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WORMS AND THE HISTORICAL OVERLOAD SYNDROME

To the Editor:

We would like to share an interesting clinical experience with your readers. The patient involved was a middle-aged, white, male physician who sought medical care for "having passed a worm in his stool." On arising in the morning somewhat bleary-eyed, he noticed an intact, undulating pink-red worm in his toilet bowl that he unthinkingly flushed. There was neither stool nor urine in the toilet, which was used solely by the patient. The patient was otherwise well.

His physician elicited a very interesting and unusual history. The patient had eaten raw fish (usually farm-raised salmon) 3 to 4 times per month for the past 3 years. During the previous 5 years, he had traveled extensively in remote areas of Southeast Asia. On several of these trips, he ate raw fish and exotic dishes containing uncooked foods and occasionally partook of these delicacies in less-than-sanitary restaurants. He usually went swimming in salt water or in hotel pools on these trips. The patient was particularly concerned about a recent trip to Kalimantan (Borneo) during which severe flooding had caused the loss of water and plumbing systems at his hotel. With this history in mind, his physician decided to order a fresh stool examination. A single fresh stool examination for ova and parasites was negative. Observing no further worms, the busy patient did not have any further stool examinations done.

Four months later, the patient found another translucent, pink-red, living, round worm in the same toilet bowl. The worm again was found before he had used the toilet. He used chopsticks to collect the worm, which he then froze, since he could not get it to a laboratory during usual working hours. The patient and a colleague, both of whom had had training in tropical medicine, consulted several parasitology texts but could not identify the worm. It did not appear to be in the realm of common parasitic worms. A hospital laboratory was uncertain of the worm's identity and sent it to a reference laboratory.

An embarrassing situation arose

when the physician had to inform his patient (and colleague) that he was passing live earthworms (*Lumbricus terrestris*). The patient assured his physician that he was not eating earthworms whole. He recalled that his initial impression of the first worm was that it was an earthworm. That event followed a heavy rainstorm after which the patient had seen numerous earthworms on the driveway outside his home and in his basement. The patient lives in a 94-year-old house that has much of the original plumbing. Initially, the doctor and patient dismissed the possibility of earthworms because it seemed unlikely that the worms would travel up to a second-story toilet, and the history was so compatible with a tropical parasitic infection.

We wish to share this experience with others since it illustrates nicely how too much history, particularly when exotic, can interfere with reaching a correct diagnosis. How often have we succumbed to similar "historical overload" that allowed our common sense to lapse?

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COMPLETE PHYSICAL

To the Editor:

Paul Frame's editorial presents several interesting points regarding the history and persistence of the annual complete physical examination (CPE).¹ He suggests that the practice remains intact due to: inadequate knowledge on the part of physicians, patient expectations, "old habits," fear of malpractice, and economic forces. In turn, it is recommended that the CPE be eliminated or transformed entirely. Left unrecognized by Frame is that medicine is a cultural system, and the persistence of the CPE suggests that it has elements of a powerful ritual performance that both does and means more than is implied on a "medical" level.

To understand why the CPE persists, we need to address some basic ques-

tions: what is, in actual practice, a CPE? What does it do, on a sociocultural as well as on diagnostic and therapeutic levels? What does it mean to the people involved? Luckmann and Melville's study, although informative, does little to answer these questions.² Based on a written, structured survey of physicians, this study cannot demonstrate what actually goes on during a CPE, only the activities reported by physicians. A standardized survey, as noted by Mishler tends to impose the researcher's agenda rather than elicit those of informants, with less sensitivity to context than qualitative approaches.³ Finally, Luckmann and Melville's study examines what physicians think patients expect, rather than addressing patients directly. What their study does imply is that (1) the CPE is not a uniform activity with a standardized set of meanings or practices, (2) physicians and patients spend considerable time and effort in this activity, and (3) the CPE is considered an essential part of the practice of medicine by many physicians.

I believe a qualitative, ethnographic study, supported by semi-structured face-to-face interviews, is necessary to increase understanding of the CPE. Before we decide to eliminate or transform such an integral part of the medical process (if we can eliminate at all), we should know what we are changing. It may be that the CPE is something more than simply "an old habit."

