From Washington

The Changing Interface of Primary and Specialty Care

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Traditional fee-for-service practice in the United States has historically tolerated considerable overlap and ambiguity in the roles and responsibilities of primary care providers and specialists. In the absence of clearly defined boundaries, specialists have provided a substantial amount of primary care,[1] and the profile of primary care practice has been shown to vary widely.[2,3] Given this blurring of professional roles, it is not surprising that patient referrals from one provider to another often result in confusion, discordant or ambiguous provider and patient expectations, and redundant or inadequate care.[4] These problems appear to be exacerbated by the frequent failure of providers not only to establish clear expectations regarding transfer of responsibility but also to communicate among themselves and with their patients.[5]

Referrals and consultations by specialists to specialists and by specialists to primary care providers are known to occur.[6] In addition, patients have traditionally been able to self-refer to specialists. The majority of referrals, however, are the result of a primary care provider's recommending that a patient seek additional advice or treatment from a specialist. This process often involves a complex interplay of medical, psychosocial, and economic considerations. Overall, about 4.5% of patient contacts with primary care providers result in referral to a specialist.[7,8] Rates of referral and consultation, however, are known to vary widely among primary care providers, suggesting a high level of uncertainty about appropriate practices.[9,10]

Changes in the Delivery of Health Care Services

The introduction of newer health plans and reimbursement mechanisms is profoundly affecting traditional patterns of health services delivery at the interface of primary and specialty care. Such plans, largely driven by market forces, challenge many of the assumptions of fee-for-service practice in their attempts to contain costs while simultaneously providing more effective and efficient health services. Typically, managed care organizations (MCOs) require each provider in the plan to assume the label of either "primary care practitioner" or "specialist." Each patient enrolled in the MCO is then linked with a primary care practitioner. In addition, many plans use one or more mechanisms to restrict direct patient access to specialty care. Such mechanisms include gatekeeping by primary care clinicians and increased cost sharing for patients preferring to self-refer to specialists. Many plans also incorporate financial incentives and administrative review of referral decisions to discourage high referral rates among primary care providers. The plans assume that if most care is provided by primary care practitioners who consult specialists only as needed, health costs will decrease. This assumption is based on the observation that specialists use significantly more resources (tests, procedures, hospitalizations), even after adjusting for severity of illness, than do primary care practitioners.[11]

The Need for Data

The push by MCOs toward more clearly defined provider roles and more limited access to specialty care has prompted much debate among the four major players at the interface of primary and specialty care: primary care providers, specialists, patients, and health care plan administrators. These discussions have most often focused on concerns about the resulting quality of patient care. Some have claimed that newer financial incentives may threaten ethical physician-patient relationships,[12] while others have pointed out that gatekeeping by primary care

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providers may protect patients from overtreatment.[13] Certain specialty groups have asserted that they are better suited than primary care practitioners to provide "principal care" for patients affected by diseases within their area of specialty.[14] Largely in response to consumer dissatisfaction with referral policies, MCOs have introduced "point of service" plans that provide for more direct access to specialty services.

Unfortunately, most of these assertions and responses have been fueled by an ample supply of opinion but a conspicuous absence of data. To address the need for more information about referral practices and the effect of evolving changes in health care delivery on the quality and costs of care, the Center for Primary Care Research of the Agency for Health Care Policy and Research (AHCPR) convened a conference in September 1995 entitled "Research at the Interface of Primary and Specialty Care." The purpose of the conference was twofold: (1) to assess the current state of research related to the integration of primary and specialty health care services, including practices of referral and consultation, and (2) to obtain suggestions regarding the most important questions in this area for future research. The 1½-day conference held in Washington, DC, brought together a diverse group of health services researchers, academicians, and primary care and specialty providers, as well as representatives of MCOs, consumers, employers, and other purchasers of health care.

Variations in Referrals and Variations in Health Care Practices

AHCPR's interest in research issues at the interface of primary and specialty care is related to previous documentation of substantial unexplained variations in the treatment of common conditions across the country.[15] Recent studies funded by AHCPR have highlighted disparities in the use of major diagnostic and therapeutic interventions associated with the sex, race, and insurance status of patients.[16–18] Since many of these interventions involve procedures performed by specialists, the findings suggest inequitable utilization of specialty care by certain sociodemographic groups. It is not yet clear, however, whether any given patient group is receiving too many or too few specialist services. In addition, almost no studies have focused on differences in the process of care prior to the time at which a patient is considered for a given procedure. Are variations in procedure rates attributable to variation in the practice style of the specialist performing the procedure, variations in referral practices of primary care providers, or both?

