

Lifetime asthma prevalence among adults in the United States climbed to 11.7% in 2003. Rhode Island paralleled and surpassed this rise – 14.4% of adults aged 18 and older in the state have been told by a health provider they had asthma at some point in their lifetime. Within these increasing trends, a disproportionate number of individuals living in low-income households have asthma compared to individuals with higher incomes.[1]

Poverty has long been associated with elevated asthma prevalence, as have race, ethnicity and urban residence.[2] The purpose of this paper is to investigate how asthma and poverty affect quality of life among men and women, specifically how the two combine to impact primary and secondary prevention behaviors important to health in individuals with asthma and health status indicators associated with asthma.

The two primary prevention behaviors selected are smoking and physical activity. Smoking is a suggested cause of asthma and a known trigger to asthma exacerbations.[3] Physical activity is linked to overall improved health and disease reduction,[4] and sedentary lifestyle is associated with greater risk of obesity, a health status indicator related to asthma.[3] Also, exercise-induced asthma may lead to tendencies to avoid physical activity, further increasing the risk of obesity.

The two secondary health preventive behaviors selected are annual physician visits and annual flu shots. These behaviors are important for asthma management and reflect the National Asthma Education and Prevention Program guidelines from the National Heart, Lung, and Blood Institute.5 The health status indicators selected are obesity and depression, both of which have positive associations with asthma.[3]

METHODS

The **Behavioral Risk Factor Surveillance System (BRFSS)** is a national telephone survey of randomly selected non-institutionalized adults (ages 18 and older) who live in households with telephones. The BRFSS monitors the prevalence of behavioral risk factors that contribute to the leading causes of disease and death among adults in the United States. It is administered in all 50 states and four US territories with funding and methodological specifications provided by the **Centers for Disease Control and Prevention (CDC)**.[1] Rhode Island has participated in the BRFSS since 1984; a professional survey organization conducts the annual survey under contract to the Rhode Island Department of Health. From January 2001 through December 2003, the Rhode Island BRFSS conducted approximately 330 random-digit dialed telephone interviews each month, for a total of 12,016 during the three calendar years. The sample was comprised of 4,618 males and 7,398 females.

Respondents who reported income below 200% of the federal poverty threshold[6] were considered poor. Three years of data were combined to in order to obtain sufficient sample size for our analyses, and data for men and women were analyzed separately. The variables included in the analysis are defined as follows:

- Lifetime asthma prevalence: Ever told by a health professional that they have asthma
- Poor: Household income below 200% of the federal poverty level.6
- Physical activity: Any physical activity or exercise during the past month, other than job-related
- Smoking: Have smoked at least

Table 1.
Prevalence of Prevention Behaviors and Health Status Measures, by Gender, Income, and Asthma Status, Ages 18 and Over, Rhode Island, 2001-2003.

	Women				Men			
	Poor		Not Poor		Poor		Not Poor	
	Asthma	No Asthma	Asthma	No Asthma	Asthma	No Asthma	Asthma	No Asthma
Measure	%	%	%	%	%	%	%	%
Primary Prevention Behaviors								
Physical Activity	58	60	80	81	67	69	87	84
Smoking	40	24	22	19	42	32	21	22
Secondary Prevention Behaviors								
Annual Physician Visit	85	85	88	87	71	70	72	76
Annual flu shot	45	37	44	36	38	34	37	35
Health Status Measures								
Obesity	64	52	48	42	70	63	62	70
Depression	49	36	38	31	41	31	29	19

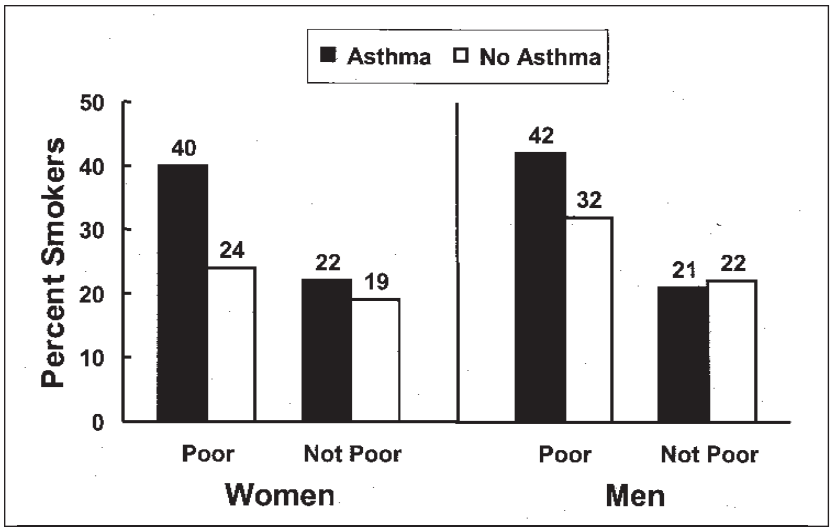


Figure 1. Smoking Prevalence, by Gender, Income, and Asthma Status, Ages 18 and Over, Rhode Island, 2001-2003.

100 cigarettes lifetime and now smoke cigarettes every day or some days

- Annual physician visit: Visited a doctor for a routine checkup within past 12 months
- Annual flu shot: Had a flu shot within the past 12 months
- Obesity: BMI greater than or equal to 30 based on self-reported height and weight
- Depression: Self-reported depression or poor mental health on 14 or more days in past month

All data are weighted to represent the Rhode Island adult population. 95% confidence intervals (CI) were calculated using SAS statistical software version 8.2, which accounts for the complex sampling design of the BRFSS. (A 95% confidence interval means there is a 95% likelihood that the interval includes the true value).