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References

1. Frame P. The complete physical examination refuses to die. *J Fam Pract* 1995; 40: 543-5.
2. Luckmann R, Melville S. Periodic health evaluations of adults: a survey of family physicians. *J Fam Pract* 1995; 40:547-54.
3. Mishler E. Research interviewing: context and narrative. Cambridge, Mass: Harvard University Press, 1986.

The preceding letter was referred to Dr Frame, who responds as follows:

Dr Feldman's letter raises an interesting point about the ritual of the annual complete physical examination (CPE). He suggests that the annual CPE is a cul-

tural phenomenon which bestows benefits to patients that are subjectively real even though they cannot be measured by quantitative research methods. Presumably these benefits include an improved sense of well-being and perhaps the assurance (at least partly false) of health.

All practicing physicians are aware of the important subjective and cultural aspects of medical practice. The "laying on of hands," wearing a long white coat, reassuring patients in spite of incomplete data, and using placebo therapy are all examples of the art of medicine. It is important, however, to make a clear distinction between preventing illness in the asymptomatic patient and treating the patient who presents requesting resolution of a problem.

The asymptomatic patient feels well. This patient is interested in remaining healthy and is asking the medical practitioner only to help achieve this goal. We should respond by offering procedures and advice about risk reduction and lifestyle that have a significant probability of benefiting the patient. To respond with an expensive, time-consuming ritual of worthless tests and examinations may impress the naive patient, but is a practice more suited to magicians and carnival barkers than to physicians.

I support Dr Feldman's suggestion to do qualitative ethnographic studies of patients to increase our understanding of the CPE. Such studies should include interviews with patients who have not had CPEs as well as patients who get annual CPEs to determine if there are differences in perceived health or wellness.

A society's culture is not static; it is a dynamic, ever-changing process. Leeches, use of ultraviolet generators, and use of static electricity were all once part of the culture of medicine. Undoubtedly, some patients felt better after receiving these treatments. They have all been discarded because they had no measurable benefit and, in some cases, may have caused harm. It is time to move on from the culture of the annual CPE to a more effective preventive strategy.

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Dr Feldman's letter was also referred to Drs Luckmann and Melville, who respond as follows:

Dr Feldman expresses concern that it may be premature to recommend a change in the content of the physical ex-

amination performed as part of the routine periodic health evaluation of adults (PHE). He states that the physical exam may have important meanings for some patients and providers that go well beyond typically measured short-term health outcomes. As noted in the conclusion to our article on the PHE,¹ we agree with Dr Feldman that future research on the PHE should focus attention on potential secondary benefits of the physical exam and other aspects of the PHE that may play an important role in the patient-physician relationship or in producing meaningful feelings of reassurance and well-being, or both.

Qualitative research would be an essential part of an effort to address these issues. Other effective ways to address these issues are more quantitative descriptive studies of the detailed content and immediate outcomes of PHEs in representative populations, and randomized trials of new forms of the PHE that include only the minimal physical examination recommended by such groups as the US Preventive Services Task Force.²

Although we agree it is important to investigate the meaning of the physical exam to patients and physicians, it may be difficult to relate such subjective responses as "reassurance," "peace of mind," or "improved patient-physician bonding" to any significant, objective general health, functional, or mental health outcome. As many of our established medical practices are scrutinized through the lens of measurable outcomes, we will face difficult decisions that require us to weigh objective risks and benefits against subjective responses. Fortunately, in our current managed-competition environment, some subjective patient concerns are being measured and seriously addressed as "patient satisfaction" issues. Ultimately, a randomized trial may be the best means of determining the long-term, measurable effects of such practices as the physical exam component of the PHE.

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References

1. Luckmann R, Melville SK. Periodic health evaluation of adults: a survey of family physicians. *J Fam Pract* 1995; 40:547-54.
2. US Preventive Services Task Force. Guide

to clinical preventive services: an assessment of the effectiveness of 169 interventions. Baltimore, Md: Williams & Wilkins, 1989.

