

More Pediatric Status Asthmaticus Ends Up in ICU

BY ROBERT FINN
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SAN FRANCISCO — The number of hospital admissions for pediatric status asthmaticus seems to be decreasing, but at the same time both the number and the proportion of patients with status asthmaticus who are admitted to the ICU appear to be increasing, Dr. Mary E. Hartman said at the annual congress of the Society of Critical Care Medicine.

In New Jersey over the 10-year period from 1992 to 2001, ICU admissions for status asthmaticus increased from 10 per 100,000 children to 18 per 100,000, an increase of 80%, said Dr. Hartman of the University of Pittsburgh.

At the same time, total hospital admissions for status asthmaticus declined from 4,170 in 1992 to 2,361 in 2001, a decline of 43%.

Dr. Hartman and her colleagues examined an administrative database from New Jersey that tabulated every pediatric hospitalization in the state's hospitals. For the years 1992, 1995, 1999, 2000, and 2001, the investigators identified all admissions with the ICD-9 codes for status asthmaticus.

The database included demographic information as well as information on admission characteristics such as length of stay and whether the child was admitted to an ICU.

The investigators were also able to determine which of the 108 hospitals had a pediatric ICU (PICU) and which had only an adult ICU or no ICU at all.

During the 10-year period, there were 17,066 pediatric status asthmaticus admissions. Fifty-nine percent of the children were male, and 70% were less than 10 years old. The proportion of uninsured children was 8.1%. These demographic characteristics did not change appreciably over the study period.

Overall, 9.3% of status asthmaticus admissions involved an ICU stay. But that increased from 4.4% in 1992 to 17.7% in 2001.

This pattern of increased ICU use did not reflect overall trends in hospitalization during that period. When all hospitalizations and all ICU admissions were considered, total pediatric hospitalizations decreased just 9%, compared with 43% for status asthmaticus. Likewise, total pediatric ICU cases increased by 51%, compared with 127% for status asthmaticus.

Deaths were infrequent during the study period and remained stable over time. A total of eight children died during the 5 years studied. On the other hand, the number of children who required mechanical ventilation declined steadily from 1995 to 2001.

"The drop in ventilated cases corresponds to an increase in ICU admissions during that time, and we believe that these data represent a trend in increased vigilance ... toward more aggressive management of status asthmaticus patients in the ICU," Dr. Hartman said.

One of the more interesting aspects of the study concerned whether children were admitted to a PICU or to an adult

ICU. Despite the fact that only 17 of 108 hospitals had a PICU, three-quarters of the children with status asthmaticus who needed intensive care were seen in PICUs. In 1992, only 8% of all admissions for status asthmaticus received intensive care in PICU hospitals. By 2001, 40% of all such admissions ended up in the PICU.

"Adult hospitals are not performing the same way [as children's hospitals]," Dr. Hartman said. "While the overall trends are the same—[adult hospitals] did indeed

lower the total number of admissions and also had a higher proportion of admitted patients cared for in the ICU over 10 years—the size of this change is minuscule, compared to what was happening in children's hospitals."

Dr. Hartman suggested that hospitals with PICUs may have more effective triage than hospitals with only adult ICU beds. "Adult hospitals still have far too many lower-acuity admissions for status asthmaticus," she said.

"If there's one take-home point I'd like you all to remember today, it's that ICU admissions for status asthmaticus are increasing linearly over time," she continued.

"We need to ask ourselves if we're prepared for the increase in admissions that is certainly ahead. Second, I think this study clearly raises questions about the regionalization of ICU care. Children's hospitals have changed in ways adult hospitals have not." ■

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Key issues in Restless Legs Syndrome (RLS)

RLS—a broad range of symptoms that impacts the everyday lives of millions

RLS is becoming recognized as a more prevalent condition than originally believed, affecting a sizeable segment of the population. This common yet often undiagnosed neurological sensorimotor disorder affects approximately 10% of the population.¹ Often associated with difficulty falling asleep or staying asleep, RLS may seem like nothing more than a sleep disorder, but it is much more.

RLS causes significant disruptions in patients' lives—during the night and during the day—and requires effective treatment of its broad range of symptoms.



RLS symptoms impact patients' everyday lives

Patients with RLS often experience an urge to move their legs at night due to uncomfortable leg sensations that worsen during periods of rest or inactivity and often interfere with the ability to sleep. Yet RLS encompasses a broader range of symptoms, such as daytime tiredness, mood disturbance, and inability to perform daily activities. These symptoms have a substantial negative impact on patients' quality of life (QOL).^{2,3} Leg discomfort, sleep disturbance, and fatigue can, in turn, impact daily functioning by affecting a patient's ability to work and participate in social activities and family life.³

RLS significantly impacts QOL

The impact of RLS on patients' QOL has been documented using the SF-36® Health Survey,* an accepted and validated instrument for assessing and comparing patients' QOL in a variety of disease states, including RLS.² Patients with RLS scored lower on the SF-36 than the general population in such areas as physical functioning, bodily pain, general health, vitality, social functioning, and mental health. In fact, RLS patients had lower QOL scores than those with diabetes, hypertension, other cardiovascular conditions, and osteoarthritis.²

The first step toward relief: Establishing an RLS diagnosis

The REST study, a multinational survey of primary care physicians and patients, revealed that of 551 patients suffering from RLS symptoms, 65% consulted a physician about their RLS symptoms, but less than 13% reported having been given a diagnosis of RLS. The authors concluded that application of RLS diagnostic criteria can help uncover the presence of RLS. They also noted that a diagnosis of RLS should be considered in patients with sleep disorders involving long sleep latency and frequent nighttime awakening.¹

That's why it is imperative to determine whether a patient's sleep complaints are due to RLS or another cause. To aid in diagnosis, the International Restless Legs Syndrome Study Group (IRLSSG) developed standardized diagnostic criteria in 1995.^{4,5} These are the minimal criteria necessary for an accurate diagnosis of RLS.



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Printed in U.S.A. (02/06) MRLS-11453R0BA