Abstracts

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Can Hematuria Be A Predictor As Well As A Symptom Or Sign of Bladder Cancer?

Gary D. Friedman; Peter R. Carroll; Eugene V. Cattolica; Robert A. Hiatt. Cancer Epidemiology, Biomarkers & Prevention 1996;5:993-996.

In a case-control study of urinalysis screening in the prevention of death from bladder cancer, hematuria was present in a higher proportion of cases than controls as long as five or six years before the diagnostic evaluation that led to the diagnosis of bladder cancer. In a separate cohort study data base that permitted the follow-up of 1046 persons with a physician's diagnosis of hematuria, 11 cases of bladder cancer were diagnosed more than two (mean 7.4) years after the hematuria diagnosis (4.3 cases expected; age-sex standardized morbidity ratio, 2.5; 95% confidence interval, 1.3-4.5). Bladder cancer was ruled out initially by cystoscopy in 8 of the 11 cases. Although we cannot be certain that preexisting bladder cancer or bladder cancer risk factors did not cause the bleeding, we hypothesize that hematuria can be a predictor as well as a manifestation of bladder cancer, based on a tendency for bladder mucosa with premalignant changes to bleed. The implications for screening and clinical practice remain to be determined.

Risk Factors For Hip Fracture In Men. Hip Fracture Study Group

Grisso JA; Kelsey JL; O'Brien LA; Miles CG; Sidney S; Maislin G; LaPann K; Moritz D; Peters B. American Journal of Epidemiol 1997;145:786-93

To identify risk factors for hip fracture in men, the authors conducted a case-control study involving 20 hospitals in Philadelphia, Pennsylvania, and 14 hospitals in Kaiser Permanente Medical Care Program of Northern California. The 356 enrolled men had been admitted with a radiologically confirmed first hip fracture. The 402 control men either were from the Philadelphia area or were members of Kaiser Permanente and were frequency matched to the cases by age and ZIP code or telephone exchange. Information on potential risk factors was obtained through personal interviews. Men in the lowest quintile of body mass had a greatly increased risk of hip fracture compared with men in the heaviest quintile (odds ratio (OR) 3.8, 95% confidence interval (CI) 2.3-6.4). Premorbid lower limb dysfunction was associated with increased risks for hip fracture (OR 3.4, 95% CI 2.1-5.4). Increased risks were also observed with the use of cimetidine (OR 2.5, 95% CI 1.4-4.6) and psychotropic drugs (OR 2.2, 95% CI 1.4-3.3). Smoking cigarettes or a pipe increased the risk of hip fracture, and this association was independent of body mass. Finally, previous physical activity was markedly protective. Factors thought to affect bone density as well as factors identified as risk factors for falls appear to be important determinants of the risks of hip fracture in men. Physical activity may be a particularly promising preventive measure for men. Additional studies of the use of cimetidine on osteoporosis and osteoporotic fractures are indicated.

A Clinical Trial of the Effects of Dietary Patterns On Blood Pressure

Lawrence J. Appel, MD, MPH; Thomas J. Moore, MD; Eva Obarzanek, PhD; William M. Vollmer, PhD; Laura P. Svetkey, MD, MHS; Frank M. Sacks, MD; George A. Bray, MD; Thomas M. Vogt, MD, MPH; Jeffrey A. Cutler, MD; Marlene M. Windhauser, PhD, RD; Pao-Hwa Lin, PhD; and Njeri Karanja, PhD; for the DASH Collaborative Research Group. New England Journal of Medicine 1997;336:1117-24.

Background

It is known that obesity, sodium intake, and alcohol consumption influence blood pressure. In this clinical trial, Dietary Approaches to Stop Hypertension, we assessed the effects of dietary patterns on blood pressure.

Methods

We enrolled 459 adults with systolic blood pressures of less than 160 mm Hg and diastolic blood pressures of 80 to 95 mm Hg. For three weeks, the subjects were fed a control diet that was low in fruits, vegetables, and diary products, with a fat content typical of the average diet in the United States. They were then randomly assigned to receive for eight weeks the control diet, a diet rich in fruits and vegetables, or a "combination" diet rich in fruits, vegetables, and low-fat diary products and with reduced saturated and total fat. Sodium intake and body weight were maintained at constant levels.

Results

At base line, the mean (±SD) systolic and diastolic blood pressures were 131.3±10.8 mm Hg and 84.7±4.7 mm Hg, respectively. The combination diet reduced systolic and diastolic blood pressure by 5.5 and 3.0 mm Hg more, respectively, than the control diet ($P<0.001$ for each); the fruits-and-vegetables diet reduced systolic blood pressure by 2.8 mm Hg more ($P<0.001$) and diastolic blood pressure by 1.1 mm Hg more ($P=0.07$) than the control diet. Among the 133 subjects with hypertension (systolic pressure, >140 mmHg; diastolic pressure, >90 mmHg; or both), the combination diet reduced systolic and diastolic blood pressure by 11.4 and 5.5 mm Hg more, respectively, than the control diet ($P<0.001$ for each); among the 326 subjects without hypertension, the corresponding reductions were 3.5 mm Hg ($P<0.001$) and 2.1 mm Hg ($P=0.003$).