HYPOTHYROIDISM-INDUCED BRADYCARDIA

To the Editor:

A 58-year-old man with known coronary artery disease was seen in the office after he had undergone complete invasive cardiologic procedures, including coronary angiography, echocardiography, and electrophysiologic studies for bradycardia. He had been taking nitrates, nadolol, and enalapril for his cardiovascular condition for 2 years. Since no cause of sinus node dysfunction or occlusion of the coronary vessel graft was found, it was surmised that nadolol was the cause of his bradycardia. Therefore, he was instructed to taper off nadolol over 15 days to prevent beta-adrenergic blocker withdrawal syndrome.¹⁻³

He was seen again in the office with complaints of weight gain, lethargy, and dizziness. An electrocardiogram (ECG) revealed sinus bradycardia, with a rate of 35 beats per minute and no conduction disturbance. Although he was not taking any medicine except sublingual nitrates as required for angina, the clinical impression of hypothyroidism was confirmed by thyroid profile. Thyroid stimulating hormone (TSH) level was 60 mU/L (normal, 0.36-5.5 mU/L). Therefore, the diagnosis of hypothyroidism-induced bradycardia was entertained, and a daily replacement dosage of 100 μ g of levothyroxine sodium was started.

Two weeks after the initiation of thyroxine replacement therapy, his symptoms improved dramatically. An ECG revealed normal sinus rhythm with a rate of 70 beats per minute. Because of his history and the presence of coronary heart disease, nadolol was reinstated. Two months later, he was hooked up for 24 hours to ambulatory ECG Holter monitoring, which revealed no bradycardia, even during sleep. The patient fully recovered from the lethargy and dizziness and lost about 20 pounds. Since levothyroxine 100 μ g did not cause angina, the dosage was increased to an optimal level of 150 μ g daily. Repeat TSH testing revealed a level of 5 mU/L. An ECG again revealed normal sinus rhythm, with a rate of 79 beats per minute, despite reinstitution of nadolol.

Nadolol, a beta-adrenergic blocker, can cause bradycardia, but hypothyroidism should be borne in mind before subjecting the patient to extensive, expensive, and invasive cardiovascular studies.

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References

1. Psaty B, Koepsell T, Wagner E, Logerfo J, Inui T. The relative risk of incident coronary heart disease associated with recently stopping the use of beta-blockers. *JAMA* 1990; 263:1653-7.
2. Ahmad S. Safe discontinuation of antihypertensive therapy. *Arch Fam Med* 1995; (in press).
3. Ahmad S. Side effects of propranolol. *South Med J* 1979; 72:900.

ANOTHER PEARL

To the Editor:

It appears you have hit the mother lode with your editorial "Pearls,"¹ at least judging by the number of responses you generated. Isn't it nice to know that so many of our colleagues remain true to the core of what being a doctor is—a teacher. My favorite pearls are nonverbal:

- Shaking hands with my patients when I first see them
- Smiling when I first see my patients
- Sitting down when I ask them, "What can I do for you?"
- Looking them straight in the eye when I ask these questions

So much can be gained by watching patients' eyes and body language as we unravel their stories. By the same token, we communicate so much by our own body language during the interview. If we have our heads buried in our notetaking, we lose part of what the patient is telling us, and we also communicate that we are not really interested in the patient's continuing. On the other hand, if we lean forward toward the patient during the history, we communicate, "Tell me more." Leaning backward, sitting in the far corner, or standing near the door communicates the opposite: "Let me out of here."

Finally, I go one step further than Dr Scherger, who asks, "Is there anything that you're worried about?"² I usually tell the patient (when doing so is being honest) what they don't need to be worried about, eg, "This is *not* cancer." Many of

our patients are too afraid to even speak the "C" word, but really want to hear the reassurance that it's "not cancer." I do likewise with "heart attack" when I am reassuring a patient who has chest pain.

Thank you for this wonderful forum in which to share ideas.

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References

1. Fischer PM. Pearls [editorial]. *J Fam Pract* 1995; 40:19-20.
2. Scherger JE. More pearls [letter]. *J Fam Pract* 1995; 40:509.

THE ROSE LESS SWEET

To the Editor:

Mold recently raised the issue of quality of life in the elderly.¹ Since as many as 50% of people over the age of 50 and 90% over the age of 80 have diminished olfactory ability, it is worth considering the contribution of these losses to the quality of life of the elderly.

