increase the yield from transbronchial biopsy of focal lesions, the yields from diffuse disease processes, such as sarcoidosis and lymphangitic carcinoma, are approximately the same between fluoroscopy and no fluoroscopy. This finding is further supported by a study published in 1988 involving 250 bronchoscopic procedures performed in patients with acquired immunodeficiency syndrome or human immunodeficiency virus seropositivity who had diffuse roentgenographic findings. In this study, the safety and the yield were favorable when transbronchial biopsies performed without fluoroscopy were compared to biopsies done with fluoroscopy. This study and ours together provide approximately 500 recent cases in which the fluoroscopy/no fluoroscopy question has been examined, and the concept of transbronchial biopsy without fluoroscopy has been shown to be safe and effective in diffuse disease. The American Thoracic Society deleted the recommendation for routine fluoroscopy with transbronchial biopsy in its official position paper on guidelines for fiberoptic bronchoscopy in adults.

Finally, we concur with the authors' suggestion that additional studies may be beneficial when defining what the practice standard for bronchoscopy should be in North America. Only thorough meaningful interchange leading to consensus can such a standard be defined.

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The opinions or assertions contained herein are the private views of the authors and are not to be construed as reflecting the views of the Department of the Army or the Department of Defense.

REFERENCES

To the Editor:

We read with interest about the ACCP survey. However, the survey did not address topical anesthesia, which in our experience, has been a difficult part of the procedure for many patients. The gagging, coughing, and taste of the anesthesia spray often increase the patient's anxiety level before the procedure has begun. We initially did a limited telephone survey on topical anesthesia preferences for bronchoscopy at teaching institutions throughout the country and found that there was no consensus on the drug of choice, although lidocaine and benzocaine were the topical anesthetics used most often. In the editorial on the bronchoscopy survey, Prakash and Stubbs state that "the majority of bronchoscopists use lidocaine," although we could find no recent data to confirm this impression. A review of the literature showed that both lidocaine and benzocaine are safe, well tolerated, and widely used, although there is no literature directly comparing the two drugs, especially with regard to taste and patient preference.

We compared benzocaine 20% spray (Hurricane; Beutlich) and lidocaine 4% delivered by atomizer to examine patients' taste

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Bronchoscopy in North America

The ACCP Survey

To the Editor:

We have read the articles by Prakash et al., which appeared in the December 1991 issue of Chest, and we commend them for their involved efforts with the ACCP bronchoscopy survey. Our comments specifically refer to the authors' recommendation that fluoroscopy be utilized to identify the "maximally abnormal" areas prior to transbronchial biopsy. While our data confirm that fluoroscopy will

REFERENCES
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To the Editor:

We are grateful to Dr Kimmel for his interest in our article. Our intent was to remind surgeons of the feasibility of the atrial approach in this group of patients when they set out to close posttraumatic VSDs. All our patients were young adults (aged 18 to 28 years) without significant medical history. These four were the only patients who had surgical closure for posttraumatic VSD in the period from 1983 through 1989.

We did not intend to define indications for surgical closure of posttraumatic VSD, but (as stated) we believe that the presence of a shunt smaller than 2:1 is not an indication for surgical closure. Our patients were asymptomatic, and we employed cardiac catheterization to confirm our echocardiographic/Doppler findings. For patients with a shunt greater than 2:1, we advise early closure based on the belief that the natural history in these patients will mirror that of patients with congenital VSD who survive infancy. It is, of course, possible for patients to be symptomatic with a shunt of less than 2:1; in these patients, cardiac failure, not the shunt, is the indication for closure. If the patients had been followed up for a longer period, it is likely that they would have developed symptoms. Given the patient population suffering penetrating cardiac trauma, regular surveillance is usually difficult.

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To the Editor:

We read with interest about the ACCP survey. However, the survey did not address topical anesthesia, which in our experience, has been a difficult part of the procedure for many patients. The gagging, coughing, and taste of the anesthesia spray often increase the patient's anxiety level before the procedure has begun. We initially did a limited telephone survey on topical anesthesia preferences for bronchoscopy at teaching institutions throughout the country and found that there was no consensus on the drug of choice, although lidocaine and benzocaine were the topical anesthetics used most often. In the editorial on the bronchoscopy survey, Prakash and Stubbs state that "the majority of bronchoscopists use lidocaine," although we could find no recent data to confirm this impression. A review of the literature showed that both lidocaine and benzocaine are safe, well tolerated, and widely used, although there is no literature directly comparing the two drugs, especially with regard to taste and patient preference.