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Conclusions

A diet rich in fruits, vegetables, and low-fat dairy foods and with reduced saturated and total fat can substantially lower blood pressure. This diet offers an additional nutritional approach to preventing and treating hypertension.

Calcium Intake and Fracture Risk: Results from the Study of Osteoporotic Fractures

Cummings RG; Cummings SR; Nevitt MC; Scott J; Ensrud KE; Vogt TM; Fox K. American Journal of Epidemiol 1997;145(10):926-34.

The relation between dietary calcium, calcium, and vitamin D supplements and the risk of fractures of the hip (n=332), ankle (n=210), proximal humerus (n=241), wrist (n=467), and vertebrae (n=389) was investigated in a cohort study involving 9,704 US white women aged 65 years or older. Baseline assessments took place in 1986-1988 in four US metropolitan areas. Dietary calcium intake was assessed at baseline with a validated food frequency questionnaire. Data on new nonvertebral fractures were collected every 4 months during a mean of 6.6 years of follow-up: identification of new vertebral fractures was based on comparison of baseline and follow-up radiographs of the spine done a mean of 3.7 years apart. Results were adjusted for numerous potential confounders, including weight, physical activity, estrogen use, protein intake, and history of falls, osteoporosis, and fractures. There were no important associations between dietary calcium intake and the risk of any of the fractures studied. Current use of calcium supplements was associated with increased risk of hip (relative risk - 1.5, 95% confidence interval 1.1-2.0) and vertebral (relative risk=1.4, 95% confidence interval 1.1-1.9) fractures: concurrent use of Tums antacid tablets was associated with increased risk of fractures of the proximal humerus (relative risk-1.7, 95% confidence interval 1.3-2.4). There was no evidence of a protective effect of vitamin D supplements. Although a true adverse effect of calcium supplements on fracture risk cannot be ruled out, it is more likely that our findings are due to inadequately controlled confounding by indications for use of supplements. In conclusion, this study did not find a substantial beneficial effect of calcium on fracture risk.

Physician-Patient Communication: The Relationship with Malpractice Claims Among Primary Care Physicians and Surgeons

Wendy Levinson, MD; Debra L. Roter, DrPH; John P. Mullooly, PhD; Valeria T. Dull, PhD; Richard M. Frankel, PhD. JAMA 1997;277:553-559.

Objective

To identify specific communication behaviors associated with malpractice history in primary care physicians and surgeons.

Design

Comparison of communication behaviors of "claims" vs. "no-claims" physicians using audiotapes of 10 routine office visits per physician.

Settings

One hundred twenty-four physician offices in Oregon and Colorado.

Participants

Fifty-nine primary care physicians (general internists and family practitioners) and 65 general and orthopedic surgeons and their patients. Physicians were classified into no-claims or claims (≥ 2 lifetime claims) groups based on insurance company records and were stratified by years in practice and specialty.

Main Outcome Measures

Audiotape analysis using the Roter Interaction Analysis System.

Results

Significant differences in communication behaviors of no-claims and claims physicians were identified in primary care physicians but not in surgeons. Compared with claims primary care physicians, no-claims primary care physicians used more statements of orientation (educating patients about what to expect and the flow of a visit), laughed and used humor more, and tended to use more facilitation (soliciting patients' opinions, checking understanding, and encouraging patients to talk). No-claims primary care physicians spent longer in routine visits than claims primary care physicians (mean, 18.3 vs. 15.0 minutes), and the length of the visit has an independent effect in predicting claims status. The multivariable model for primary care improved the prediction of claims status by 57% above chance (90% confidence interval, 33%-73%). Multivariable models did not significantly improve prediction of claims status for surgeons.

Conclusions

Routine physician-patient communication differs in primary care physicians with vs. without prior malpractice claims. In contrast, the study did not find communication behaviors to distinguish between claims vs. no-claims surgeons. The study identifies specific and teachable communication behaviors associated with fewer malpractice claims for primary care physicians. Physicians can use these findings as they seek to improve communication and decrease

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malpractice risk. Malpractice insurers can use this information to guide malpractice risk prevention and education for primary care physicians but should not assume that it is appropriate to teach similar behaviors to other specialty groups.