Finding answers to such questions will be challenging. Despite provider labeling by MCOs, much is still unknown about the appropriate roles of primary care and specialty providers. Surprisingly few studies have focused, for example, on the relationship between provider training or experience and the quality of care delivered. Nor have any studies allowed an isolation of the effects of provider training from health care organizational structure and financial incentives. Referral profiling and evaluation of intraprovider variation in referral practices have been shown to be highly problematic in the absence of adequate measures of case-mix or standard units of analysis.[19] There is little information about the most effective way to coordinate care or foster collaboration between primary care providers and specialists. It is also unclear how best to interpret and incorporate the perceptions, preferences, and concerns of patients who require both primary and specialty care.

Another basic problem is the need for a universally accepted classification scheme related to the sharing or transfer of patient care. The American Academy of Family Physicians has developed reasonable definitions of consultation, referral, and transfer. However, a more comprehensive typology that includes such concepts as patient self-referral to specialists and co-management of patients by two or more providers is required. Researchers must also develop strategies that take into consideration the relative infrequency of referrals. Very large study populations or data sets will be needed for the study of patterns of referral and outcomes associated with the transfer of care from one provider to another.

Referral Guidelines

There is an urgent need for information that can lead to more science-based decisions about when and how to refer. Speakers and participants at the AHCPR conference expressed the opinion that until such information is available, efforts to develop referral guidelines are being undertaken prematurely. Dr Katherine Kahn of RAND, addressing the issue of quality of care and referral decisions, stated that such guidelines are unlikely to be associated with improved quality until studies have identified the provider whose outcomes are most favorable in the care of specific problems of specific patients in specific settings. The costs of such care must also be taken into consideration. Under one set of circumstances, the preferred clinician may be the primary care provider, while in other cases, it may be the specialist. Furthermore, the appropriateness of generic referral guidelines that do not allow consideration of crucial site-specific information, such as the local availability of recommended medical personnel and support services, must be questioned.

Research Agenda

Participants at the AHCPR conference arrived at a set of recommendations for future research at the interface of primary and specialty care. Selected, prioritized research questions, grouped under four large headings, are listed below:

Economic incentives and referral decisions

- How do specific economic incentives affect the referral behavior of primary care and specialty providers?
- When economic incentives are applied within a health care system, which specific patients and patient problems are more or less likely to be referred?

Effective communication and teamwork

- Is it possible or desirable to standardize the content and language of information transferred between referring clinician and consultant?
- How can newer technologies be used most effectively to improve the process and outcomes of communication among providers and between provider and patient?
- Does improved reimbursement for time spent communicating, including "curbside" consultations, improve the incidence and quality of communication?

Provider roles and responsibilities

- Which specific provider competencies in both knowledge and skill have a proven impact on patient outcomes?
- What is the most effective mix of providers, including physician and nonphysician providers, for a defined patient population?

Patient demand and satisfaction

- How can primary care providers most effectively integrate patient concerns about or demands for specialty services into their referral decisions?
- What are the measurable factors that shape patient expectations, preferences, attitudes, and understanding about referral and consultation practices?

A more complete conference summary will soon be available from AHCPR. Future studies addressing the questions raised during the conference should be of great relevance to evolving health plans and policymakers. Science-based answers to the questions may have far-reaching effects on the practices of both primary and specialty care providers as well as an important beneficial impact on the care patients receive.

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Letters to the Editor

The Journal welcomes letters to the editor. If found suitable, they will be published as space allows. Letters should be typed double-spaced, should not exceed 400 words, and are subject to abridgment and other editorial changes in accordance with Journal style. All letters that reference a recently published Journal article are sent to the original authors for their reply. If no reply is published, the authors have not responded by date of publication. Send letters to Paul M. Fischer, MD, Editor, The Journal of Family Practice, 519 Pleasant Home Rd, Suite A-3, Augusta, GA 30907-3500, or Fax (706) 855-1107. E-mail: jfampract@aol.com

PREPARTICIPATION PHYSICAL EXAMINATION

To the Editor:

I must agree with Beasley[1] when he questions the concept of the preparticipation sports evaluation and its role in the larger picture of comprehensive health care screening. The preparticipation physical examination (PPE) serves far greater and more diverse purposes than just a screening dedicated to sports activities. Whenever possible, the athlete's family physician should be the one performing such an examination. In an ideal setting, that physician is also the one involved as team physician. The majority of the time, however, that is not the case, and the PPE is completed by a second physician. First and foremost, that physician needs to be someone qualified and who understands what to look for in such a screening examination. This examination is often the only interaction that a healthy young athlete will have with the health care system for years. While the most effective way to do the PPE is in the relative isolation of the ambulatory care office, this is simply not realistic. I disagree with Dr Beasley's comment that the PPE "should never be performed in groups or by someone other than the patient's primary provider" as being unrealistic and out of touch with present-day medicine. It just does not happen that way. I believe a good screening can be accomplished if time is taken to plan and to set up group screening in such a way as to provide privacy and time to discuss the important non–sport issues that confront most adolescent athletes.

Lastly, the form suggested by Rifat et al[2] is incomplete in addressing the important issues of sexuality, tobacco, alcohol, and other drug abuse. The PPE monograph advocated and endorsed by the American Academy of Family Physicians, the AMSSM, and other groups is a better form to consider and one which obviously does address these important issues. For more information on this monograph, please contact the AAFP.

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SMARTDOCS SOFTWARE

To the Editor:

Berdy Medical Systems would appreciate the opportunity to respond to several comments made by Drs Gaspar and Ebell in the October issue of *The Journal* (*Gaspar DL, Ebell MH. J Fam Pract 1995; 41:410*).

1. The article states that ICD-9 codes cannot be removed. Since the SmartDocs' review, and in response to customer requests, SmartDocs now has the capability to delete ICD-9 codes.

2. The article states difficulty locating the descriptive diagnosis of acetaminophen overdose. The ICD-9 and CPT codes used in SmartDocs are licensed from the American Medical Association (AMA). Berdy Medical Systems cannot modify these databases; therefore, using proper terminology increases SmartDocs ease of use. The correct AMA diagnosis of "Poisoning by aromatic analgesics, not elsewhere classified" (code 965.4), is listed. Using the SmartDocs' Search feature, the code is easily found by entering any portion of key words such as "poison," "pois," "analg," or even just "ana" to find it.

3. The article implies that it is difficult to alter a CPT code assignment. To maintain code integrity, a selected CPT code in SmartDocs cannot be edited, but may be replaced. To do so, the user would simply depress the Delete key to erase the original code, the Y key to confirm the deletion, and then select the new code.

4. The article states that after 6 days and 24 admissions, each CPT update took 30 seconds to carry out. Based on the number of patients reportedly entered by Dr Gaspar, our observed response time to carry out each CPT update is 2 to 3 seconds on the unit returned by Dr Gaspar as well as other units, even those with a much larger patient roster.

Our physician user surveys attest to the value and satisfaction SmartDocs and the Psion 3a have brought to the medical community.

Joanna Sluja
Berdy Medical Systems, Inc
Rochelle Park, New Jersey

OUTPATIENT CIRCUMCISIONS

To the Editor:

The article by Mansfield et al[1] raises interesting questions about the cost of in-hospital neonatal circumcisions. Infant circumcisions can also be safely performed in an outpatient environment. In the current managed care environment, with its associated shortened postpartum maternal hospital stay, we should consider performing this elective procedure on an outpatient basis. For over 10 years, we have safely performed neonatal circumcisions in an ambulatory environment.[2] We use both Gomco and Plastibell techniques in newborn males up to 1 month of age using a dorsal penile block for anesthesia. Health care systems wishing to significantly decrease their inpatient costs associated with neonatal circumcision should consider moving this elective procedure to an ambulatory setting.

Carlos A. Moreno, MD, MSPH
Janet P. Realini, MD, MPH
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To the Editor:

I was surprised to see the findings of Mansfield et al indicating a longer length of hospital stay for circumcised males (*Mansfield CJ, Hueston WJ, Rudy M. Neo-*

natal circumcision: associated factors and length of hospital stay. J Fam Pract 1995; 41:370–6). There are a few cases where I would keep a child a few more hours to watch him after doing the procedure, but I find it is hard to believe that the average stay is prolonged by a very significant amount. For a family practice journal, I felt that the critical issue was: who is doing the circumcisions that result in a prolonged length of stay? Is it simply because the pediatrician is waiting for the obstetrician to come and do the circumcision so the baby can go home? Are the family practice babies sent home sooner because the family physicians do their own circumcisions? I am fearful that the dollar calculations in this article will push payers against circumcision, while I doubt that the real cost to a family physician's babies is near the cost estimated in the article.