Results

During 2001-2003, 13% (95% CI: 12%-14%) of RI adults ages18 years and older reported ever having asthma. Fifteen percent (95% CI: 14%-16%) of women and 11% (95% CI: 10%-12%) of men reported ever having asthma. Fifteen percent (95% CI: 13%-16%) of adults living below 200% of the federal poverty level, ("poor/poverty" in this analysis), and 12% (95% CI: 11%-13%) of adults not living in poverty reported ever having asthma. Stratified by and within gender, 17% (95% CI: 15%-19%) of females living in poverty compared to 14% (95% CI: 13%-15%) of females not living in poverty reported ever having asthma. Ten percent (95% CI: 8%-13%) of males living in poverty and 10% (95% CI: 9%-12%) of males not living in poverty reported ever having asthma.

Table 1 presents the prevalence of the six chosen measures of preventive behaviors and health status among adult Rhode Islanders, stratified by gender, poverty, and prevalence of asthma.

The correlation of poverty with most of these measures is clear. Those in poverty have higher prevalence of smoking, depression, and obesity (except in men), and lower prevalence of physical activity. Poverty has a smaller effect or no affect on the prevalence of the secondary prevention behaviors, annual doctor visits and annual flu shots.

Asthma is also strongly related to some of the chosen measures, notably smoking, depression, and obesity (except among men who are not poor). Asthma has a small, less significant, correlation with physical activity, and no apparent effect on the likelihood of having had a doctor visit in the past year. Individuals with asthma were more likely overall to have had an annual flu shot than those without asthma, especially among women.

The interaction between poverty and asthma was most prominent for smoking (Figure 1) and for obesity (Figure 2). In both cases the elevation in prevalence among individuals with asthma relative to individuals without asthma was greater for those in poverty, both men and women, than for those who were not poor.

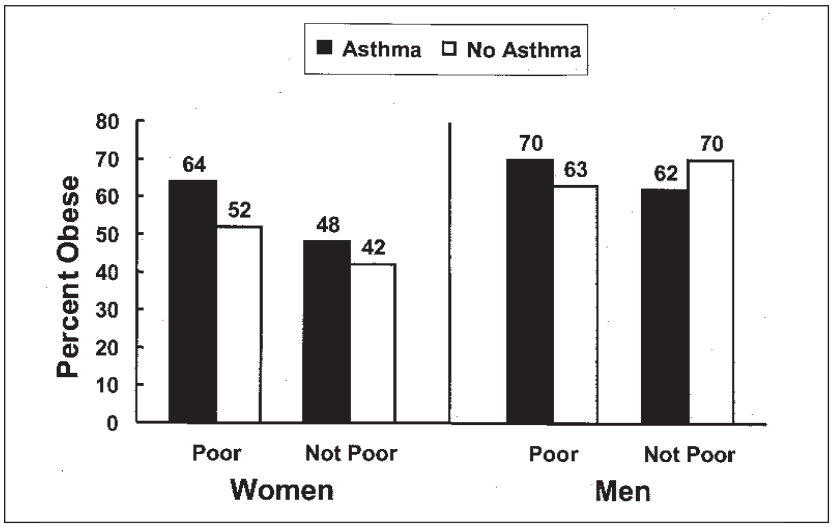


Figure 2. Prevalence of Obesity, by Gender, Income, and Asthma Status, Ages 18 and Over, Rhode Island, 2001-2003.

Discussion

Women with asthma in poverty had the highest prevalence of current smoking, obesity, and depression compared to all other women. In addition, within asthma status women who were poor had a lower prevalence of physical activity compared to their counterparts who were not poor. Generally similar

patterns were seen among men.

These findings are informative for the design of asthma interventions aiming to enhance primary and secondary preventive behaviors and health status outcomes. The results demonstrate the differential manifestation of the intersection between poverty and gender on asthma and its associated health actions and outcomes. These results provide additional support to the notion that health interventions can be more effective when tailored to account for the influence of the socio-economic context on health behaviors and outcomes.

1. Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System. http://www.cdc.gov/brfss.
2. Erickson S, Munzenberger P, Plante M, et al. Influence of sociodemographics on the health-related quality of life of pediatric patients with asthma and their caregivers. *J Asthma* 2002;39: 107-17.
3. Von Behren J, Kreutzer R, Hernandez A. Self-reported asthma prevalence in adults in California. *J Asthma* 2002;39:429-40.
4. Swatzky J, Naimark B. Physcial activity and cardiovascular health in aging women: a health-promotion perspective. *J Aging Physical Activity* 2002;10:396-412.
5. National Asthma Education and Prevention Program. Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma. Bethesda MD: National Heart, Lung, and Blood Institute. 1997.
6. U.S. Census Bureau. http://www.census.gov/hhes/poverty/threshld.html.

Colleen Caron, PhD, is Senior Epidemiologist in the Division of Disease Prevention and Control and Clinical Assistant Professor of Community Health, Brown Medical School.

Annie Gjelsvik, PhD, is Project Coordinator of the Assessment Initiative Grant and Investigator, Department of Community Health, Brown Medical School.

Jay S. Buechner, PhD, is Chief, Office of Health Statistics, and Clinical Assistant Professor of Community Health, Brown Medical School.

Judicial Diagnosis

Post-HIPAA Introductions

John Aloysius Cogan, JR., MA, JD

Post-HIPAA, can a nurse walk into a crowded waiting room and ask for a specific patient by his or her full name? Can a physician's office use a sign-in sheet that allows patients to see the names of those who preceded them?

The United States **Department of Health and Human Services (HHS)** says "Yes" to these hypotheticals. In fact, HHS provides straightforward answers to these and other frequently asked questions on its web site. In response to a question about the use of sign-in sheets, HHS responds:

"Covered entities, such as physician's offices, may use patient sign-in sheets or call out patient names in waiting rooms, so long as the information disclosed is appropriately limited. The HIPAA Privacy Rule explicitly permits the incidental disclosures that may result from this practice, for example, when other patients in a waiting room hear the identity of the person whose name is called, or see other patient names on a sign-in sheet. However, these incidental disclosures are permitted only when the covered entity has implemented reasonable safeguards and the minimum necessary standard, where appropriate. For example, the sign-in sheet may not display medical information that is not necessary for the purpose of signing in (e.g., the medical problem for which the patient is seeing the physician). See 45 CFR 164.502(a)(1)(iii)."

