Is prostate-specific antigen (PSA) screening indicated for any subgroup of men?

EVIDENCE-BASED ANSWER

Although African American men, men with a first-degree relative with prostate cancer (CaP), and older men constitute higher-risk subgroups, no well-designed randomized controlled trials are available that show PSA testing to improve mortality or quality of life for these or any other groups of men.[1] A trend toward detecting more localized cancers and a possible decreasing mortality rate from CaP in all men may be related to PSA testing, lead-time bias, or both. (Grade of recommendation: C, based on inadequate reference standards and an unclear clinical decision rule.)

EVIDENCE SUMMARY

The value of screening with PSA in any population is uncertain. This issue will remain controversial at least until the first of 2 well-designed randomized controlled trials reports results in 2004.[2,3] However, higher-risk subgroups merit special attention. Screening the 3 groups mentioned above would improve the positive predictive value of PSA, but crucial data to determine whether this will improve outcomes are lacking. Using average estimates, if 3300 African American men (aged 50 to 65 years) were screened, 100 would have cancer. After subsequent radical prostatectomy, 1 screened man would die from the procedure, 60 would become impotent, and 20 would be incontinent.[4]

If current therapies for localized therapy do not decrease morbidity or mortality, screening higher-risk groups merely puts them at increased risk for potentially harmful interventions. Biopsies cannot reliably predict which cancers will progress and which will lie indolent. The 30% incidence of CaP on autopsy means that more people die *with* CaP than *from* it. Using estimates of the prevalence and natural history of the disease, decision analyses report varying years saved by screening compared with watchful waiting (ranging from a gain of 2.5 quality-adjusted life years (QALYs) to an actual decrease in QALYs, depending primarily on the rate of progression to metastatic disease and efficacy of treatment.[5,6] Another decision analysis, using quality-of-life measures, concluded that men would favor screening only if the prevalence of CaP were greater than any current estimate.[7] Since the mean expected survival at age 70 is slightly more than 10 years, PSA screening for men 70 years or older to detect cancers with a 10-year survival rate of approximately 90% makes little sense.

RECOMMENDATIONS FROM OTHERS

The US Preventive Services Task Force in 1996 recommended against performing routine screening, stating that there was fair evidence to exclude the test. The American Cancer Society (ACS) and the American Urological Association (AUA) recommend that PSA be offered annually, beginning at patient age 50, to men with a life expectancy of more than 10 years. The same recommendation extends to younger African American men (age 40 years [AUA] or 45 years [ACS]) and men with 1 (AUA) or 2 (ACS) affected first-degree relatives. The American College of Physicians and the American Academy of Family Physicians (AAFP) recommend a discussion of the benefits and harms of screening, diagnosis and treatment, and individualizing the decision to screen.

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CLINICAL COMMENTARY

When ordering a PSA test, note the last time the patient ejaculated. Ejaculation within 48 hours may elevate PSA levels, as may prostatitis, urinary retention, and prostatic massage, although a digital examination does not. Finasteride and herbal remedies such as saw palmetto can lower PSA levels.

In practice, it is helpful to follow the guidelines from the AAFP, which advises counseling the patient about the known risks and uncertain benefits of the test (http://www.familydoctor.org/healthfacts/361/).

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Each month, the members of The Family Practice Inquiries Network answer questions with the best available evidence in a concise, reader-friendly format. Each answer is based on a standard minimum search of resources, including MEDLINE, the Cochrane Library, and InfoRetriever, and is then reviewed by 2 peer reviewers. Each item is graded for the level of evidence (http://cebm.jr2.ox.ac.uk/docs/levels.html). The collected Clinical Inquiries answers can be found at http://www.jfponline.com or http://www.fpin.org. Details of the search strategies used for developing the Clinical Inquiries answers can be found on the *JFP* Web site at www.jfponline.com.

What is the best treatment for impacted cerumen?

EVIDENCE-BASED ANSWER

Docusate sodium given 15 minutes before irrigation is most effective for facilitating cerumen removal during a single office visit. (Grade of recommendation: B, based on head-to-head trials that lacked irrigation-only arms.) Treatment with 5% urea hydrogen peroxide in glycerol is most effective for facilitating cerumen removal between office visits, reducing the amount of irrigation needed. (Grade of recommendation: B-, based on lack of rigorous randomization, lack of definition of cerumen impaction, and only one placebo-controlled trial.) No trials recommending one strategy over another exist.

TABLE

EVIDENCE SUMMARY FOR IN-OFFICE CERUMEN REMOVAL

Agent Studied	N	Setting	Results
Docusate sodium and TP (Cerumenex) (3)	50	ED	Docusate more effective than TP (NNT ~2) Without irrigation: equal effectiveness
TPO and olive oil (4)	67	Outpatient	Equal effectiveness; TPO needed less irrigant
TPO and carbamide peroxide (5)	80	Unknown	TPO more effective

All studies were randomized and double-blinded, included patients of all ages, and found no adverse effects. ED denotes emergency department; N, number of patients studied; NNT, number needed to treat; TP, triethanolamine polypeptide; TPO, trietnandamine polypeptide oleate.