David H. Hopper, MD
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To the Editor:

Mansfield and colleagues (*Mansfield CJ, Hueston WJ, Rudy M. Neonatal circumcision: associated factors and length of hospital stay. J Fam Pract 1995; 41:370–6*) use the logistic regression technique to show that certain characteristics of patients are independently associated with circumcision. The results of logistic regression are usually expressed as odds ratios, which in certain circumstances approximate the risk ratio or relative risk, which means a multiple of risk or probability to most readers.

However, in the case where the outcome is common and especially where the outcome rate is greater than 50%, the odds ratio greatly overestimates the relative risk. Using unadjusted data from Table 1 from the paper, the *relative risk* of circumcision of private insurance to self-pay insurance is simply the circumcision percentage of the two groups divided by each other, 92.2/80.0, or 1.15. However, the *odds ratio* (% circumcised private/% not circumcised private)/(% circumcised self-pay/% not circumcised self-pay) calculated from the same data is (92.2/7.8)/(80/20), or 2.9, more than double. The difference between the odds ratio and the relative risk is as great or greater for all the odds ratios mentioned in the paper. The adjusted odds ratio of 2.47 calculated from the logistic regression translates to a relative risk of somewhat less than 1.15, although the statistical significance is unchanged. It is up to the reader to determine the meaning or importance of such a difference or whether unknown confounders or measurement error can explain a finding of that magnitude.

David H. Mark, MD, MPH
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The preceding letters were referred to Drs Mansfield and Hueston and Ms Rudy, who respond as follows:

We thank Drs Moreno and Realini and Hopper and Mark for their comments on our article.[1]

The experience with circumcision in an ambulatory environment shared by Drs Moreno and Realini is useful. If the procedure cannot be scheduled within a short maternal stay, doing it later is an option. In either instance, convenience to the parents and cost to the provider should be considered. Perhaps if done later, parents will be better informed about risks and benefits.

We share Dr Hopper's curiosity about reasons for longer length of stay. Our study did not set out to explore this issue. Longer length of stay is an important but secondary finding. We do not know who performed the circumcisions, when they were performed, or whether there were complications. In these settings, many were probably performed by residents. If we ascribe responsibility for the procedure, though, to the physician who initially cared for the mother in labor, we find no significant difference in length of stay between family physicians and obstetricians for healthy infants born to low-risk mothers. The cost implications may push payers against circumcision, but they should decide according to their own data and their individual cost management and marketing strategies.

Dr Mark is correct in making the distinction between relative risk (RR) and the odds ratio (OR). RR is most appropriate in prospective, experimental studies, where subjects are grouped according to intervention of interest and the observed occurrence or incidence of an outcome. Study design and random assignment to intervention groups help control for confounding variables, and outcome proportions can then be compared across interventions using RR to estimate the effect of intervention. The purpose of our study was to identify and quantify factors associated with a procedure in the care process. It was retrospective, with classification of subjects for analysis based on circumcision as an outcome (rather than intervention) of interest. The OR technique was used to control for confounding variables.[2] OR and RR are different but, as Dr Mark points out, provide similar statements of probability when the incidence of an outcome is low. We did not intend to state, or imply interpretation of, differences in circumcision rates as RR. We should have been more careful with our language and thank Dr Mark for the clarification. It is fair for him to question the importance of the differences in rates, but if one interprets the data in Table 1 as RR, it is useful to remember that each variable may be influenced by others in that table. The reason we used logistic regression is that it specifies the factors independently associated with circumcision and estimates the odds of circumcision associated with each factor independent of the others (an *adjusted* OR). The associations we found between circumcision and payment source, race, cesarean section, and episiotomy remain.

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ANTIBIOTIC TREATMENT OF ASTHMA

To the Editor:

In his article reporting an uncontrolled, open-label (nonblinded) trial of antibiotic treatment of asthma in patients with antibody to *C pneumoniae*,[1] Hahn states that the "rather dramatic results" could be due to "placebo responses or patient and physician biases." He dis-

counts patient and physician biases as "unlikely [to] account for persistent objective improvement in pulmonary function" but does not further address the likelihood that the results could reflect a placebo response. Placebo responses of the magnitude reported by Hahn in the FEV_1 from pre- to posttreatment (12.5%, 95% confidence interval, 4.6% to 20.3%) have been reported in randomized controlled trials of asthma treatment. For example, average improvements of 11% to 18% in serial FEV_1 measurements 1 to 6 hours after administration of a placebo were reported in one study of 12 subjects.[2] An increase of 6% in FEV_1 from baseline, averaged over 12 hourly measures, was noted at 12 weeks of follow-up for 77 placebo controls in another study.[3] The mechanisms by which the well-known placebo effect operates are not known, but in the case of FEV_1, they could include regression to the mean, reduction in anxiety, and improvements in learning and effort. I am concerned that publication of this article will be taken as preliminary evidence of treatment efficacy. The lack of a control group means there is no assurance that the effect being reported is other than a placebo response.