In a nutshell, physicians (and their staff) may use a patient's name (both first and last) in the waiting room or on a sign-in sheet, as long as other information concerning the patient is not disclosed, such as information about the nature of the patient's illness or the treatment sought by the patient. For example, a staff person might enter a crowded waiting room and say: "Mr. Smith, the doctor will see you now in Exam Room 1." According to HHS, this is perfectly acceptable under HIPAA. The statement does not reveal why Mr. Smith is in the office or what treatment he is to receive. On the other hand, if the staff person says: "Mr. Smith, the doctor will see you now in radiology" (assuming that it is a multi-specialty practice), this would be inappropriate because it reveals something more substantial about Mr. Smith's visit. Likewise, the staff person should never say, "Mr. Smith, Dr. Jones is ready to see you for the _____" (identifying a specific procedure).

The answers to many other practical HIPAA-related questions are available at HHS's web site (www.hhs.gov/ocr/hipaa). Just click on the link to "Your Frequently Asked Questions on Privacy."

Correspondence:
John Aloysius Cogan, Jr, MA, JD
E-mail: jacoganjr@yahoo.com

PUBLIC HEALTH BRIEFING

RHODE ISLAND DEPARTMENT OF HEALTH

PATRICIA A. NOLAN, MD, MPH, DIRECTOR OF HEALTH
EDITED BY JOHN P. FULTON, PHD

THE "LOW CARB CRAZE" AND CURRENT FAD DIETS

KATHLEEN CULLINEN, MS, RD

Although low-fat diets have been the standard recommendation for weight reduction, fat intake among the United States population has decreased during the last 20 years while the number of individuals who are obese has increased to epidemic proportions. In addition, obesity-related chronic conditions such as cardiovascular disease and diabetes have also dramatically increased.[1] The US Department of Agriculture's Food Guide Pyramid Diet is a high-carbohydrate, low-fat diet that advocates consumption of grains, fruits and vegetables at the expense of fat. Low-carbohydrate, high-fat diets (e.g., Atkins Diet, Zone Diet, South Beach Diet) have gained increasing popularity despite neither sufficient evidence about their long-term effectiveness or safety, nor clear consensus as to what amount of carbohydrates per day constitutes a low-carbohydrate diet.[2] This editorial presents the current evidence-based research findings regarding low-carbohydrate, high-fat diets.

The Atkins Diet focuses on the consumption of fat and protein as primary caloric energy sources, while severely restricting carbohydrates.[3] The Atkins Diet claims to be effective at producing weight loss despite ad libitum consumption of fatty meat, butter, and other high-fat dairy products, restricting only the intake of carbohydrates to fewer than 30 grams per day.[4] The Zone Diet is another new fad in low carbohydrate dieting. The Zone is a 40% carbohydrate, 30% protein and 30% fat eating plan that advocates only sparing use of grains and starches and a precise 0.75 protein to carbohydrate ratio required with each meal.[5] Similar to the Atkins Diet, the South Beach Diet begins with a two-week ban of fruit, bread, potatoes, baked goods, sweets, cookies, ice cream and alcohol, with subsequent stages that permit adding back foods while supposedly maintaining initial weight loss. The South Beach Diet claims to differ from Atkins by pushing the "right carbs" instead of no carbs. The South Beach diet allows meat, but unlike Atkins, it warns against saturated fat and encourages consumption of fish and chicken.[6] One hypothesis for the accompanying weight loss observed with these low-carbohydrate, high-fat diets may be that severe restriction of carbohydrate intake leads to depletion of glycogen stores, excretion of glycogen-bound water, and a resultant ketogenic state that is appetite suppressing. [7]

Large randomized controlled trials have shown that reduction of fat intake as part of a healthy lifestyle reduces the risk of overweight and type 2 diabetes.[8] Other randomized controlled trials have shown that low-fat diets for overweight or obese individuals are as efficacious as other weight-reducing diets for achieving sustained weight loss.[9] Both low-fat, low-calorie diets and low-carbohydrate, high-protein diets have been shown to have a favorable impact on serum lipids. Low-carbohydrate diets, however, limit fresh fruit and vegetable intake and are seriously deficient in several micronutrients and dietary fiber, thus creating a need for nutritional supplements.[10]

The ketogenic diet is a high-fat, low-carbohydrate, adequate-protein diet that has been used for more than eight decades in the treatment of intractable seizures in epileptic children. The effects of the ketogenic diet on brain biochemistry, neuron function and cellular network behavior still remain unclear.[11] Although no reliable evidence from randomized controlled trials supports the use of ketogenic diets for people with epilepsy, for those on multiple antiepileptic drugs, with a difficult epilepsy, the ketogenic diet is a possible treatment option.[12]

Insulin resistance is a central pathogenic factor for the metabolic syndrome. The metabolic syndrome is a cluster of conditions, including high levels of blood pressure, blood sugar and cholesterol, and abdominal obesity, which together greatly increase the risk of cardiovascular disease and type 2 diabetes.[13] In the context of the current obesity epidemic, it is imperative to consider diets in terms of their ability to promote weight loss as well as ameliorate insulin resistance. [14]

Carbohydrates are classified by their glycemic responses or postprandial (i.e., post meal) blood glucose levels using the glycemic index.[15] Diets with a high-glycemic index or load may affect insulin-resistant and insulin-sensitive individuals differently. The total amount of dietary carbohydrates, their associated glycemic responses or indices, and an individual's physical activity level must all be considered in diet comparison.[16,17] Although long-term research on glycemic index and weight regulation is needed, evidence suggests that consumption of low-glycemic index carbohydrates may delay the return of hunger and subsequent energy intake relative to consumption of higher-glycemic index carbohydrates.[18]