EVIDENCE SUMMARY

In studies that evaluated onetime softening in the office to ease or eliminate the need for irrigation, a presoak with docusate sodium (Colace) was most effective, although its effects were not compared with those of water.[1] Both triethanolamine (Cerumenex) and olive oil were the next most effective treatments.[2] Carbamide peroxide (Debrox, Murine Ear) was least effective (see Table and Table W1*).[3] In 1 small, carefully done study of ear candles, more candle wax was added than earwax was removed in the 8 ears tested.[4]

In studies that evaluated 3 to 14 days of home ceruminolysis to obviate or ease irritation, 5% urea hydrogen peroxide in glycerol was most effective.[5] Sterile water, sodium bicarbonate in glycerol, 2% acetic acid (VoSoL, Domeboro), ethylene oxide polyoxypropylene (Addax), and acpd (arachis oil, chlorobutanol, p-dichlorobenzene [Cerumenol]) were all of equal efficacy.[6-8] All were more effective than no treatment. Notably, 5% of cases resolved completely and 26% became moderately clear after 5 days of no treatment (Table W2*).[6]

No direct comparisons exist of same-day in-office softening followed by irrigation or disimpaction against home softening followed by irrigation and manual disimpaction. Until more placebo-controlled data are generated, recommendations should be based on relative safety and on the direct comparison trials within each strategy. Complications of irrigation include otitis externa, perforation, canal trauma, pain, cough, tinnitus, vertigo, otitis media, treatment failure, and time consumption.[9] Harm done by wax softeners is minimal.

*Tables W1 and W2 are available on the *JFP* Web site, http://www.jfponline.com.

RECOMMENDATIONS FROM OTHERS

The *5-Minute Clinical Consult 2001* recommends Cerumenex followed by irrigation in office. *Clinical Evidence 2001* reports that clinically accepted standards are ear syringing and manual disimpaction, although no randomized clinical trials addressing benefit or harm have been conducted. No specific recommendation made because of inconsistent, unclear study design or undefined terms (eg, impaction).

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Literature search by Caryn Scoville, MLS

CLINICAL COMMENTARY

I have had success with various agents in different practice settings. Overall, treatment appears to depend more on the patient's ability to cooperate, the size and hardness of the cerumen plug, and irrigation technique than on which agent is used. Patients who prove unable to tolerate irrigation on an initial visit do best with a home softening agent followed by irrigation at a later date. I recommend referral for cerumen removal when a perforated tympanic membrane is suspected.

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What is the most effective treatment for acute low back pain?

EVIDENCE-BASED ANSWER

Nonsteroidal anti-inflammatory drugs (NSAIDs) are more effective than placebo for pain relief in patients with acute low back pain (grade of recommendation: A). There is no consistent evidence that NSAIDs are more effective than acetaminophen (grade: D). Muscle relaxants are effective for short-term relief of acute low back pain (grade: A), but there is no added benefit when they are used in combination with NSAIDs (grade: B). Advice to remain active speeds recovery compared with short-term bed rest (grade: A). There is no consistent evidence that epidural steroid injections are effective for acute low back pain (grade: D). Spinal manipulation or back exercises are no more effective than medications alone (grade: B).

EVIDENCE SUMMARY

A recent systematic review found NSAIDs more effective than placebo for pain relief in patients with acute low back pain.[1] There is conflicting evidence regarding the effectiveness of NSAIDs versus acetaminophen or narcotics alone.

According to another systematic review, there is no difference in pain intensity at 3 weeks' follow-up between active patients and patients for whom variable lengths of short-term bed rest for treatment of acute low back pain have been prescribed.[2] No consistent conclusions could be drawn regarding the effectiveness of epidural steroid injections for acute low back pain.[3] This analysis was limited by the inclusion of all studies of patients with acute low back pain regardless of the underlying etiology and presence or absence of radicular symptoms. A systematic review of 12 trials reported inconsistent results of facet joint, epidural, and local corticosteroid injections; however, only 1 studied epidural injections.[4]

Cyclobenzaprine is more effective than placebo, according to a recent systematic review summary (odds ratio for improvement by day 10: 4.7 [2.7-8.1 95% CI]; number needed to treat [NNT] = 2.7 [2.0-4.2 95% CI]).[5] There is no statistically significant difference in pain relief between patients using NSAIDs alone versus those using both NSAIDs and muscle relaxants.[1] The use of muscle relaxants was associated with more adverse reactions than placebo (53% vs 28%; number needed to harm [NNH] = 4).

Performance of specific flexion or extension exercises was no more effective than analgesics.[6] In a randomized, controlled trial (n = 321) to assess the effectiveness of formal physical therapy for acute low back pain, patients referred to physical therapy were more satisfied with their care than were patients given handouts on back exercises, even though disability and pain scores were unchanged.[7] Evidence is insufficient to support the use of spinal manipulation in patients with acute low back pain because of serious design flaws in the trials.[8]

RECOMMENDATIONS FROM OTHERS

The Institute for Clinical Systems Improvement recommends conservative treatment such as cold and heat therapies and over-the-counter anti-inflammatory or analgesic drugs as the first line of treatment. Patients with acute low back pain should stay active and continue routine activity within the limits permitted by the pain.[9] The Agency for Health Care Policy and Research states that acetaminophen is the treatment of choice for low back pain and that NSAIDs should be used sparingly because of their potential side effects. Manipulation is safe and effective in the first month in patients who do not have radicular symptoms.[10]

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CLINICAL COMMENTARY

My recent practice has been to greatly liberalize the use of opiates in the acute situation. With close phone and office follow-up, it is possible to do better than to provide reassurance alone. That the patient does not have surgical disease and will eventually improve should not obscure our obligation to relieve the acute pain. Muscle relaxants such as cyclobenzaprine may function primarily as a sedative, although they too may have a useful role.

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