In fact, they declare that their work is "the first demonstration of the positive effect of the drug on respiratory exchanges." In one of the first publications on almitrine, in 1974, Neukirch et al tested 72 obstructive, hypoxicemic, and hypercapnic patients. Thirty-six served as control subjects and the other 36 were treated with 400 mg of almitrine. The authors had already underlined that the increase in PaO$_2$ after oral administration of almitrine is more sensitive and significant than the decrease in PaCO$_2$.

Since then, many works have been published by different groups showing the improvement in PaO$_2$ after administration of almitrine, which is often independent of ventilation. Several have used Wagner's technique to show this action. Others have used radioto isotopic methods. Some other authors have shown that by maintaining ventilation at a constant level, almitrine administration improved oxygenation without changing the FCO$_2$. Thus, the action of almitrine on the V/Q ratios is a well-documented phenomenon. The exact mechanism remains to be explained, but this, as Kipling once said, is another story.

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ECG Infusion Artifact

To the Editor:

Constant oscilloscopic display of electrocardiographic rhythm and rate is standard in the management of critically ill patients.

A 43-year-old man admitted to our Special Care Unit to rule out myocardial infarction manifested an abnormal ECG rhythm while constant infusion of insulin was being administered utilizing an IVAC 230 drop counter (Fig 1). The abnormal rhythm was related solely to the infusion controller, as a standard bedside electrocardiogram revealed normal sinus rhythm (Fig 2).

Intravenous infusion pumps and controllers are fast becoming the most widely used electrically operated devices in the hospital environment. Functionally, most new infusion devices available today pose no hazard to the patient in almost all combinations of operating modes. A safety hazard that can be seen with infusion devices relates to a piezoelectric signal that can be generated by some devices when polyvinyl chloride tubing is suddenly compressed. In some patients with low electrocardiographic voltages and high skin resistance, this piezoelectric signal may either mimic or mask a host of possible cardiac events. The signal is manifested along with the electrocardiogram as a function of the pump or controlling mechanism, tubing parameters, infusion rate, and type of solution infused. This type of interference may sometimes be corrected by judicious skin preparation and repositioning of monitoring electrodes. Although the monitor used has a common mode rejection ratio ≥110 decibels, the piezoelectric potentials generated by the pinching of the IV tubing in the controlling mechanism still manifested themselves on the ECG tracing.

The abnormal rhythm strip manifested by this patient with high skin resistance is due purely to the infusion controller. Patients in whom an abnormal rhythm appears on the oscilloscopic tracing must have a 12-lead ECG to document its presence and determine the type of rhythm. This abnormal rhythm may not be seen when an ECG is obtained using limb clamps and suction cups, as the larger surface area of these electrodes significantly reduces skin resistance in comparison to the much smaller disposable adhesive electrodes used for continuous monitoring.

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A New, Fully Protected Biopsy Scraper for Transbronchial Lung Biopsy

To the Editor:

For the purpose of performing safer and easier transbronchial lung biopsy, our group has recently developed a new biopsy scraper. The scraper is covered by polyethylene (PE) or Teflon tube; diameter 2.4 mm, total length 1,080 mm. The tip size segment (biopsy segment) is 2.5×1×1.7 mm. Under remote control, the tip segment can be extended and retracted into the PE tube. It can be stopped in either

![Figure 1. The biopsy scraper (lower); close-up of tip segment when extended (upper right) and when blade is raised (upper left).](image)

![Figure 2. The natural size of biopsied specimen obtained by the scraper (left), and by an ordinary forceps (right).](image)