During evaluation by the Smell and Taste Disorders Clinic (supported by NIH program grant 9-P01DC00220) at the SUNY Health Science Center in Syracuse, NY, 48 patients between the ages of 12 and 78 (30 of them over 50) were asked to describe the effects of chemosensory disorders on their lives. When the reports of life changes were coded into categories of psychosocial impact, it was found that over 90% of patients experienced a decrement in the quality of their lives, such as decreased enjoyment of food or flowers. Approximately one third reported having experienced adverse emotional reactions, including frustration, loneliness, irritability, loss of self-esteem, and over one half recounted negative social effects, such as loss of enjoyment while dining out and sensitivity to comments regarding smell or taste, which resulted in a level of self-imposed withdrawal from society.

Twenty-five of these patients also completed the Beck's Depression Inventory and the Zung Anxiety Scale. The rate of anxiety was considerably higher (31% minimal to moderate) than the 20% incidence level previously reported in patients in a family practice setting.² The rate of depression (23%) found in patients with chemosensory disorders was also

slightly higher than the 20.9% level previously found in patients in a family practice setting.³

It is also significant that 11 (23%) patients stated, unsolicited, that medical professionals had previously characterized their chemosensory disorders as unimportant. Physician should be aware of the psychological as well as physical impact of chemosensory dysfunction on the lives of the elderly.

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References

1. Mold JW, McCarthy L. Pearls from geriatrics, or a long line at the bathroom. *J Fam Pract* 1995; 41:22-3.
2. Zung WWK. Prevalence of clinically significant anxiety in a family practice setting. *Am J Psychiatry* 1986; 143:1471-2.
3. Zung WWK, Broadhead WE, Roth ME. Prevalence of depressive symptoms in primary care. *J Fam Pract* 1993; 37:337-44.

MORE THAN A SPORTS EXAM

To the Editor:

Regarding the article by Rifat, Ruffin, and Gorenflo (*Disqualifying Criteria in a Sports Examination. J Fam Pract* 1995; 41:42-50.), I must express my concern about the conceptualization of the preparticipation sports evaluation as being merely a history and physical related to sports activity.

As I noted many years ago in a letter to the editor (*J Fam Pract*, 1982, 15:616), the point of the preparticipation sports examination is to allow a patient's family physician (or pediatrician for that matter) to get to know the patient, develop a relationship, and assess the patient's overall risks at a time in life when he or she does not usually see doctors. To conduct a preparticipation sports evaluation with a more-or-less randomly selected physician, as was done here, and to focus only on the outcome regarding sports participation, presents too narrow a view of the process—a view unworthy of family physicians.

Continued on page 437

Continued from page 433

While the authors state that a "directed PPE model may . . . increase the clinician's efficiency, thereby freeing more time to address other important issues in this age group," that goal will certainly be much more difficult when the exam is conducted by somebody other than the patient's personal physician. As even the authors note, "when the examining physicians are not the primary care providers," there is evidence that some results are "more negative" than would be expected.

Finally, the form suggested for the preparticipation sports exam fails to address any of the common issues such as sexuality, school performance, and tobacco and other drug and alcohol abuse.

As family physicians, we need to get to know our patients and take into account the entire spectrum of risks and opportunities for our patients, not merely those involving sports. Part of the opportunity presented by the preparticipation evaluation is to build an effective physician-patient relationship. For these reasons, preparticipation evaluations should never be performed in groups or by someone other than the patient's primary provider.

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INAPPROPRIATE ADMINISTRATION OF DT/DTP VACCINES

To the Editor:

Administration of diphtheria-tetanus or diphtheria-tetanus-pertussis (DT/DTP) in older children and adults results in more severe injection site reactions than in younger children. This led to the use of adult tetanus-diphtheria (Td) vaccine, whose formulation contains a 5- to 10-fold lower dose of diphtheria toxoid than the DT/DTP vaccines, for individuals aged 7 years and older.¹ Zimmerman and Peilitieri searched the Vaccine Adverse Event Reporting System (VAERS) database through March of 1992 and confirmed several instances of DT/DTP administered inappropriately in individuals aged 7 years and older.² Reports of this type have persisted since then.

Since the inception of VAERS in July of 1990, approximately 74 million doses of DTP, 5 million doses of DT, and

49 million doses of Td have been sold in the United States (CDC, personal communication). Reports of adverse events following vaccination to VAERS contain information on the type of vaccine(s) administered, the lot number of the vaccine, the age of the vaccine recipient, and the time interval between vaccination and onset of the adverse events. VAERS received 19,899 such reports of DT/DTP through July of 1995, of which 542 appeared to be inappropriately administered with respect to the age of the vaccinee. Using an electronic list of valid lot numbers and their associated antigens, DT/DTP lots reported on 131 (24%) of these reports were validated.

