As regards the onset of pectus, our patient had been aware of this abnormality since approximately 12 years of age, but she denies having had any medical checkup or follow-up while in her native country. Since her immigration to the United States > 9 years ago, she had not had any medical evaluation until her hospitalization last year, when she came to our attention for the first time.

Employing noninvasive, bilevel pressure ventilation (inspiratory pressure of 12 cm) and low-flow oxygen, we were able to improve her hypercapnia and hypoxemia while maintaining a balanced arterial pH. Higher levels of inspiratory pressures may be appropriate if the result from lower pressures is unsatisfactory. Patients with acute-on-chronic respiratory acidosis develop metabolic alkalosis, and to see if the need for supplemental oxygen can be obviated.

To the Editor:

We wish to challenge the statement in the review of antithrombotic agents for use in coronary artery disease by Cairns et al1(p241S) that, compared with unfractionated heparin, the treatment of unstable coronary artery disease with enoxaparin produces significant cost savings only in hospitals in the United States and not in the hospitals of other countries. In fact, a number of peer-reviewed articles have demonstrated that treatment of this condition with enoxaparin produces significant cost savings in hospitals in countries other than the United States, including Canada, South America, the United Kingdom, and France.

Based on the Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q-Wave Coronary Events (ESSENCE) trial,2 use of enoxaparin instead of unfractionated heparin resulted in a significant in-hospital and 30-day cost saving in US patients (Table 1).3 Similar results were seen at 30 days in the French4 and Argentina/Uruguay5 subgroups of the ESSENCE trial. Further, a Canadian predictive decision-analysis model confirmed that enoxaparin was the least costly strategy for the majority of 30-day composite end point values.6 Finally, based in part on the continued advantage of enoxaparin over unfractionated heparin at 1 year follow-up,7 both UK8 and Canadian9 cost-effectiveness analyses predicted impressive cost savings with enoxaparin. Thus, in addition to greater clinical efficacy observed in the ESSENCE trial and recently confirmed in other studies,10–12 use of enoxaparin led to both lower administrative costs (less use of IV sets, IV infusion pumps, and nursing time) and decreased resource utilization (fewer cardiac catheterizations, coronary revascularizations, shorter length of hospital stay). Despite the modestly higher drug acquisition cost, these advantages translated into observed cost savings with enoxaparin as compared to unfractionated heparin in several different countries. In addition, it should be noted that all the studies mentioned have only considered direct costs and have not included indirect costs (such as loss of work time, and increased costs incurred by patients), and thus it is possible to speculate on further savings to society were these costs analyzed.

The consistent results from these analyses lead us to conclude that the treatment of unstable coronary artery disease with enoxaparin is less costly than treatment with unfractionated heparin, not only in the United States but also other clinical practice settings and countries in the world. We suggest that an erratum should be published, and that the results from these studies should be considered when the American College of Chest Physician guidelines for antithrombotic therapy are next updated.

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REFERENCE


Table 1—Overview of Cost Savings Observed in Health Economic Analyses of the ESSENCE Trial

<table>
<thead>
<tr>
<th>Source</th>
<th>Time Horizon of Study</th>
<th>Country, Year of Costing</th>
<th>Cost Saving per 100 Patients, US$*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark et al1</td>
<td>30 d</td>
<td>United States, 1996</td>
<td>117.200</td>
</tr>
<tr>
<td>Detournay et al4</td>
<td>30 d</td>
<td>France, 1996</td>
<td>142.625</td>
</tr>
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<td>Bozovich et al3</td>
<td>30 d</td>
<td>Argentina/Uruguay, year not reported</td>
<td>29.000</td>
</tr>
<tr>
<td>Balen et al6</td>
<td>30 d</td>
<td>Canada, 1999</td>
<td>2.951</td>
</tr>
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<td>O'Brien et al9</td>
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**Table**

**Enoxaparin Treatment in Unstable Coronary Artery Disease**

**International Cost Savings**

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The study of Mark et al. was based on the 655 US patients with available economic data, out of the total of 936 US patients in the Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q-Wave Coronary Events (ESSENCE) trial. The overall cost reduction associated with enoxaparin use was statistically significant at 30 days among the US patients. Amongst the total study cohort, there was a trend toward reduced costs, but it was not statistically significant. These data underlay our statement that “an economic assessment of the ESSENCE results showed significant cost savings in US hospitals, but not across those in other countries with the cost saving mainly attributable to fewer cardiac catheterization procedures.”

Fox and Goodman, in their letter, refer to economic analyses of non-US national subpopulations drawn from the ESSENCE trial, the results of which are consistent with the nonsignificant trend toward cost savings with enoxaparin use reported in the article to which we referred.

The results of which are consistent with the nonsignificant trend toward cost savings with enoxaparin use reported in the article to which we referred. Although the outcome data for the TIMI 11B trial (references 10, 11, and 12 in their letter all relate to this trial) are similar to those in the ESSENCE trial, we are not aware of any published procedural data or economic analyses based on this trial.

To the Editor:

We read with interest the review by Werner, entitled “Status Asthmaticus in Children,” that appeared in the June 2001 issue of CHEST. In this nonsystematic review, we found that important statements are not evidence based.

Werner examined the data and rationale for the use of corticosteroids (CCS) in children with acute asthma. On the basis of an incomplete literature search, the author stated, “There does not appear to be a role for aerosolized steroids in acute severe asthma in children.” As a result, all the evidence about the use of inhaled CCS in acute asthma was ignored. Most of this is new literature (mid-1990s), and its quality is very high. Therefore, Edmonds et al. conducted a systematic review of the literature with meta-analysis to determine the benefit of inhaled CCS for the treatment of patients with acute asthma managed in the emergency department. On the basis of six randomized controlled trials (six adult, two pediatric), the authors found that patients treated with inhaled CCS were less likely to be admitted to the hospital (odds ratio, 0.33; 95% confidence interval, 0.17 to 0.64); additionally, they demonstrated a significant improvement in FEV1 at 2 h of treatment.

In the section on anticholinergics, Werner appropriately stated that “anticholinergics are now an integral part of the treatment of acute asthma in children.” However, a “recommended dose” of 250 to 500 µg at 6-h intervals does not seem acceptable. On the contrary, there is strong evidence that supports the use of high and increasing doses of inhaled anticholinergics (ipratropium bromide) added to β2-agonists in the treatment of children and adults with acute asthma. Examination of the protocols reveals that repeated doses of nebulized ipratropium bromide were usually administered as 250 to 500 µg per dose every 20 min or four puffs (80 µg) every 15 to 20 min via metered-dose inhaler and spacer. So, routine emergency department treatment of acute severe asthma involves repeated doses of β2-agonists and ipratropium bromide administered over the first hour.

Werner recommended the use of “high-flow supplemental oxygen”; the assertion that “in the absence of preexisting chronic