Long-range survey of BCG vaccine administered to medical students

BCG vaccine was administered for tuberculosis (TB) prophylaxis in 1952-1953 to the 1953 graduating class of the University of Wisconsin Medical School, of which I was a member. This was in keeping with the institutional practice of that time. Unfortunately, student health records were kept for only 10 years at that time. Intrigued by the widespread employment of BCG for the treatment of bladder cancer in particular, as well as other experimental studies utilizing BCG for various malignancies, last year I conducted a survey of my surviving classmates. Of the 41 survivors (37 males and 3 females) at that time, 40 returned the questionnaire (97.5%). Ages ranged from 80 to 86 years, with a median of 81 years. Thirty-two respondents had received BCG vaccine; 6 did not because they were PPD; 2 said they were absent or overlooked. Eighteen respondents resided in Wisconsin; the others were scattered nationally in 13 other states.

None of the 40 respondents has had proven tuberculosis or BCG sequelae. One female developed a pulmonary infiltrate during internships, after a patient with advanced TB coughed in her face during a physical examination. She remained acid-fast bacilli (AFB) smear and culture negative, however. No class member has had bladder or renal malignancy. One male, a BCG recipient, had undergone a nephrectomy for suspected cancer, but the lesion proved to be benign. One female and 1 male had a history of breast carcinoma, requiring both surgery and chemotherapy; neither has had a recurrence in over 10 years. Three class members, all BCG recipients, had a history of prostatic cancer, controlled with therapy and clinically stable. Two class members had had melanomas excised, without recurrence. One male, a BCG recipient, had undergone a limited bowel resection over 10 years ago, with no recurrence to date. There were no reported cases of lung cancer, lymphoma, blood dyscrasia, brain tumors or skeletal malignancies among the 40 survey respondents. No immunologic disease was reported. Most of our deceased classmates (34) died of cardiovascular disease. Two deaths resulted from trauma. Three classmates had succumbed to prostatic cancer, 1 from pancreatic cancer, and 1 from leukemia. One classmate died from Lou Gehrig’s disease; 1 allegedly had Alzheimer’s disease; 1 committed suicide.

Unfortunately, small sample size and a deficit of pertinent records preclude any statistical analysis. Among our deceased classmates, for example, we don’t know who received BCG and who did not. Precise causes of death were another formidable obstacle; the state of Wisconsin does not permit access to death certificates without next-of-kin permission. Overall, the intriguing aspect of this limited survey is the seemingly low incidence of malignant disease in a group of octogenarian physicians who received BCG vaccine over 50 years ago, suggesting modulation of our immune systems has occurred. This is in keeping with recent studies linking BCG and tuberculosis in complex immune processes (eg, Th1/Th2 responses),1,2 a discussion of which is beyond the scope of this study. Still other factors (eg, genetic), could have been operative as well.

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References

WHIO unites key stakeholders in effort to improve health care quality, safety, affordability

The Wisconsin Health Analytics Exchange, created by the Wisconsin Health Information Organization (WHIO), provides a unique opportunity for everyone in Wisconsin. Doctors, hospitals, patients, and employers all may benefit from the voluntary multi-stakeholder efforts that resulted in 1 of only 4 All Payer Claims Databases (APCD) in the country as designated by the Commonwealth Fund.

Wisconsin has always been a leader in health care innovation and has had among the lowest number of uninsured residents. Once again we are at the forefront in successfully bringing together health care stakeholders with a common commitment to facilitate improvement in quality, safety, and affordability.

The Wisconsin Collaborative for Healthcare Quality has done a terrific job in collecting clinical information on quality process measures and some outcomes measures so that medical groups can compare themselves with other groups. In 2004, the members of the Collaborative recognized they did not have the necessary information to measure efficiency of provider services. Employers facing ever-increasing medical costs also supported efforts to measure efficiency.

By combining efforts and significant resource commitments, the Wisconsin Medical Society,
We are fortunate in Wisconsin that all of the participants in WHIO, many with competing interests, have been able to work together to create the Wisconsin Health Analytics Exchange. Its use in the coming years should help us further improve the delivery of health care in Wisconsin. The working relationships developed in the process have established a base to tackle other challenging health care issues in our state.

Larry Rambo
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Chair, WHIO Board of Directors
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