Randomized Controlled Trial of a Low Animal Protein, High Fiber Diet in the Prevention of Recurrent Calcium Oxalate Kidney Stones

Robert A. Hiatt; Bruce Ettinger; Bette Caan; Charles P. Quesenberry, Jr.; Debra Duncan; John T. Citron. American Journal of Epidemiology 1996;144:25-33.

Low protein diets are commonly prescribed for patients with idiopathic calcium nephrolithiasis, who account for >80% of new diagnoses of kidney stones. This dietary advice is supported by metabolic studies and epidemiologic observational studies but has not been evaluated in a controlled trial. Using 1983-1985 data from three Northern California Kaiser Permanente Medical Centers, the authors randomly assigned 99 persons who had calcium oxalate stones for the first time to a low animal protein, high fiber diet that contained approximately 56-64 g daily of protein, 75 mg daily of purine (primarily from animal protein and legumes), one-fourth cup of wheat bran supplement, and fruits and vegetables. Intervention subjects were also instructed to drink six to eight glasses of liquid daily and to maintain adequate calcium intake from dairy products or calcium supplements. Control subjects were instructed only on fluid intake and adequate calcium intake. Both groups were followed regularly for up to 4.5 years with food frequency questionnaires, serum and urine chemistry analysis, and abdominal radiography; and they were urged to comply with dietary instructions. In the intervention group of 50 subjects, stones recurred in 12 (7.1 per 100 person-years) compared with 2 (1.2 per 100 person-years) in the control group; both groups received a mean of 3.4 person-years of follow-up (p=0.006). After adjustment for possible confounding effects of age, sex, education, and baseline protein and fluid intake, the relative risk of a recurrent stone in the intervention group was 5.6 (95% confidence interval 1.2-26.1) compared with the control group. The authors conclude that advice to follow a low animal protein, high fiber, high fluid diet has no advantage over advice to increase fluid intake alone.

Continuation of Postmenopausal Hormone Replacement Therapy: Comparison of Cyclic Versus Continuous Combined Schedules

Bruce Ettinger; De-Kum Li; Raymond Klein. Menopause 1996;3(4):185-9.

Discontinuation of hormone replacement therapy (HRT) is much more common than what is reported in randomized, double-blind clinical trials. Our purpose in this retrospective study, using a prescription database, was to compare the continuation rate among women who took cyclic combination therapy adding progesterone to estrogen (CYC-PERT) or continuous combined estrogen progestin therapy (CC-PERT). The study subjects were 1,532 women, ≥45 years old, who initially filled index prescriptions for 0.625 mg conjugated estrogens. They were divided into two groups (CYC-PERT = 644, CC-PERT = 888) on the basis of coprescribed medroxyprogesterone. We found that for all women initiating therapy, 35-40% did not return for a refill and 76-81% stopped therapy within 3 years. Those prescribed CC-PERT initially were more likely to stop than those prescribed CYC-PERT (rate ration [RR] = 1.20; 95% confidence interval [CI] = 1.06-1.35). Adjustments for age, year of starting medication, cost of medication, and prescriber specialty did not affect the difference in discontinuation between the two regimes (RR = 1.18, 95% CI = 1.04-1.34). We conclude that the likelihood of women continuing HRT beyond 3 years of initiation is low. Furthermore, compared with CYC-PERT users, those receiving CC-PERT have a slightly higher probability of discontinuation. Efforts should be made to understand why three quarters of women beginning HRT will stop it long before it can provide major long-term benefit.

"We found that for all women initiating therapy, 35-40% did not return for a refill and 76-81% stopped therapy within 3 years. "

Identification of Children At Risk for Lead Poisoning: An Evaluation of Routine Pediatric Blood Lead Screening in an HMO-Insured Population

Mary N. Haan; MPH, DrPH; Marianne Gerson, MD, MPH; B. Anne Zishka, BA, MSW. Pediatrics 1996;97:79-83.

Objectives

To estimate the prevalence of elevated blood lead levels in children receiving well-care checkups; and to evaluate the effectiveness of certain key risk factors in detecting children at higher risk for elevated blood lead levels.

Design

Cross-sectional study.

Setting

Two facilities of the Kaiser Permanente Medical Care Program (KPMCP) health maintenance organization (HMO), Northern California region.

Patients

Six hundred thirty-six children, aged 12 to 60 months, who were seen at four KPMCP facilities in two subregions for a well-care checkup from September 1991 through August 1992.

Interventions

Blood samples were collected from each child and analyzed for lead content. Participating parents completed a questionnaire that included questions recommended by the Centers for Disease Control and Prevention (CDC) about the child's and the parent's lead exposure via home, workplace, and hobbies.

Results

Ninety-six percent of the children had blood lead levels under 10 mg/dL. Blood lead levels declined with increasing age and were higher for black children compared with whites. Age of residential housing, mother's education, and residence in an old house with peeling paint had low sensitivity and positive predictive value for identifying children with blood lead levels over 10 mg/dL.