Of these 131 reports, 77% of the individuals received vaccines other than DT/DTP simultaneously. Among the 23% that received DT/DTP alone, 79% reported symptoms within 48 hours after receiving the vaccination. The most common symptoms reported in these individuals were hypersensitivity and edema surrounding the injection site. Sixty-six percent of the reports were for female patients and the median age was 22.

The VAERS data continue to show a need for vaccine providers to be educated on the DT/DTP vaccination schedule and to pay more careful attention to the appropriate administration of DT/DTP.

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References

1. Stratton KR, Howe CJ, Johnstone RB, eds. Adverse events associated with childhood vaccines: evidence based on causality. Washington, DC: National Academy Press, 1994.
2. Zimmerman RK, Peilitieri TR. Inadvertent administration of DTP and DT after age six as recorded in the Vaccine Adverse Event Reporting System. *Fam Pract Res J* 1994; 14:353-8.

PERSPECTIVES ON NEEDLE PHOBIA

To the Editor:

I appreciated reading Dr Hamilton's article about needle phobia (*Hamilton JG. Needle phobia: a neglected diagnosis. J Fam Pract* 1995; 41:169-75). I have an anecdotal experience that I would like to share with the readers about this subject.

The two most severe cases of needle phobia I have seen over the past few years have been related to patients who have been sexually abused as children. One case was a 30-year-old secretary who dreaded childbirth only because it was associated with venipunctures. Sedation was needed for any type of needle puncture. Even following sedation with intravenous diazepam, several people would have to hold her down for the venipuncture, and blood pressure and pulse would show appropriate responses. When I asked her an open-ended question, "There must be some problem at the root of this—how long have you had this problem?" she offered the explanation that it stemmed from being sexually abused as a preteen.

The second patient was an elderly woman with non-insulin-dependent diabetes whose blood glucose was rising and for whom insulin was indicated. She kept insisting that she could never use needles. The patient had previously disclosed to me that she refused to do breast self-examination because she was sexually abused as a preteen and teenager. When I asked her an open-ended question about the specific reason she did not like needles, she explained to me that she "did not like dirty things being stuck in [her]." After explaining that needles are sterile, I asked if she thought this had anything to do with being sexually abused. She said, "Of course it does, and I am so embarrassed about this, but I can never use a needle." Finally, after much supportive discussion, she began insulin therapy and is currently under counseling.

With these cases, I took pains not to suggest that sexual abuse occurred. The striking and powerful nature of the interactions with these patients convinced me that sexual abuse and needle phobia, at least in these cases, were related. Since sexual abuse is common, open-ended questions about sexual abuse might be appropriate for patients with needle phobia.

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To the Editor:

Dr James Hamilton's poignant article on needle phobia (*Hamilton JG. Needle phobia: a neglected diagnosis. J Fam Pract* 1995; 41:169-75) reminded me of a patient I looked after years ago.

A registered nurse working in a coronary care unit (CCU) told me that her

Continued on page 512

Continued from page 437

otherwise healthy 27-year-old husband had apparently suffered a syncopal episode after a routine immunization some years earlier, and another apparent syncopal episode when he was being given an intravenous injection of contrast medium for an intravenous pyelogram the previous year. She had been present on the second occasion and was convinced that her husband was actually in asystole for a short time, although the medical staff who attended him discounted her opinion.

She returned some weeks later accompanied by her husband to discuss the matter further. The husband was perfectly healthy, except for a resting heart rate of 36 beats per minute. His wife and I chatted for 5 minutes while he did push-ups in a corner of my office. His heart rate stayed at 36, and I referred him to a university hospital for evaluation.

He was admitted to a CCU, attached to a monitor, and given a subcutaneous injection, with full resuscitation services and equipment by the bedside. He went into asystole, was immediately and uneventfully resuscitated, was subsequently fitted with a pacemaker and, so far as I now know, lived happily ever after. The diagnosis?—a sick sinus.

The lesson for me was never to ignore a nurse's opinion. Think carefully before giving injections to people who have a history of fainting with needles.