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preference and the effect of the topical anesthetic on the bronchoscopy procedure. After obtaining informed consent, we enrolled 50 nonintubated patients who were scheduled for a transnasal bronchoscopy. Patients either were premedicated with meperidine (Demerol, Sanofi Winthrop), 50 mg given intramuscularly, and atropine, 0.4 mg given intramuscularly, or received no premedication. Time to loss of gag reflex and any complications from the anesthesia or the procedure were noted. Immediately after the procedure, patients were asked to evaluate the taste of the topical anesthesia on a scale of 1 to 4 (1 = pleasant; 2 = mildly unpleasant; 3 = unpleasant; 4 = extremely unpleasant) and to evaluate the overall impression of the procedure on a scale of 1 to 5 (1 = not unpleasant; 2 = slightly unpleasant; 3 = unpleasant; 4 = very unpleasant; and 5 = intolerable).

In the lidocaine group, 64 percent (15/25) found the taste to be unpleasant or extremely unpleasant, in the benzocaine group, 28 percent (7/25) found the taste to be unpleasant or extremely unpleasant (p<0.05). We found a correlation between the taste of the anesthetic and acceptance of the bronchoscopy procedure (p<0.05). There was no significant difference in time to loss of gag reflex, and no complications were noted in either group.

In summary, we conclude that benzocaine 20% and lidocaine 4% are both effective and safe topical anesthetics. More patients in the lidocaine group found the taste to be unpleasant or extremely unpleasant, as compared with the benzocaine group. We found a significant relationship between the taste of the anesthetic and patient tolerance of the bronchoscopy procedure. Further study of the effectiveness of topical anesthesia and its impact on the overall bronchoscopy experience may be valuable. We would be interested in seeing topical anesthesia practices included in the next ACCP bronchoscopy survey.

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To the Editor:

Since 1981 I have personally performed almost 1,000 therapeutic bronchoscopies using rigid and fiberoptic bronchoscopes, the CO₂ laser, the YAG laser, cautery, and photodynamic therapy. From this experience, there are some conclusions in the article by Drs Prakash and Stubbs in the December 1991 issue of Chest I wish to challenge.

Bronchoscopy is not performed often, rather than too often. We repeatedly see patients with almost total obstruction of their bronchi who have normal chest x-ray films. At least two or three times a year I have to dissuade patients from seeing their physicians because they have been followed up with chest radiography and never underwent bronchoscopy. Patients with colon resections are routinely followed up with barium enemas or colonoscopy to detect early recurrence. Supine films of the abdomen are not adequate. Similarly, chest films are not adequate for follow-up of endobronchial disease. It is our experience that endobronchial tumors migrate down the path of least resistance and obstruct more proximal bronchi so that the distal lung becomes nonfunctional although there is no tumor in it. This is true of bronchial stumps as well as primary tumors. If the tumor is found early and is confined to the distal bronchus before it migrates by using either the YAG laser or photodynamic therapy, we can delay the increasing disability. We have carried patients with endobronchial disease recurrence in their stumps for over five years with this technique.

The statement that treating small lesions in the periphery has no benefit is not true in our experience. As stated above, these tumors are going to get larger and migrate centrally. We have patients who, four and five years after photodynamic therapy to stage I lesions in their distal bronchi, remain free of tumor as verified by bronchoscopy and radiography.

From having used both the rigid and the flexible bronchoscope, singularly and combined, we believe that the rigid bronchoscope cannot be used to treat anything except tumors in the main-stem bronchi or trachea. We cannot get to the upper lobes without the fiberoptic scope, but we repeatedly see patients with tumors in their upper lobes projecting into the intermediate bronchi. Resecting just the tumor in the main bronchus without destroying the tumor at the upper lobe orifice leads to rapid reocclusion of the main bronchus.

In the past, we have felt that the YAG laser treatment was indicated for massive bleeding from tumors in the main bronchi. Recently, however, we have been using photodynamic therapy as early as 40 min after injection of the sensitizer to treat severely dyspneic and/or bleeding patients. The photodynamic therapy stops the bleeding, and tumor can be removed at the end of the photodynamic therapy by mechanical means. Airway patency is reestablished, and bleeding is stopped.

A recent case summarizes some of the above points: The patient was referred to us on the respirator because of massive bleeding; his hemoglobin level had dropped from 15 mg/dl to 9 mg/dl. We injected dihematoaphorin ether, 2 mg/kg, and took him to the operating room 40 min later, where we administered photodynamic therapy through a fiberoptic bronchoscope through his endotracheal tube. The bleeding stopped, and we removed the bulk of the tumor at the end of the procedure. He was extubated in the recovery room. At the time of this writing, two months since that episode, he has recently finished external radiation therapy. His Karnofsky performance status is 80, and he does not use oxygen. This patient had been seen by a physician for two months before his bleeding episode occurred. At that time he was told he had “walking pneumonia” and was given antibiotics. When he did not get any better, he went to see another physician and was sent for chest radiography, which was interpreted as normal. A month later he presented at a local emergency room coughing up cupfuls of blood. Bronchoscopy disclosed a massively bleeding tumor in the left main bronchus with almost complete obstruction. Bronchoscopy will be performed again in a few weeks to see if there is any residual tumor. If there is, he will be retreated with photodynamic therapy.

I think it is self-serving to state that those who use the fiberoptic scope do not know how to use the rigid scope.

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