Postprandial hyperglycemia plays a direct pathogenic role in the disease process. Low-carbohydrate ketogenic diets lead to weight loss and favorable changes in serum triglycerides and high-density lipoprotein (HDL) cholesterol or "good cholesterol".[19] Evidence suggests that a low-glycemic index diet may protect against type 2 diabetes, cardiovascular disease, obesity, colon cancer and breast cancer.[20] Further studies are needed to delineate the role of glycemic carbohydrates and their mechanisms of action in satiety determination and chronic disease prevention.[21]

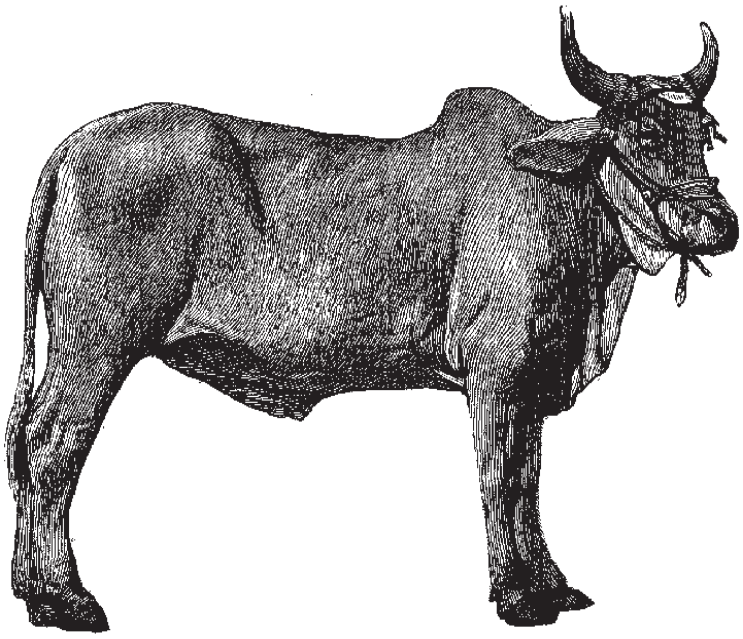
A randomized clinical trial, funded by the National Institutes of Health, is evaluating the safety and effectiveness

of low and high carbohydrate diets in a four-year study of 360 overweight and obese male and female subjects, 18 to 65 years of age. Each participant will be enrolled in the study for two years. This is one of the first long-term studies comparing the conventional USDA diet (high-carbohydrate, low-fat) to one of the low-carbohydrate, high-fat diets, the Atkins Diet. Each of the dietary approaches will be evaluated on changes in 1) weight and body composition; 2) metabolic and organ function; and 3) exercise tolerance. This study, to be completed in May 2007, will provide valuable insight into both the short- and long-term clinical effects of a low-carbohydrate diet and a high-carbohydrate diet in overweight and obese men and women.

References

1. Bell SJ, Sears B. Low-glycemic-load diets: impact on obesity and chronic diseases. *Crit Rev Food Sci Nutr* 2003;43:357-77.
2. Bravata DM, Sanders L, Huang J, et al. Efficacy and safety of low-carbohydrate diets: A systematic review. *JAMA* 2003 289:1837-50.
3. Rollo I. Understanding the implications of adopting the Atkins' diet. *Nurs Times* 2003;99:20-1.
4. Astrup A, Meinert Larsen T, Harper A. Atkins and other low-carbohydrate diets: hoax or an effective tool for weight loss? *Lancet* 2004; 364:897-9.
5. Cheuvront SN. The Zone Diet phenomenon: a closer look at the science behind the claims. *J Am Coll Nutr* 2003;22:9-17.
6. Sizing up South Beach. *Harv Health Lett* 2003;29:5.
7. Astrup A, Meinert Larsen T, Harper A. Atkins and other low-carbohydrate diets: hoax or an effective tool for weight loss? *Lancet* 2004 Sep 4;364(9437):897-9.
8. Hung T, Sievenpiper JL, Marchie A, et al. Fat versus carbohydrate in insulin resistance, obesity, diabetes and cardiovascular disease. *Curr Opin Clin Nutr Metab Care* 2003;6:165-76.
9. Pirozzo S, Summerbell C, Cameron C, Glasziou P. Should we recommend low-fat diets for obesity? *Obes Rev* 2003;4:83-90.
10. Kappagoda CT, Hyson DA, Amsterdam EA. Low-carbohydrate-high-protein diets: is there a place for them in clinical cardiology? *J Am Coll Cardiol* 2004;43:725-30.
11. Stafstrom CE, Bough KJ. The ketogenic diet for the treatment of epilepsy: a challenge for nutritional neuroscientists. *Nutr Neurosci* 2003;6:67-79.
12. Levy R, Cooper P. Ketogenic diet for epilepsy. Cochrane Database *Syst Rev* 2003:CD001903.
13. Stern MP, Williams K, Gonzalez-Villalpando C, et al. Does the metabolic syndrome improve identification of individuals at risk of Type 2 diabetes and/or cardiovascular disease? *Diabetes Care* 2004;27:2676-81.
14. Lara-Castro C, Garvey WT. Diet, insulin resistance, and obesity: Zoning in on data for Atkins dieters living in South Beach. *J Clin Endocrinol Metab* 2004;89:4197-205.
15. Wolever TM. Carbohydrate and the regulation of blood glucose and metabolism. *Nutr Rev* 2003;61(5 Pt 2):S40-8.
16. Moyad MA. Fad diets and obesity—Part II: An introduction to the theory behind low-carbohydrate diets. *Urol Nurs* 2004;24:210-3.
17. Sanders TA. High- versus low-fat diets in human diseases. *Curr Opin Clin Nutr Metab Care* 2003;6:151-5.
18. Roberts SB. Glycemic index and satiety. *Nutr Clin Care* 2003;6:20-6.
19. Westman EC, Mavropoulos J, Yancy WS, Volek JS. A review of low-carbohydrate ketogenic diets. *Curr Atheroscler Rep* 2003;5:476-83.
20. Brand-Miller JC. Glycemic load and chronic disease. *Nutr Rev* 2003;61(5 Pt 2):S49-55.
21. Anderson GH, Woodend D. Effect of glycemic carbohydrates on short-term satiety and food intake. *Nutr Rev* 2003;61(5 Pt 2):S17-26.