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The preceding letters were referred to Dr Hamilton, who responds as follows:

I read these letters from Drs Daniels and McSherry with great interest. I am grateful to these two gentlemen for their courtesy and insights.

In regard to the hypothesis of Daniels that sexual abuse may trigger needle phobia, I have never heard of this from a patient with needle phobia; however, I have never asked. It may well be that those who inherit a peripheral neural network that promotes shock upon bodily penetration with an object may be subject to the development of needle phobia when triggered by a traumatic event at an early age. Some children are abused by the sticking of pins into their bodies. I agree with Daniels that asking questions about sexual abuse may be helpful with many needle phobic patients.

McSherry's case highlights the important points that (1) death can occur from a vasovagal reflex, and (2) asystole is common, at least for a few seconds, during a needle-induced vasovagal episode. Most people with a needle phobia, however, do not need a pacemaker, since if they are not exposed to needles, they will not have asystole or a vasovagal reflex. For cases in which a needle procedure is necessary, numbing the arm with topical anesthesia with iontophoresis will abort most vasovagal episodes.

Since this condition is so common, affecting probably more than 20% of the population, many clinicians have favorite needle phobia stories. Our initial papers from Duke^{1,2} were meant to create a common understanding and acceptance of needle phobia as a concrete entity. We have much work ahead in fine-tuning our knowledge of this condition.

I am always happy to consult informally with anyone by telephone or by mail at any time about patients with this condition, or to answer any questions. My 24-hour phone number is 318-443-3728.

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References

1. Ellinwood EH, Hamilton JG. Case report of a needle phobia. *J Fam Pract* 1991; 32: 420-23.
2. Hamilton J, Ellinwood E. Needle phobia. *South Med J* 1991; 84(suppl):2S-27.

ELEVATED ESR IN A STROKE PATIENT

To the Editor:

Stroke cases are usually attributed to atherosclerosis, especially in the elderly. Rarely, this may lead to misdiagnosis of treatable causes.

A 72-year-old man was admitted for evaluation of acute onset right-sided weakness and difficulty in speaking of 1 month's duration. There were no known risk factors for atherothrombotic stroke.

Investigation showed a hemoglobin of 10.2 g/dL, normal blood counts, erythrocyte sedimentation rate (ESR) of 132 mm per 1st hour, and excess rouleaux formation. Serum total protein, IgG, and IgA were normal, whereas IgM level was increased to 19.1 g/L (normal = 0.5 to 3.5 g/L). Plasma protein elec-

trophoresis showed an M band consisting of monoclonal IgM- λ chains. Urine was negative for Bence Jones protein. Plasma viscosity was 2.1 mPa (normal=1.5 to 1.7 mPa). Bone marrow showed few atypical plasma cells. A computed tomography scan of the brain was consistent with a left middle cerebral artery territory occlusion. The patient was treated with plasma exchange, then intermittent courses of chlorambucil 4 mg per day. His neurological deficit improved, and at the end of 1 year he was able to walk unaided, his ESR had dropped to 25 mm per hour, and his serum IgM level had become normal.

Causes of ischemic strokes with an elevated ESR include inflammatory vascular disease such as systemic lupus erythematosus and giant cell arteritis; chronic infection such as tuberculous or fungal meningitis with vascular involvement; cardiac conditions such as atrial myxoma or infective endocarditis; and hematologic conditions such as the paraproteinemias. Among these conditions, giant cell arteritis and paraproteinemias are common in elderly subjects. Most of these conditions have other systemic manifestations that often give the clue to the diagnosis.

Twenty-five percent of patients with macroglobulinemia develop neurological complications¹ due to hyperviscosity, infiltration of the brain or meninges with malignant cells, or damage to the peripheral nerves by the abnormal immunoglobulins. Increased serum viscosity can

Announcement

The *Journal of Family Practice* is now online. Our e-mail address is jfampract@aol.com. We are pleased to offer this alternative mode of communication to our readership and authors and hope it will enhance your access to the editorial office. All of us on the editorial staff look forward to your continued input and feedback.

produce fluctuating neurological symptoms, such as headache, drowsiness, poor concentration, visual blurring, and auditory and vestibular symptoms, in addition to strokes. Cerebral infarction may be arterial or venous, and at postmortem, the circulation is occluded with acidophilic material thought to be precipitates of the abnormal proteins.² Subacute meningitis,³ cerebellar ataxia,⁴ and other focal brain syndromes can occur owing to central nervous system involvement by neoplastic cells.⁵ Demyelinating peripheral neuropathy and mononeuritis multiplex are common complications; in one half of these, antemyelin-associated glycoprotein activity is found.⁶

In this elderly patient with occlusive vascular disease of cerebral circulation, high ESR, raised IgM, and presence of monoclonal IgM- λ band on electrophoresis established the diagnosis of Waldenström's macroglobulinemia. With specific treatment, he made a good recovery. This case illustrates the importance of simple screen-

ing tests such as ESR in the evaluation of stroke patients, including the elderly.

