To the Editor:

Drs. Lytle and Loop refer to our recent article on coronary artery bypass grafting in patients 35 years of age or less. In their own study of 107 patients who underwent coronary artery bypass grafting at age 35 years or less, they also noted a poor (53 percent) event-free survival rate at ten years following surgery. Considering that this event-free survival occurs in a group of patients who are now less than 45 years of age, this seems like a poor postoperative result, similar to that which we found in our own series. Again, a 15 percent mortality rate ten years following coronary bypass graft surgery in patients also now 45 years of age or younger seems to be a poor postoperative result, similar to that in our own series.

Drs. Lytle and Loop noted that survival and event-free survival are adversely influenced by elevated serum cholesterol levels and diabetes. They did not, however, include a control group of middle-aged and elderly patients, as we did in our study. Our study showed that, although the young patients might have an increased level of hyperlipidemia compared to the general population, there was basically very little difference in the number of risk factors or the type of risk factors present in the young population vs matched middle-aged and elderly patients with similar levels of coronary disease. We therefore concluded that the type or number of risk factors were not the reason for the difference in long-term event-free survival between the various age groups, but that age alone seemed to be the more critical variable.

We do not yet have a long-term series of patients in this age group who have had internal mammary artery grafts but, following the recommendations of Drs. Lytle and Loop for both this age group and more advanced age groups, we now utilize internal mammary artery grafts for all young patients. Thus, we agree with Drs. Lytle and Loop that when coronary artery bypass grafting is indicated in this population, mammary artery grafts should be used for the major vessels whenever technically feasible.

David J. Cohen, M.D., F.C.C.P.
Division of Cardiothoracic Surgery
University of Wisconsin Clinical Sciences Center
Madison

Reprint requests: Dr. Cohen, 600 Highland Avenue H4/348, Madison, WI 53792

Relative Orientation of the Ciliary Central Pair in the Immotile Cilia Syndrome

To the Editor:

Ramat et al (Ches t 1986; 90:138-40) report that a diagnosis of Kartagener's syndrome was made in a newborn infant by means of electron microscopy of a "nasal biopsy". Confusion arises from the use of the term "nasal biopsy", since use of a microcurette usually allows only a nasal scraping, not biopsy sampling. The importance of this distinction relates to whether the orientation of the cilia can be used as a criterion for diagnosis of immotile cilia syndrome. (Orientation is determined by the plane of the central tubules within each cilium.) It is recognized that nasal scraping disturbs the relative orientation of one cilium to another, whereas a true biopsy retains this orientation. Since the authors report that all of their controls did retain the orientation of the cilia, I wonder whether they did in fact perform biopsies, or whether their method of scraping the nasal mucosa retains ciliary orientation. If so, they should clarify precisely the method used for obtaining the samples of cilia.

Jack Lieberman, M.D., F.C.C.P.,
Professor of Medicine,
UCLA School of Medicine, Sepulveda

Our article1 included a discussion about the importance of neonatal diagnosis of immotile cilia syndrome rather than a detailed description of the technology used. However, interrogations and comments of Dr. Lieberman evoke the following comments.

Kartagener's syndrome (KS) is a hereditary disease involving the classic triad of sinusitis, bronchiectasis and situs inversus;3,4 the complete clinical picture as an etiopathologic entity was recognized by Kartagener in 1933. As bronchiectasis and sinusitis are absent in the neonatal age group, immotile or dysmotile cilia syndrome is the preferred term; the diagnosis of KS is a clinical diagnosis and is not based on electronmicroscopic findings. Our samples of nasal epithelium were obtained in a minimally invasive fashion frequently described in literature.5,6 The technique consists of a gentle brushing of the surface of the lower nasal turbinate with a microcurette with central sharp edges or Hartmann ear forceps. This involves little discomfort for newborns or children and a biopsy with preservation of the basal structures can be obtained. A superficial brushing is never used and would indeed, as mentioned by Dr. Lieberman, completely disturb the relative orientation of one cilium to another. The lower nasal turbinate can be approached in repeat biopsies to provide consistency and reproducibility of sampling.8 Friday et al9 recommend that 50 to 100 cilia with proper orientation should be studied before a diagnosis of immotile cilia syndrome is rendered. At rest, the cilium is a cylindrical structure arising from the apical portion of the cell where it is attached to a basal body.9 Basal feet with ciliary roots are examined to validate uniform orientation, thus permitting the use of our technique following in proper orientation of the cilia and interpretation of the axis formed by the ciliary tubule. The highly-ordered configuration of ciliary structures, including the central microtubular doublet and peripheral pairs, can be recognized in the obtained specimen. They are completely adequate for ultrastructural evaluation.

Joseph Ramet, M.D., and
Jeanine Byloos, M.D.,
Departments of Pediatrics and Otolaryngology,
Academic Hospital,
Vrije Universiteit Brussel,
Brussels, Belgium

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