Kathleen Cullinen, MS, RD, is Program Manager, Rhode Island Comprehensive Cancer Control Program, Rhode Island Department of Health.



STEM CELLS IN MEDICINE: DESIGNING THE CLINICAL RESEARCH

Alan B. Weitberg MD

The research observations supporting the concept of stem cell plasticity have resulted in a new field of medicine entitled regenerative medicine. The possibility that stem cells from a variety of sources may be used to treat a broad spectrum of diseases has captured the excitement of not only clinicians, but the public as well.. Especially intriguing is the possibility of offering therapy for a number of untreatable or incurable diseases and providing an innovative approach to the treatment of chronic diseases.

However, many issues, both at the research and clinical levels, arise when one considers the clinical utility of stem cells. However, this discussion does not include embryonic stem cells and the ethical issues regarding their use in research. As we design clinical trials for the use of stem cells in humans, novel research issues are developing. There are several research areas with clinical implications as outlined in Table 1. Identifying stem cells from terminally differentiated organs will allow us to target our clinical therapies more rationally. Clearly, the identification of the pathways that regulate the plasticity of stem cells may allow us to manipulate that system to our clinical advantage. Developing efficient transfer vectors as well as combining this with other therapeutic approaches will be important for the rapid and effective development of this field. Work in these areas will allow us to refine our methodology for stem cell administration in humans.

The clinical research issues involving stem cell therapy relate to the design, safety and diversity of stem cell delivery in these clinical trials.

Design

Phase I trials will be used to determine the maximally tolerated dose of stem cells and to monitor side effects for the dose delivered. Phase II trials will use this dose as the treatment for a specific disease to determine the efficacy of that dose for that disease. In Phase III trials, patients will be randomized to receive stem cells or placebo for a specific disease as determined in the Phase II trial. When conducting Phase III trials, it will be important to appropriately match populations for the diseases being studied,which in some instances, will be challenging, but doable. Determining the correct volume of cells to be infused will be based on dose-limiting side effects, which assumes that more is better. Determining the most efficacious dose may be another matter.

Safety

Stem cell therapy of non-hematologic disease in humans has been extremely limited and appropriate trials to determine the safety of this approach have not been conducted. Lessons have been learned from the early gene therapy trials where an unexpected death can set back the field for years. One has to proceed with caution, but one has to proceed none-the-less. Another safety issue to be considered is how does one insure that differentiation can be controlled ? What if stem cells infused to treat myocardial infarction differentiated into fibroblasts instead of cardiac muscle cells ? That result could be devastating. Even local injection as opposed to infusion does not obviate this issue although it would seem to lessen the chances of such rogue differentiation. This also raises the issues of whether local or systemic infusion is more efficacious and that will have to be addressed in future Phase II and Phase III studies. Lastly, unforeseen side effects will have to be catalogued and monitored during the Phase I trials.

Delivery

Developing and testing different delivery systems will be critical to finding the optimal delivery approach. This may be disease-specific i.e. some methods of delivery may be more efficacious for some diseases and not others. Similarly, systemic infusion may yield better results than regional injection in some diseases than in others. These issues will have to be addressed in Phase I/II trials before larger randomized trials are contemplated. Certainly,

Table 1. Research Opportunities with Clinical Implications

1. Identifiy stem cells from different terminally differentiated organs
2. Identify the molecular pathways that regulate the plasticity of stem cells
3. Development of technologies for efficient nuclear transfer of somatic nuclei to totipotent stem cells
4. Development of combined gene and stem cell therapeutic approaches

Table 2. Potential Clinical Targets

1. Neural: Parkinson's disease, spinal cord injury, cerebral infarction
2. Gastroenterologic/Endorine: Diabetes mellitus, cirrhosis, chronic hepatitis, toxic and drug-induced hepatitis
3. Cardiac: myocardial infarction, cardiomyopathy, left ventricular failure
4. Dermatologic: wound healing, decubiti, vascular ulcers
5. Pulmonary: chronic obstructive lung disease, interstitial lung disease, chemotherapy-induced lung disease

the source of stem cells needs to be determined as well as the possibility of using gene-modified stem cells. Will organ-specific stem cells be more effective than hematopoietic stem cells, for example ? Perhaps this issue will be disease-specific as well.

Once delivered, reliable methods for determining the efficacy of engraftment and degree of transdifferentiation *in vivo* will have to be determined. This will be critical for accurately interepreting data from all phases of the clinical trials program for a specific disease. Obviously, one assumes that the degree of engraftment and differentiation into cells of the target tissue will be directly proportional to the probability of response. Thus, in order to compare responses clinically, these variables will have to be monitored and measured. Lastly, histocompatibility issues will have to be addressed when using donor cells.

