enzymes, and low platelet count (HELLP) were present in 33 of our patients. Although these 33 patients may have had coexistent hypertension, that condition was the reason for ICU admission in only 5 patients. Our obstetric unit has equipment and staff to provide care to noncomplicated cases of hypertension without ICU admission, explaining this observation. Although there was no significant difference in the incidence of pulmonary edema between patients who did and did not undergo emergent cesarean section, pulmonary edema was the most common reason for ICU admission in our study. A large, earlier study had also shown that pulmonary edema is a common occurrence in obstetric patients admitted to ICU. We are surprised by the absence of any case of pulmonary edema in the study by Olarra et al.

The reported mortality rate of obstetric patients admitted to ICU ranges between 0% and 36%. The mortality rate reported by Olarra et al is within this range. Heterogeneity of the patient population and differences in disease severity may account for the differences in the reported mortality rates of critically ill obstetric patients. We agree with Olarra et al on the need for future studies to identify the risk factors for obstetric-associated critical illness, in order to decrease the associated morbidity and mortality.

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REFERENCES

3 Graham SG, Laxton MC. The requirement for intensive care support for the pregnant population. Anaesthesia 1989; 44:581–584

Strength of Evidence for Low-Molecular-Weight Heparin

To the Editor:

In the Sixth ACCP Consensus Conference on Antithrombotic Therapy, Geerts et al recommend (evidence 1A) the use of low-molecular-weight-heparin (LMWH) for prevention of venous thromboembolism in patients with ischemic stroke and impaired mobility. As reported, the recommendation is based on the results of three randomized control trials; one of those trials compared LMWH with unfractionated heparin and yielded no evidence on the disadvantages of nonprevention. The results of the two smaller-sized placebo-controlled trials are in disagreement. We think that this recommendation lacked a clear-cut connection to the evidence.

In support of our opinion, a meta-analysis by Bath et al assessed the efficacy and safety of treatment with LMWH in patients with acute ischemic stroke. They reported that treatment with LMWH reduced the risk of deep vein thrombosis (relative risk reduction [RRR], 45%; number needed to prevent [NNP] 40) and pulmonary embolism (RRR, 63%; NNP, 80), but it increased the risk of major extracranial bleeding (RRR, 53%; number needed to damage [NND], 80) and probably of intracranial hemorrhage (odds ratio, 1.77; confidence interval, 0.95–3.3), with no change in mortality. This study does not support the routine use of LMWH. However, it might be useful in patients with additional risk factors and greater benefit/risk ratios. Furthermore, most patients with stroke are receiving aspirin, and the baseline risk of venous thromboembolism is likely to be downgraded as a benefit of aspirin treatment. Thus, according to our present knowledge, treatment with LMWH can hardly be considered a routine, evidence-based recommendation for prevention of venous thromboembolism in patients with acute ischemic stroke.

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To the Editor:

Dr. Alonso and colleagues suggest that the use of low-molecular-weight heparin (LMWH) should not have been given a grade 1A recommendation as one of the thromboprophylaxis options in patients with ischemic stroke by the Sixth American College of Chest Physicians (ACCP) Consensus Conference on Antithrombotic Therapy. I certainly agree that more studies of thromboprophylaxis in stroke patients are needed. However, based on the available literature, our grade 1A recommendation for the use of LMWH (or low-dose heparin) stands.

Four randomized trials have compared prophylactic LMWH to either placebo or to low-dose unfractionated heparin (LDUH) in stroke patients. In the two LMWH vs placebo trials, prophylaxis with LMWH was associated with a 35% relative risk reduction for deep venous thrombosis (DVT). In the two LMWH vs LDUH studies, the use of LMWH was associated with a 37% relative risk reduction for DVT.

Alonso and colleagues use the meta-analysis by Bath et al to support their view. This study identified a DVT rate in stroke patients not receiving prophylaxis that is high enough to warrant prophylaxis (37%). Unfortunately, this review pooled studies of
MLWH prophylaxis with those of danaparoid prophylaxis (clearly not a LMWH) and pooled trials of thromboprophylaxis with studies in which therapeutic doses of LMWH were used in the treatment of stroke rather than in the prevention of DVT after stroke. Furthermore, this analysis included a study with an unblinded control group and excluded studies that compared more than one antithrombotic agent. The review of the American College of Chest Physicians, however, restricted the inclusion of trials to those that were published and used prophylactic doses of LMWH. We did not exclude studies that compared more than one antithrombotic agent, but we did exclude studies with an unblinded control group.

