Table 1—Effects of Nasal CPAP

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>CPAP Before</th>
<th>CPAP After</th>
<th>PO2</th>
<th>PO2</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCP/AIDS</td>
<td>47</td>
<td>47</td>
<td>85</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>PCP/AIDS</td>
<td>7.5</td>
<td>48</td>
<td>271</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>PCP/AIDS</td>
<td>5</td>
<td>47</td>
<td>65</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Cardiogenic edema</td>
<td>10</td>
<td>54</td>
<td>101</td>
<td>43</td>
<td>40</td>
</tr>
<tr>
<td>PCP/lymphoma</td>
<td>7.5</td>
<td>49</td>
<td>61</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>ARDS</td>
<td>5</td>
<td>42</td>
<td>83</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>DIP</td>
<td>5</td>
<td>44</td>
<td>70</td>
<td>38</td>
<td>38</td>
</tr>
</tbody>
</table>

Caring for Mechanically Ventilated Patients at Home

To the Editor:

People requiring prolonged home mechanical ventilation have utilized personal caregivers to augment self-care and family efforts since the polomyelitis era. They can be used by the older child in the self-directing family, by the self-directing adult, and by the adult who in the opinion of the professional staff of a vendor agency can be safely cared for by personal caregivers with periodic nursing supervision. Models exist abroad, and in New York, where ventilator users recruit, hire, train, and manage such caregivers in a quality, cost-effective, client-maintained program. The personal caregiver is allowed to provide tracheostomy care, suction the tracheostomy, and check ventilator settings.

The ACCP Respiratory Care Section promoted non-credentialed attendants as alternative caregivers for ventilator-assisted individuals. The ACCP reviewed the positive 30-year experience of Goldwater Memorial Hospital and Concepts of Independence. The ACCP is "highly supportive of the concept of Personal Care Attendants for supplementation of long-term home care for prolonged mechanical ventilator patients." They "can provide the means for chronic ventilator patients to have independent living and family centered care," and accomplish "a remarkable degree of cost savings at a time when we are looking for ways to bring down the costs of medical care."

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Ophthalmologic Complications in Primary Pulmonary Hypertension

To the Editor:

We followed a patient with a well documented case of primary pulmonary hypertension (PPH). All the criteria for the diagnosis of PPH of the thrombotic type were fulfilled. During the 25 months before heart-lung transplantation, hemodynamic monitoring exhibited a continuous rise in pulmonary hypertension (Table 1).

Nineteen months after the diagnosis of PPH, the patient noticed episodes of temporary blurred vision, mainly in the right eye. At first these episodes lasted a few minutes, but just before transplantation they persisted several hours. Ophthalmologic examination showed extremely dilated conjunctival vessels and discrete chemosis. The cornea, anterior chamber, iris and lens were normal. Intraocular tension varied from 12 to 16 mm Hg for the right eye and from 24 to 32 mm Hg for the left eye. Right eye funduscopy findings consisted of a normal optic disc and turgescence of the retinal veins. During asymptomatic periods, chorioretinitis was in place, but there existed some discrete abnormal pigmentation on the posterior pole. During visual troubles, macular retinas presented exudative detachment which disappeared in the following days. Left eye funduscopy examination showed excavated optical disc, discrete dilated veins and some retinal hemorrhages. This patient thus had retinal and choroidal venous stages which were responsible for the episodes of macular exudative detachment (more frequently of the

Table 1—Evolution of Pulmonary Artery Pressure (PAP)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>PAP Systolic (mm Hg)</td>
<td>85</td>
<td>105</td>
<td>116</td>
</tr>
<tr>
<td>PAP Diastolic (mm Hg)</td>
<td>40</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>PAP Mean (mm Hg)</td>
<td>56</td>
<td>72</td>
<td>79</td>
</tr>
</tbody>
</table>
right eye), and glaucoma of the left eye by raising the episcleral venous pressure.

Seven months after heart-lung transplantation, the patient is in good shape and the ophthalmologic complaints have been completely relieved. Ophthalmologic examination is nearly normal. Only minor glaucoma of the left eye persists.

This letter emphasizes the deleterious effects of prolonged venous hypertension on the eyes in a patient with PPH of the thrombotic type.