David Thom, MD, PhD
Stanford University
Palo Alto, California

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

I thank Dr Thom for reemphasizing for readers of *The Journal of Family Practice* the limitations of uncontrolled clinical interventions in asthma. I share his concern that my published results could be overinterpreted and that "the danger of promiscuous overuse accompanies any recommendation for empiric antibiotic treatment based solely on uncontrolled clinical observations."[1] An anonymous reviewer from another journal stated that it was a "tragedy" that my study was not a randomized, placebo-controlled, double-blind trial. I remain uncertain how an investigator can attract funding to perform such a trial without first publishing promising preliminary results.

Dr Thom cites pre- and post-bronchodilator FEV_1 results for placebo groups in two studies of bronchodilator treatment for asthma. Since my study[2] reported on changes in pre-bronchodilator results only, its results may be compared more appropriately with equivalent pre-bronchodilator data from randomized controlled trials of chronic inhaled steroid treatment for asthma.[3–6]

The difference between baseline (pretreatment) and follow-up FEV_1 in the control groups can be used as a measure of the natural history of lung function in asthmatics not receiving anti-inflammatory treatment. Pre-bronchodilator FEV_1 declined in control groups treated for 6 weeks,[4] 1 year,[3] 2 years,[5] and 2½ years.[6] This decline in FEV_1 over time in asthmatics who are not receiving inhaled corticosteroids may be (1) due to worsening asthma symptoms, (2) a manifestation of the well-known loss of FEV_1 that occurs in asthma, or (3) both. This decline in pre-bronchodilator FEV_1 must be distinguished from the acute changes following bronchodilator use cited by Dr Thom.

Another interesting exercise is to compare study FEV_1 results (12% improvement)[2] with the improvement in FEV_1 for patient groups treated with inhaled steroids. Improvement in FEV_1 during ongoing inhaled steroid administration of between 6 weeks and 2½ years' duration was 7%,[4] 0%,[3] 4%,[5] and 12%,[6] respectively. Thus, my study results could be due to nonspecific effects (placebo response) that would (1) be equal to or greater than the magnitude of the proven effect of long-term inhaled steroid administration on pre-bronchodilator FEV_1, (2) be associated with delayed clinical improvement consistent with (but not conclusive proof for) resolution of an inflammatory response as shown in Figure 1 of my study,[2] and (3) result in apparent remission of asthma in 15% of the patient group. I believe the expression "rather dramatic" does apply to these results, whether they are due to nonspecific effects, nonantibiotic effects of the administered agents, or the hypothesized antimicrobial effect. Future studies should clarify the situation.

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TOBACCO ADVERTISING IN PHARMACIES

To the Editor:

Recently, I went into a pharmacy where some of my patients fill their prescriptions. Next to the pharmacy cash register, a large sign advertising cigarettes proclaimed, "Alive with pleasure." The manager said it was paid advertising and that the tobacco company dictates where each sign is placed, even on the pharmacy counter where medicines are dispensed.

Pharmacies are symbols of healing and health. By placing these advertisements where medicines are dispensed, tobacco companies imply that tobacco products are conducive to health. Advertising can influence those who are sick, many of whom have illnesses directly related to tobacco use and may be attempting to quit smoking. Such advertising may also persuade children that tobacco products are associated with health and well-being. Since most tobacco users begin using tobacco before the age of 18 years, youngsters may be influenced by tobacco advertising.[1,2]

Pharmacies should not allow tobacco advertising. Physicians should encourage their patients, especially those

who have been advised to quit smoking and those with children, to purchase their prescriptions at pharmacies in which tobacco is not advertised. The presence of tobacco advertising in pharmacies is further evidence that such advertising should be regulated by the Food and Drug Administration.

Sue Ann Brenner, MD
Atlanta, Georgia

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WHAT'S IN A NAME?