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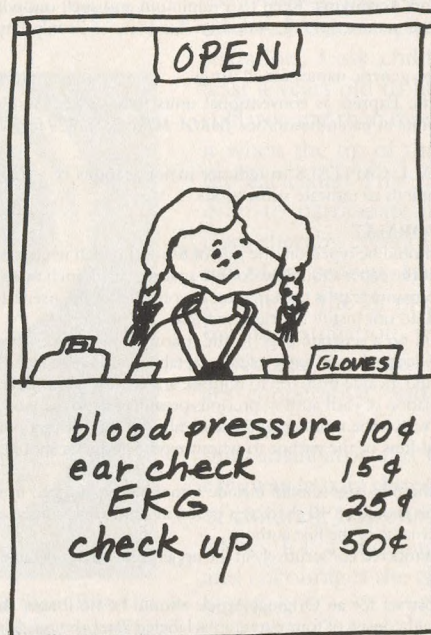
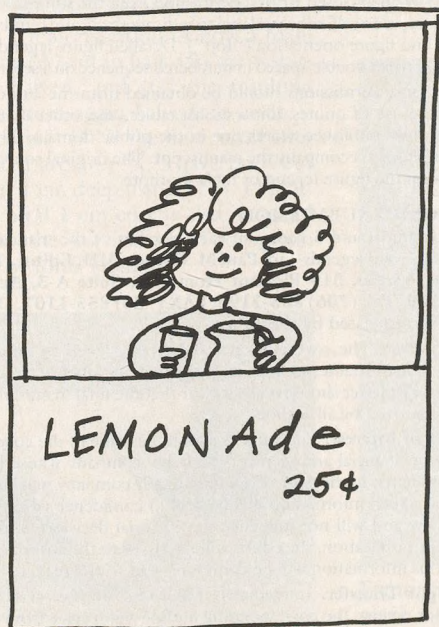
References

1. Solomon A. Neurological manifestations of macroglobulinemia. In: Brain WR, Norris F. The remote effects of cancer on the nervous systems. New York: Grune & Stratton, 1965:112.
2. Warlow C. Disorders of the cerebral circulation. In: Walton J, ed. Brain's diseases of the nervous system. 10th ed. Oxford, England: Oxford Medical Publications, 1993:225.
3. Henson RA, Ulrich H, eds. The neurological manifestations of systemic malignant disease. Oxford, England: Blackwell, 1982.
4. Spencer SS, Moeneh JC. Progressive and treatable cerebellar ataxia in macroglobulinemia. Neurology 1980; 30:536.

5. Shimizu K, Fujisawa K, Yamamoto H, Mizoguchi Y, Harak K. Importance of central nervous system involvement by neoplastic cells in a patient with Waldenström's macroglobulinemia developing neurological abnormalities. Acta Haematol 1993; 90(4):206-8.
6. Nobile-Drazio E, Marmivoli P, Baldini L, Spagnol G, Barbieri S, et al. Peripheral neuropathy in macroglobulinemia, incidence and antigen specificity of M proteins. Neurology 1987; 37:1506-14.

CORRECTION

In the table of contents synopsis of "Firearm Injury Risk Among Primary Care Patients" (Goldberg BW, von Borstel ER, Dennis LK, Wall E. Firearm injury risk among primary care patients. J Fam Pract 1995; 41:158-62), the rate of nonfatal firearm injuries was inaccurately stated. The correct rate is 2.6 nonfatal firearm injuries per firearm fatality, or approximately 100,000 nonfatal injuries annually. The Journal regrets this error.



Bennett & Evans

Little girls: while most of the neighborhood kids sold lemonade, Doc Miller's girl had other ideas