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Pleural Involvement in Hairy Cell Leukemia Response to Recombinant Interferon-Alpha

To the Editor:

Hairy cell leukemia is almost invariably characterized by splenomegaly and cytopenia. Complications include infection and bleeding, as well as autoimmune syndrome and paraproteinemia.1

We report a patient with hairy cell leukemia who presented with respiratory complaints due to specific pleural involvement (a complication not previously described) and who benefitted from treatment with recombinant interferon-alpha.

A 75-year-old man with a ten-year history of hypertensive and ischemic cardiopathy presented with sudden onset of dyspnea and right knee pain, together with low-grade fever. Physical examination disclosed a large right pleural effusion, right knee arthritis and a palpable spleen 3 cm below the left costal margin. White blood cell count was 1,800/cu mm, with 46 percent lymphocytes and 3 percent hairy cells. Pleural fluid was hypercellular (1,000 cells/cu mm) with 56 percent lymphocytes. Pleural and bone marrow biopsy revealed massive infiltration with hairy cells. Cultures of pleural and knee fluid were sterile. Interferon-alpha 2b was initiated at a daily dose of 4 million units subcutaneously. Gradual improvement was noted, with regression of dyspnea and pleural effusion, as well as splenomegaly. Cytopenia improved; white blood cell count was 3,100/cu mm at three months, with 34 percent lymphocytes and no hairy cells. Interferon-alpha 2b was continued at the same dose on a three-times-weekly regimen.

The indication for splenectomy, generally considered the treatment of choice in hairy cell leukemia, is very controversial. Increasing experience with interferon-alpha therapy suggests that splenectomy can, in some cases, be delayed or proposed as second-line therapy.2-3 Specific involvement of the pleural space by hairy cells is very uncommon, although it is a well-known complication of other lymphoid hematologic malignancies. In our patient's case, poor general status and severe respiratory impairment at presentation did not permit splenectomy. Interferon-alpha 2b led to marked improvement of his general and hematologic condition, as well as reduction of the pleural involvement. This case emphasizes the value of medical therapy in severe cases of hairy cell leukemia.

Francois Raffi, M.D.;
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Control of Dyspnea in Advanced Cancer Patients

To the Editor:

Dyspnea is a symptom which seriously affects quality of life in advanced cancer patients.1 They alone can describe the intensity and characteristics of such a symptom which, if not relieved, tends to create a state of anxiety, discomfort and a feeling of imminent death which is bound to worsen in time.2

In the majority of cases, dyspnea presents itself associated with pain.3 In our experience, only 20 percent of cancer patients not treated with opioids have dyspnea without pain.

We verified the validity of a treatment used for the control of dyspnea in very advanced patients without physical pain who were cared for at home. The treatment consists of the administration of two drugs, morphine and chlorpromazine, used at the effective minimum dosages (10 mg of morphine hydrochloride i.m. and 25 mg of chlorpromazine); the former reduces the perception of hypoxia and hypercapnia in high respiratory centers,4 while the latter acts on the control of psychomotor agitation, and nausea and vomiting due to morphine, on the depression of respiratory centers and on the emotional dissociation from the environment.5-6

Clinical evaluations were carried out by health staff and subjective perceptions were referred by patients; invasive methods of evaluation, which are in contrast with the philosophy of palliative care in the advanced phases of the disease, have been excluded.7

Patients' subjective perceptions have been recorded by means of VAS8 before treatment and after 15', 30', 60', 150' and 180'. At the same time respiratory frequency, heart rate, arterial blood pressure, peripheral cyanosis, posture and lucidity have been assessed through the Mini-Mental State Examination.9

A group of five patients who were no longer responsive to specific anticancer treatments and did not benefit from the use of bronchodilators, analgetics and cardiotonics, were administered the two drugs with satisfactory subjective and objective results.

Besides the validation of such a drug association, the authors are now considering carrying out a study on the separate action of these two drugs, but wonder if it is ethically correct to experiment with the two drugs separately, considering that when associated, they brilliantly solved a dramatic situation in patients already exhausted beyond the limits of endurance.

The authors also question whether their prevalence data on pain-dyspnea association in advanced cancer patients are comparable to those of other centers.

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