

Gender disparity in community-acquired pneumonia

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When men present in emergency departments with pneumonia, they are likely to be sicker than women and have a greater risk of dying over the next year, despite the more aggressive medical care they receive, according to research from the University of Pittsburgh that will be presented at the American Thoracic Society's 2008 International Conference in Toronto on Tuesday, May 20. Even when social and environmental factors such as age, race, insurance, smoking and other illnesses are taken into account, the disparity remains.

The study examined 1,136 men and 1,047 women recruited in the emergency rooms of 28 U.S. hospitals. On average, women had longer pre-hospital duration of symptoms and more had already received antibiotics. Men, on the other hand, presented with more co-morbidities and had worse vital signs. Once hospitalized, men more often received antibiotics within eight hours and were twice as likely to be admitted to the ICU.

"The gender disparity on aggressiveness of hospital care is appropriate, given the fact that men tended to be significantly sicker than women," said Michael Reade, D.Phil., who lead the study. "But it is nevertheless insufficient to offset men's higher risk of death within the following year."

The results suggest a number of biological possibilities. "The social factors we examined were not sufficient to explain the differences we observed," continued Dr. Reade. "This leads us to suggest that there may



be differences in genetic or inflammatory factors between men and women. We plan on investigating the precise factors, and determining whether there is a specific immunomodulator unique to females that could be used as a treatment for severe infection."

Until that factor is identified, however, there are immediate implications to the study. "Hospital and family practitioners may wish to modify their approach to men with community-acquired pneumonia in light of the demonstrated higher risk of death these men face," said Dr. Reade.

Because the findings were based on a multi-center prospective cohort, and were controlled for a series of potentially confounding factors, they provide "the strongest evidence to date of a biological basis" for the differences in infection and survival between the sexes, concluded Dr. Reade.

Source: American Thoracic Society

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