To the Editor:

When I was young, my friends and I played a game of making up names for people based on their occupations. Given today's multiplicity of specialists, the game seemed like a natural for our profession. Here's what I came up with. Does anyone have other names to contribute?

Addictionist, I. Drinkwater, MD
Anesthesiologist, Bonnie Gasser, MD
Cardiologist, Anne Jinnah, MD
Dermatologist, I. deWart, MD
Diabetologist, P. Sweet, MD
Emergency physician, B. Quick, MD
Endocrinologist, Libby Doe, MD
Family physician, C. A. Lott, MD
Gastroenterologist, Manny Scopes, MD
General surgeon, Kurt Manner, MD
Geneticist, Jean Poole, MD
Geriatrician, Leif Sinding, MD
Gynecologist, Deanne See, MD
Hematologist, Eck E. Moses, MD
Infectious disease specialist, Cole Chivers, MD
Internist, Noah Bunche, MD
Neurologist, E. E. Ghee, MD
Neurosurgeon, A. Burr Hohl, MD
Obstetrician, Kid Cumming, MD
Oncologist, N. Mustarde, MD
Ophthalmologist, Will Seawell, MD
Orthopedic surgeon, Aitken Bach, MD
Otolaryngologist, Addie Noyes, MD
Pathologist, Topsy Dewar, MD
Pediatrician, Bebe Chalmers, MD
Plastic surgeon, Faye Swift, MD
Proctologist, Seymour Bottoms, MD
Psychiatrist, Izzy Batty, MD
Pulmonologist, Les Coffman, MD
Radiologist, A. Katz Canning, MD
Rheumatologist, Daley Payne, MD
Sports medicine specialist, Will Wynne, MD
Urologist, Nita Sample, MD

S. Spence Meighan, MD
Portland, Oregon

ELEVATED ESR IN STROKE

To the Editor:

I read the report by Tharakan et al[1] with keen interest. The authors state that "high ESR, raised IgM, and presence of monoclonal IgM-λ band on electrophoresis established the diagnosis of Waldenström's macroglobulinemia [WM]," and that "bone marrow showed few atypical plasma cells." The bone marrow aspiration is often hypocellular with WM, but the bone marrow biopsy reveals hypercellularity and is extensively infiltrated with lymphoid cells. The number of plasma cells are increased and normal marrow component decreased.[2] Also, 75% to 80% of IgM protein in WM are of κ-light chain, contrary to that seen in the patient in the present report who had IgM-λ chain.[2,3]

Based on the information given in the report, it is impossible to diagnose WM in the patient. The data are indistinguishable from an IgM myeloma. WM and IgM myeloma follow a similar clinical course. WM is often associated with hepatosplenomegaly, while IgM myeloma is associated with lytic bone lesions. The light chain isotope may have an impact on survival. Patients with IgM myeloma secreting λ-light chains, such as the one in the present report, have significantly shorter overall survival than those secreting κ-light chains.[2,3]

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References

1. Tharakan JKJ, Jacob PC, Mohiyaddin A. Elevated ESR in a stroke patient [letter]. J Fam Pract 1995; 41:512–3.
2. Kyle RA. Multiple myeloma and other plasma cell disorders. In: Hoffman R, Benz EJ, Shattil SJ, Furie B, Cohen HJ, Silberstein LE, eds. Hematology: basic principles and practice. 2nd ed. New York, NY: Churchill Livingstone, 1995:1354–74.
3. Longo DL. Plasma cell disorders. In: Wilson JD, Braunwald E, Isselbacher KJ, Petersdorf RG, Martin JB, Fauci AS, Root RK, eds. Principles of internal medicine. 12th ed. New York, NY: McGraw-Hill, 1991:1410–7.

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

This patient has no evidence of osteolytic lesions, and his serum calcium is normal. Bone marrow biopsy showed few plasmacytoid lymphocytes, in addition to atypical plasma cells. His serum viscosity was elevated and he had neurological symptoms and signs. All these features occurring together in a patient with elevated IgM favors the diagnosis of WM more than that of IgM myeloma *(Thomas JK. Macroglobulinemia. In: Earnest B, Marshall AL, Barry S, Thomas JK, eds. Williams hematology. 5th ed. New York, NY: McGraw-Hill, 1995:1127–32.)*. It is well known that the light chain of IgM is constituted by kappa in 75% and lambda in the remaining 25% of WM patients. Therefore, elevation of IgM lambda chain, as seen in this patient, does not argue against the diagnosis of WM.

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