Alonso and colleagues also suggest that aspirin may provide sufficient prevention against venous thromboembolism to preclude the need for specific thromboprophylaxis. The use of aspirin is widespread in these patients and, based on extensive data, is recommended (grade 1A by the American College of Chest Physicians) as secondary prophylaxis for all patients with noncardioembolic ischemic stroke who do not have contraindications.7 Both the International Stroke Trial and the Chinese Acute Stroke Trial found that aspirin reduced the incidence of recurrent stroke but not of pulmonary embolism.8,9 We believe that aspirin plus an anticoagulant prophylactic agent should be used in these patients if there are no contraindications.1,7

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REFERENCES

5 Harenberg J, Schomaker U, Flosbach CW. Enoxaparin is superior to unfractionated heparin in the prevention of thromboembolic events in medical patients at increased thromboembolic risk [abstract]. Blood 1999; 94(suppl):390a

Octreotide in the Treatment of Chylothorax

To the Editor

We read with interest the article by Denoo et al1 in the March 2001 issue of CHEST. We would like to make two comments, and we would like to share our experience with octreotide administration in one of our patients suffering chylothorax.

First, significant reduction of chest drainage had already occurred after the initiation of total parenteral nutrition (TPN)1 and before administration of octreotide. The doxycycline infusion (with the resulting clot in the tube and the necessity of a second tube thoracotomy) may have altered the evolution of chest drainage. It is difficult to evaluate the results of treatment with octreotide, which was started 2 days after the insertion of the new tube. Additionally, the thoracentesis of 500 mL fluid on 28th day after insertion of the tube proves the existence of loculated effusion. It is possible that some amounts of chyle continued to accumulate in other, smaller loculated spaces, although the tube had stopped its drainage. This possibility creates further difficulties for interpreting the consequences of octreotide treatment. The addition of intrapleural doxycycline and its results (clots, new tube insertion, thoracentesis) complicated the evolution of drainage and the correct evaluation of octreotide administration.

Second, which treatment is more effective—somatostatin or octreotide? Successful treatment of chylothorax with somatostatin was mentioned first in 1990 and was confirmed in another report.2 Octreotide is a somatostatin analog and offers the advantage of subcutaneous administration, while somatostatin-14 demands continuous IV infusion.

The authors of the above-mentioned article reported that chylothorax in a 4-month-old boy had been treated successfully with octreotide.2 We read this article by Rimensberg et al, and we did not find any report of octreotide. Rather, Rimensberg et al reported the administration of somatostatin as a continuous infusion.

Because of the advantage of subcutaneous administration, we decided to administer octreotide (Sandostatin; Novartis AG, Basel, Switzerland) to one of our patients with chylothorax after a left pneumonectomy. A 52-yr-old man was admitted to our hospital for squamous cell carcinoma in the left lung. He underwent left pneumonectomy with lymph node dissection. On the second day, we noticed an increased drainage of serous liquid in the chest tube (1200 mL) [Fig 1]. On the third day, the patient had a light lunch, and the liquid became milky. The biochemical examination confirmed the diagnosis of chylothorax (triglycerides, 150 mg/dL; total cholesterol, 110 mg/dL).

Cessation of oral intake and TPN started immediately. The drainage was reduced dramatically in 3 days (from 2150 mL/24 h to 350 mL/24 h) [Fig 1]. On the sixth day, the drainage was 350 mL. On the seventh day, we started subcutaneous administration of octreotide (100 µg bid for the first 2 days and 100 µg tid for the next 6 days), but there was no reduction in the amount of drainage. An aggressive treatment is suggested if chest drainage is > 200 mL/24 h (as occurs in conjunction with video-assisted thoracoscopic surgery or open surgery). However, in our case, we decided to continue the conservative treatment because, although some amount of fluid is normally expected, we had faced a chylothorax after pneumonectomy where the hemithorax was completely empty. On the 15th day, we stopped octreotide administration, and on the 20th day, the chest tube was removed when drainage dropped to 250 mL. We continued the TPN for 4 days (24th day), and on the 23rd day, we started enteral nutrition by a feeding tube with a solution containing medium-chain triglycerides. Daily radiographs revealed normal evolution.

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