Potential Targets

Many clinical targets for stem cell therapy have been discussed. These are outlined in Table 2. Perhaps the most commonly commented on are the neural, endocrine (diabetes mellitus) and cardiac targets. In general, one could envision utilizing this technology in those diseases where there has been loss of cell volume which usually occurs in chronic diseases of most organ systems. Usually the lost cells are replaced with fibrotic tissue after some period of chronic inflammation. Choosing the initial clinical targets will be important for several reasons. First, choosing a prevalent disease where any degree of response will result in a great clinical difference to the patient will have immediate impact on the field. Second, the target disease should be accessible to local therapy if that approach is warranted. Lastly, treating a disease in a target population without a multitude of concurrent diseases would insure that the trials could be completed more quickly and with less complications.

Conclusions

The field of regenerative medicine has created exciting opportunities for treating previously untreatable human diseases. Clinical trials must address a variety of issues to insure that they are performed uniformly and that endpoints can be measured accurately *in vivo.* Clinical targets will have to be chosen carefully and results monitored rigorously. That being said, these trials will create hope for millions of patients who pray to be cured, but whose lives would be brightened considerably by the chance for even a small change in their clinical condition. Hopefully, this technology will give them that chance._

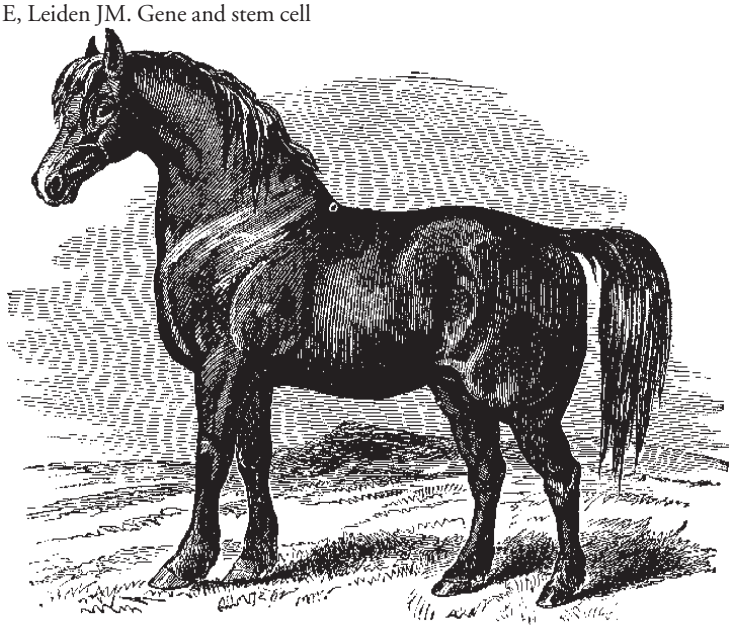
References

1. Nadia, R. Machinations of the marrow. *J Clin Invest* 2003; 111: 29-30.
2. Kaji E, Leiden JM. Gene and stem cell therapies. *JAMA* 2001; 285: 545-50.
3. Strauer BE, Brehm M, Zeus T, et al. Repair of infracted myocardium by autologous intracoronary mononuclear bone marrow cell transplantation in humans. *Circulation* 2002; 106: 1913-8.
4. Caplice NM, Gersh BJ. Stem cells to repair the heart: A clinical perspective. *Circ Res* 2003; 92: 6-8.
5. Kuehnle I, Goodell MA. The therapeutic potential of stem cells from adults. *BMJ* 2002; 325: 372-6.

Alan B. Weitberg, MD, is Chairman, Department of Medicine , Roger Williams Medical Center; Professor of Medicine, Boston University School of Medicine; and Adjunct Professor of Medicine, Brown Medical School.

Correspondence:

Alan B. Weitberg, MD
Department of Medicine
Roger Williams Medical Center
825 Chalkstone Avenue
Providence, RI 02908
Phone: (401) 456-2070
e-mail: AWeitberg@aol.com



A Physician's Lexicon

A Pandemic of Words

The prefix, *pan-* , is liberally employed in medical terminology. Its most common usage, from the Greek, meaning all or every, appears in words such as pancreas, an organ which was considered by the ancients to be all flesh. The Greek root, *creas*, meaning flesh, appears in biological terms such as creatinine, a substance which was first isolated from skeletal muscle by the French chemist, Chevreul. He coined the word to signify that it was derived from animal flesh.

A pandemic, meaning a global spread of some disease, generally infectious, also contains the Greek prefix, *pan-*, as well as the root, *demos*, meaning people as in words such as democracy, demotic and demagogue. A pandemonium, however, is etymologically unrelated to a pandemic. In Book I of *Paradise Lost*, John Milton has the herald announce: "A solemn council forthwith be held at Pandaemonium, the high Capital of Satan and his Peers." It is a hybrid word, coined by Milton, based on the Greek, *pan*, and the Latin word, *daemonium*, meaning evil spirit. Pandemonium was thus Milton's name for the capitol of Hell. In later centuries it defined any riotous, disorganized place; and currently, any chaotic site unassociated with any moral judgment ["There was pandemonium in the emergency room."]

Panacea, a Greek word, is the name of one of Asklepios' daughters, the other being *Hygeia*. The word means all cures, that is, a universal remedy for all ailments. A plant of the ginseng family is called panax and is said to cure all diseases.

Pandora, a woman's name, signifies someone who is all-gifted, and is constructed from *pan-* and the Greek word, *doron*, meaning gift. Pandora, according to Greek legend, was a woman endowed by the gods with a full range of graces. The gods, in malice, also gave her a box which concealed all of humanity's evils. Curiosity prevailed, Pandora opened the box and thus escaped all of the world's evils, including prolixity.

There are yet further words beginning with the prefix, *pan-* . These include words such as pancytopenia, panglossia, panmycin, pantothenate and pantophobia. The word, panic, however is derived from the Greek word, *panikos*, meaning from the forest god, Pan, whose battle cry caused panic amongst the Persians during the battle of Marathon. And the word, panniculitis is a hybrid word of Latin [a *panniculus* is a small piece of cloth] and the Greek origin, with *-itis*, meaning inflammation.