Conclusion

Universal routine screening for elevated blood lead levels in children in an employed, HMO-insured population is not warranted on grounds of prevalence. Responses to CDC questions do not effectively identify high-risk children in this population.

"Overnight hospitalization after transurethral prostatectomy is an appropriate, safe and cost-effective pathway of patient care that is readily applicable to any urology practice."

The Safety of Overnight Hospitalization for Transurethral Prostatectomy: A Prospective Study of 200 Patients

Roderic J. Cherrie; Roberta A. Young and Eugene V. Cattolica. Journal of Urology 1997;157:531-533.

Purpose

Our goal was to determine the appropriateness, safety and cost-effectiveness of catheter removal and hospital discharge 1 day after transurethral prostatectomy.

Materials and Methods

A prospective study of 200 patients who underwent transurethral prostatectomy during a 23-month period was done. On the morning of postoperative day 1 catheters were removed from 156 patients (78%) who had normal vital signs, adequate urine output, absence of clots and acceptable character of the catheter effluent.

"The findings included a forty-five percent decrease in sick care office visits, a fifty-five percent decrease in acute care visits, and a sixty-seven percent decrease in the number of hospitalizations after the allergy evaluation."

Results

Among the 156 patients whose catheters were removed 4 of 5 went home on postoperative day 1. Two of these patients were rehospitalized within 30 days, as were 2 others whose catheters were removed later. Overall length of patient stay was 1.6 days.

Conclusions

Overnight hospitalization after transurethral prostatectomy is an appropriate, safe and cost-effective pathway of patient care that is readily applicable to any urology practice.

Cost Effectiveness of an Allergy Consultation in the Management of Asthma

Westley CR; Spiecher B; Starr L; Simons P; Sanders B; Marsh W; Comer C; Harvey R. Allergy Asthma Proc, 1997 Jan-Feb;18(1):15-8

In a large Denver HMO, a retrospective study of asthma management was reviewed. Seventy moderate to severe asthmatic patients' charts were reviewed through April 1994. All patients admitted to the study had to be followed for at least 1 year by a primary care physician before the allergy evaluation (AE) and for at least one year of follow-up (F/U) after the AE. All patients had at least two acute care (ER) visits and/or one hospitalization before the AE. All primary care, AE, and F/U were done by staff physicians in the Kaiser Permanente system. The findings included 1) Forty-five percent decrease (308 to 169) in the number of sick care office visits (P=0.0001); 2) fifty-five percent decrease (266 to 118) in acute care visits (P= 0.0001); 3) sixty-seven percent decrease (34 to 11) in the number of hospitalizations after the AE (P=0.001); 4) average hospital days before AE were four days and after AE, 2.5 days; 5) estimated cost saving of $145,500, or $2,100 per patient.

Identification of Neonatal Deaths in a Large Managed Care Organization

Escobar GJ; Gardner MN; Chellino M; Fireman B; Verdi J; Yanover M. Paediatr Perinat Epidemiol 1997 Jan;11(1):93-104

The neonatal (< 28 days) mortality rate (NMR) is one of the most commonly employed maternal and child health epidemiological measures. It is also being employed in quality measures ("report cards") used to assess the performance of health care organizations. The objectives were to (1) develop methods for the rapid quantification of the neonatal mortality rate in a multi-hospital system, the Kaiser Permanente Medical Care Program's Northern California Region (KPMCP NCR), (2) develop methods for generating facility-specific rates and case lists, and (3) ascertain the capture rates of the information sources available to us. Potential neonatal deaths were identified in the KPMCP NCR for the 1990 and 1991 calendar years from 3 sources: (1) clerical searches of local facility records, (2) electronic searches of the KPMCP NCR hospitalization database, and (3) linking KPMCP electronic birth records to death certificate tapes. The medical records of all infants identified through these methods were reviewed. The neonatal mortality rate was calculated in three ways: (1) including all livebirths, (2) excluding births weighing < 500 g, and (3) adjusting for prematurity by increasing the follow-up period in preterm babies (these babies were included as

neonatal deaths if they died up to 40 weeks corrected age + 27.9 days). A total of 352 records out of 64 469 birth records in the KPMCP NCR were reviewed. If one includes babies < 500 g, the neonatal mortality rate was 3.72/1000 livebirths; if these babies are excluded, the rate was 3.05/1000. Adjusting for prematurity increased these rates to 3.91/1000 and 3.24/1000, respectively. Accurate quantification of the neonatal mortality rate in a multi-hospital system requires the use of multiple information sources. Use of a single source can lead to varying rates of over- or under-estimation. It is possible to employ our methodology for both research and operational purposes.

"The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy."

Dr. Martin Luther King, Jr.