the pericardium and was related to the bleeding, which was expressed as hemoptyis.

**Communications** 8,127 5,069 11,097 15,630

**REFERENCE**

1 Jain AJ. Strickman NE, Hall RJ, Ort DA. An unusual complication of left ventricular pseudoaneurysm: hemoptyis. Chest 1988; 93:429-31


**To the Editor:**

It is with interest that we read Dr. Goldberg's letter. Although finding a pseudoaneurysm is common, the development of hemoptyis secondary to fistula formation is very rare. The observation that CT scan can be used to identify a patient with ventriculobronchial fistula is very important since many patients now undergo ventricular aneurysm repair and may be at risk for this rare complication.

**Norma Boone Goldberg, M.D., F.C.C.P.,
Director, Pulmonary Rehabilitation,
VAMC North Chicago; and
Marc Van Drenen, M.D.,
Chief, Diagnostic Radiology,
Hines VA Hospital/Loyola Medical School,
Hines, IL**

**REFERENCES**

1 Jain AJ. Strickman NE, Hall RJ, Ort DA. An unusual complication of left ventricular pseudoaneurysm: hemoptyis. Chest 1988; 93:429-31


**To the Editor:**

We have read with great interest the article of Strange et al entitled "Lidocaine Concentrations in Bronchoscopic Specimens" (Chest 1988; 93:547-49). From a recent study we have some additional findings on which we would like to comment.

In this study, we used 2 percent commercial lidocaine solution as a local anesthetic and a Machida FBS 6TL bronchoscope. Lidocaine concentrations were measured using a Hewlett-Packard 5890A gas chromatograph with flame ionization detector.

Five (10.2 percent) of the total 49 bronchoscopic secretion aspirates contained lidocaine concentrations greater than 8,000 µg/ml (between 8,010 to 12,580 µg/ml), which is thought to have sufficient density for bacteriocidal effect.1 Three (6.1 percent) other aspirates contained more than 3,000 µg/ml (between 3,436 to 6,296 µg/ml), which might have a bacteriostatic effect.1,4

These collected secretion aspirates were divided into two groups, one within a 10 min interval group from the final lidocaine administration (early aspirates group) and another collected after 10 min (late aspirates group). Seven (24.1 percent) of the total 29 early aspirates contained lidocaine concentrations greater than 3,000 µg/ml; however, only one (5.0 percent) aspirate of the total 20 late aspirates showed more than 3,000 µg/ml. Unfortunately, similarity of these two variances were not proven, so statistical analysis was impossible. Also, no relationship was proven between lidocaine concentrations in the specimens and the total usage of lidocaine solutions during bronchoscopy.

**Lidocaine Concentrations in Endobronchial Aspirates during Flexible Fiberoptic Bronchoscopy**

**To the Editor:**

We have read with great interest the article of Strange et al entitled "Lidocaine Concentrations in Bronchoscopic Specimens" (Chest 1988; 93:547-49). From a recent study we have some additional findings on which we would like to comment.

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**Table 1—Effect of Lidocaine Dilution Technique Method (DTM) in a FFB Channel (in vivo study)**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Aspirates, before DTM</th>
<th>Aspirates, after DTM</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8,127</td>
<td>819</td>
<td>7,308</td>
</tr>
<tr>
<td>2</td>
<td>11,995</td>
<td>6,549</td>
<td>5,446</td>
</tr>
<tr>
<td>3</td>
<td>12,798</td>
<td>5,041</td>
<td>7,757</td>
</tr>
<tr>
<td>4</td>
<td>11,097</td>
<td>3,787</td>
<td>7,310</td>
</tr>
<tr>
<td>5</td>
<td>11,298</td>
<td>6,220</td>
<td>5,090</td>
</tr>
<tr>
<td>6</td>
<td>15,630</td>
<td>2,902</td>
<td>12,728</td>
</tr>
<tr>
<td>7</td>
<td>17,853</td>
<td>6,467</td>
<td>11,386</td>
</tr>
</tbody>
</table>

Mean ± SD 8,143 ± 2,882

DTM denotes that before sampling, gradual injection of 2 ml saline solution into the FFB channel and disposal was performed immediately with a suction machine. FFB is abbreviated with flexible fiberoptic bronchoscope. Lidocaine dosages in the airway of the patients ranged from 3.5 to 15 ml. Statistical analysis before and after DTM proved significant differences between mean values (p<0.001).

Lidocaine dilution technique method (DTM) was used in the fibroscope channel (gradual injection of 2ml saline solution into the channel) and disposal was performed immediately with a suction machine; we then studied in vitro and in vivo samples. Statistical analysis of each study before and after DTM was performed and proved significant differences between mean values. In vitro study results are shown in Table 1. Total administered dosages of a 2 percent solution of lidocaine into the airway of the patients, at the time of DTM procedure, ranged from 3.5 to 15 ml.

According to above results, we think endobronchial aspirates from the involved areas should be taken after a 10 min interval from final lidocaine administration. DTM just immediately before sampling is also recommended for obtaining a lower lidocaine density specimen.

**REFERENCES**


**Response of Nasal (and Possibly Bronchial) Vasculature to Physical Exercise**

**To the Editor:**

We read with great interest the symposium article by Dr.