And finally for those colleagues who insist on abbreviating all phrases, there is PAN, short for *polyarteritis nodosa*.

– Stanley M. Aronson, MD, MPH

Rhode Island Department of Health
Patricia A. Nolan, MD, MPH, Director of Health

Vital Statistics

Edited by Roberta A. Chevoya

I ÃÙ } § Ĉ 3 ā Ì |
SÆC [I C J C [

G þ U ę Æ ā Æ U O ⌈ I C ?
´ b Ù Ñ
) Æ e Æ ā Æ U O C U ´

N Ö } § þ Í ' [ē ā § Ĉ Ú	I § é Ù þ Ĉ Æ (	
	0 § i þ đ G (	á đ C < U O C A ā C * O } Æ O » C
) Æ ā § ⌈ ā § ā C < [I Æ » O [O C (' § b § i b Ù e ⌈ ā s 3 O E ë s s Æ } § O C ć J ē . ' ? G	= ē N i § þ C ë ⌈ ì C đ ¶ Ģ C đ á đ C C ¬ C C ¹ C ¹ G C	= ē N i § þ C ë ⌈ ì C C z Ģ ¶ × C đ z C × ą C ¶ đ ¬ C ¹ ą đ C ¹ × ¬ C	đ ¬ C đ đ ¹ ¹ × î ¹ ¹ ¹ î á (¹ C î C (

S Æ Ċ [Í Ĉ	I § é Ù þ Ĉ Æ (	
	é » đ G (	á đ Ĉ < Ù Ö Ĉ Ä ā Ĉ ē » ē ā (
: Æ e § ( ) § ⌈ Ĉ 3 Ö ´ ⌈ Ö C C = § U O ⌈ (< [þ þ /) Æ e U 3 O } ē s § } C L ¦ J é U O C [O § U ē ā Ĉ N Ö } § þ Ĉ đ Ģ Ĉ Ē § C đ Ģ ñ C E § § I	= ē N i § þ C á z đ đ đ C ą ¶ á C ë ą ì C ë C ì C × ą C C đ ą ą C ¹ ¬ ą C × C C ë ¬ ¶ ì C ë ¬ ì C	= ē N i § b (á ¹ z đ × á Ģ z á ¬ ¹ ë ¬ G ì (ë C C ì (¬ z đ C C (C z đ ¶ C (¶ z ¹ C × (á z C Ģ ą C (ë á z đ ¹ (ë C ą ì (

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.

(b) Rates per 100,000 estimated population of 1,069,725

(c) Years of Potential Life Lost (YPLL)

Note: Totals represent vital events which occurred in Rhode Island for the reporting periods listed above. Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.

* Rates per 1,000 estimated population # Rates per 1,000 live births

THE RHODE ISLAND MEDICAL JOURNAL
The Official Organ of the Rhode Island Medical Society
Issued Monthly under the direction of the Publications Committee
VOLUME 1
NUMBER 1
PROVIDENCE, R.I., JANUARY, 1917
PER YEAR $2.00
SINGLE COPY, 25 CENTS

Ninety Years Ago, February 1915

An Editorial on crossed eyes warned: "The common advice to let Nature alone is bad." "A difference in the visual acuity of the two eyes will in time cause a child to use the one eye to the exclusion of its fellow and this (*amblyopia ex anopsia*) is the most common cause of the turning of the eye from its normal axis. It is very important that children not be allowed to discontinue the use of that eye. If the vision cannot be improved by glasses, this may be accomplished by covering the good eye and compelling the child to use the poor eye, or by the use of a cycloplegic in the good eye, which will necessitate the use of the worse eye."

A second Editorial criticized the hype over foot and mouth disease. The disease is "not usually communicated to human beings, although through milk from diseased cows it might be transmitted. Pasteurization, however, renders it entirely safe and human beings who do get the disease usually get it through direct contact with a sick animal." If a person eats diseased meat, cooking usually kills the disease; and even if adults get the disease, it is "not serious," except for "small sickly children." The editorial lamented the "woeful waste of money and useless slaughter of many animals."

Miss E. Frances O'Neill, Supervisor, Providence Society for Organizing Charity, contributed "The Amazing Patience of the Physician." She chided physicians for neglecting convalescent care: "…if you think of your patient as a mother or a bread-winner, or a future citizen, and look upon it as your job to return him or her valid to the community, you must admit that all too often you fail. Why are you satisfied when your patients, still half-sick go out into the community? Why…are you silent on the need for convalescent care?" Miss O'Neill supervised 6 District secretaries, who last year oversaw 1000 families. One example: Mrs. A has a tumor, goes to the hospital to have the tumor removed. Mrs. A returns, tumor-less, to 5 children and a husband, in a cramped apartment. "You know better than I can tell you that Mrs. A is not fit to go back to that little tenement home, that nerves and general misery are going to result - but you apparently shrug your shoulders and say 'What can we do about it?'" In another case a man who had had an appendectomy returned to a tenement apartment, where he lived with his parents, four siblings, his wife, and their 3 children. He deserted the family.

Fifty Years Ago, February 1955

In "Thyroid Cancer and Nodular Goiter," Bentley P. Colcock, MD, from the Department of Surgery, Lahey Clinic, summarized two years of Clinic data (748 patients with nontoxic nodular goiter, 113 with toxic goiter): 5.3% had carcinoma. He presented this talk at the interim meeting of the Rhode Island Medical Society. The Journal reprinted it.

William J. O'Connell, MD, gave the President's Address, "Dignity of Practice of Medicine,"at the 108th annual meeting, Providence Medical Association. The Journal reprinted his talk. "We foolishly allow the public to make our services synonymous with goods…"

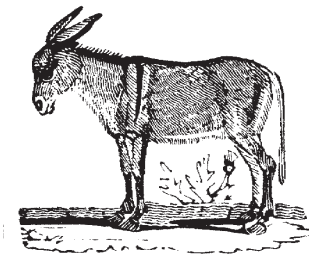
Laurence A. Senseman, MD, FACP, contributed "Present Status of Multiple Sclerosis Therapy," where he described the local chapter of the Multiple Sclerosis Society, and gave information on prevalence, life expectancy, and treatments.

