care to patients who meet specific criteria alter the morbidity and mortality in a cost-effective manner?

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To the Editor:

We appreciate the interest and reactions to our paper expressed by Mr. Welch and Mr. Mercurio. We would urge them, however, to review the purpose, which we outlined, for doing the study and for selection of the methods.

Although we heartily agree that the way we administered each of the modalities does not agree with the current concept of their application, we deliberately designed our protocol to duplicate the current community standard of practice, not our institution's practice. Sustained maximal inhalation (SMI), based upon our review of many hospitals in our community, is being given in a haphazard manner, without standardization, much as has IPPB in the past, despite Welch and Mercurio's feelings about how this should be done. We at least tried to assure that patients took SMI and IPPB in a consistent manner, which, despite Welch and Mercurio's feelings to the contrary, also is not reality in the community.

We fully agree with the questions raised concerning the correct methods of administration, criteria for patient selection, etc. We are forced to conclude, however, that since this is not yet being done, studies such as ours do emphasize that the mere substitution of one modality with another will not necessarily achieve the objectives desired, if none of the modalities is properly administered. Welch and Mercurio might be interested to know that we, indeed, have a standard protocol for administering SMI at our institution which is considerably different from that used in our paper. We also rarely use IPPB postoperatively, and resistance breathing devices, although still ordered, are more often found in patients' bedside tables than in their mouths.

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Toxic Shock Syndrome

To the Editor:

Toxic shock syndrome (TSS) is a poorly understood illness occurring primarily in previously healthy young women and increasing an 8 to 10 percent mortality. Apparently increasing in incidence, it has recently been linked to the use of certain brands of tampons in menstruating women and to the presence of penicillin-resistant Staphylococcus in the vagina. Clinically, it has been characterized by fever, rash, hypotension, and the hepatic, hemolytic, renal and central nervous systems may also be involved.1 We wish to report the first case of the occurrence of pulmonary involvement, specifically, adult respiratory distress syndrome (ARDS), in toxic-shock syndrome.

Case Report

A 20-year-old white woman presented with history of myalgia, fever, and diarrhea for several days. These symptoms had begun during her menses, and she had been using a popular tampon which has subsequently withdrawn from the market. Examination and laboratory evaluation were initially unremarkable except for vaginal cultures that grew Staphylococcus aureus, and when hypotension developed, she was transferred to our hospital for further evaluation. On admission, her respiratory rate, chest x-ray film, and gas exchange parameters were all normal. Tachypnea and cyanosis gradually developed, however, and her chest x-ray film showed progressive, diffuse infiltrations. A Swan-Ganz catheter was placed and revealed normal pressure. Copious pink-tinged frothy secretions (100 ml per hour) were suctioned from her endotracheal tube. Effective compliance was reduced, and the A-a gradient was 614 mm Hg. Treatment with PEEP, colloid and steroids resulted in improvement in her A-a gradient and chest x-ray film findings, but multisystem failure supervened, and the patient died on the fourth hospital day.

We feel this patient represents a case of shock-lung precipitated by the so-called toxic shock syndrome. Although not previously described as a complication of TSS, other entities in the differential diagnosis were carefully excluded. In addition, precedent exists for the development of ARDS in other forms of bacterial toxemia.5,6 Although the specific etiology of TSS remains to be elucidated, it is possible that either circulating toxin or circulating immune complexes are responsible for the disruption of capillary permeability. Because this apparently new and often devastating illness usually occurs in previously healthy young women, it is important to add it to the differential diagnosis of ARDS.

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