An advertisement for Sealy Posturepedic offered a professional discount to physicians for their personal use. The mattress, designed "in cooperation with leading Orthopedic Surgeons," featured spin-on-a-line support.

Twenty-Five Years Ago, February 1980

Charles L. Hill, MD, gave the President's Address, "Our Role in the 1980s." He cautioned: "Never before in my professional life has the time been so critical for the health profession to create together a more sensitive and yet economical system….We must impress upon our legislators the necessity to include us in health planning. We must constantly point out the failures in other systems, as well as ours, to prevent the unfairness of government plans such as Medicare, and inequities such as occur in the Veterans health system…"

Helen E. DeJong, librarian emeritus, reported in a Note that October 16, 1846, was the first public demonstration of the use of ether in surgery, at the Massachusetts General Hospital, and that two Rhode Island physicians, J.W.C. Ely and James Fanning Noyes, were present.



What's in a Name???

GOOD - authentic, honest, just, kind, pleasant, skillful, valid

NEIGHBOR - friend, near

ALLIANCE - affiliation, association, marriage, relationship

CORPORATION - company, business establishment

A Good Partner Makes the Difference

It's Official:

The Rhode Island Medical Society's Insurance Brokerage Corporation

has contracted with

The Good Neighbor Alliance Corporation

to provide their members

Employee Benefits

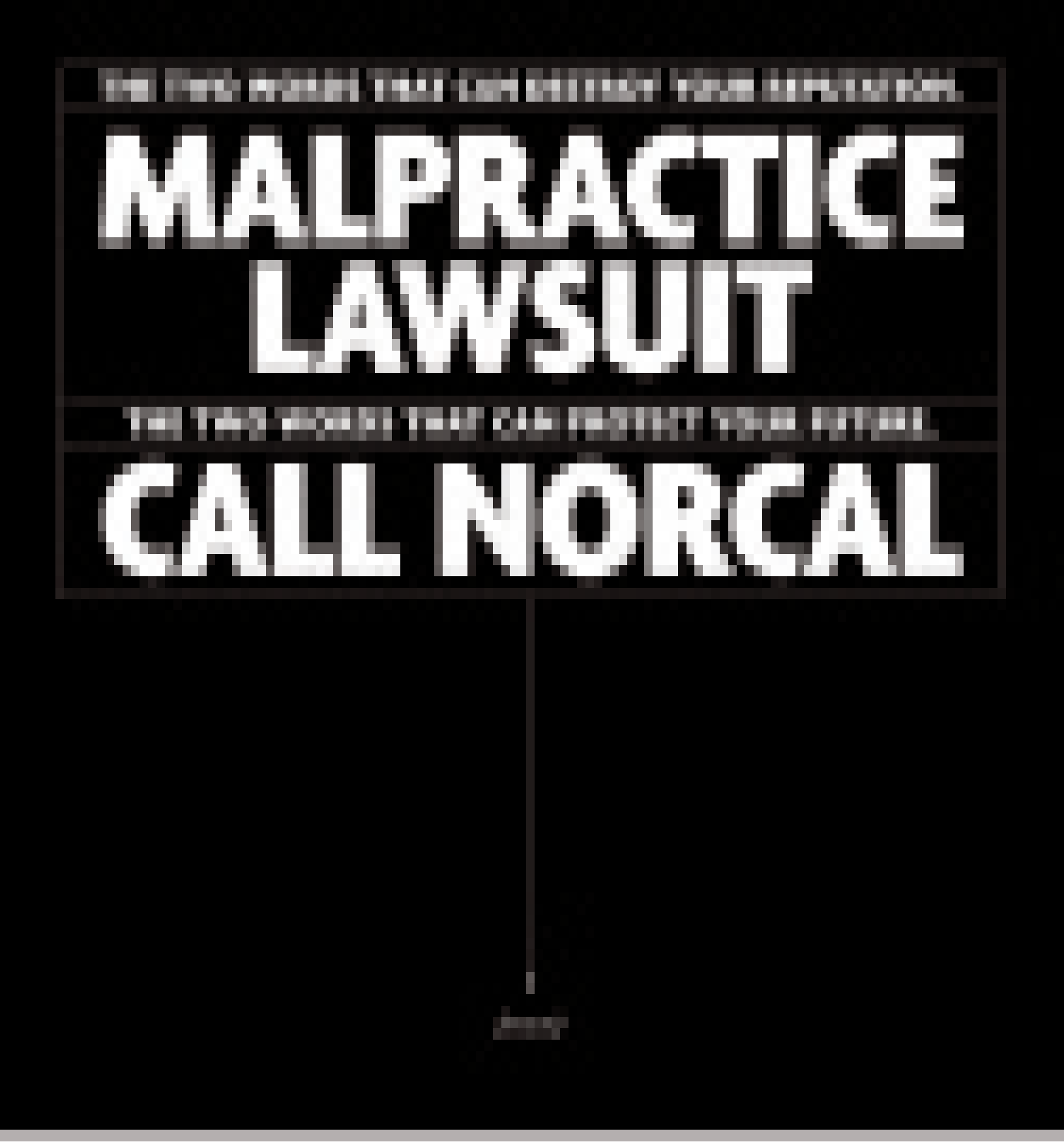
Specializing in Employee Benefits since 1982

Let the Best in the Business Take Care of Your Employee Benefit Needs.

The Good Neighbor Alliance Corporation

1-800-462-1910 or 401-467-2880

www.goodneighborall.com


MALPRACTICE
LAWSUIT
CALL NORCAL