Clinical Digest

ONLINE EDITION

Emergency Medicine

Necrotizing Fasciitis: Timing is Critical

For patients with necrotizing fasciitis, short stays in the emergency department (ED) and early operations may be crucial factors in limiting in-hospital mortality, according to researchers from Chang Gung Memorial Hospital, Taiwan and The State University of New York, Buffalo.

The researchers analyzed data on 195 patients admitted to an ED between January 1, 2002 and December 31, 2005 who had a discharge diagnosis of necrotizing fasciitis. They determined whether each patient had an early diagnosis (defined as a confirmed diagnosis of necrotizing fasciitis within three hours of arriving at the ED), a prolonged ED boarding stay (defined as a stay in the ED of more than eight hours between confirmed diagnosis and operation), or an early operation (defined as a debridement or amputation within 24 hours of arrival in the ED). The researchers then looked for associations between these and other factors and the patients' in-hospital mortality.

The patients had a mean age of 55 years, and 137 (70%) of them were men. One hundred thirty six (70%) of the patients had an early diagnosis, 70 (35.8%) had a prolonged hospital stay, and 161 (83%) had an early operation. One hundred sixty-seven (86%) of the patients survived their hospital stays and were considered members of the cohort's nonmortality group, while 28 (14%) of the patients died in the hospital and were considered members of a mortality group.

The researchers found that prolonged ED boarding stay was associated with higher in-hospital mortality rates and that early operation was associated with lower in-hospital mortality rates. Early operation occurred in 143 (85.6%) of patients in the nonmortality group and 18 (64.3%) of patients in the mortality group, while prolonged ED boarding stay occurred in 55 (32.9%) of patients in the nonmortality group and 15 (53.6%) of patients in the mortality group. There was no significant association between early diagnosis and mortality; however, such diagnosis occurred in 119 (71%) of patients in the nonmortality group and 17 (61%) of patients in the mortality group.

These results, the researchers say, emphasize that necrotizing fasciitis is a surgical emergency for which "extensive and aggressive...intervention is crucial and time is critical."

Source: *Am J Emerg Med.* 2009;27(4):385–390. doi:10.1016/j.ajem.2008.03.010.

Geriatrics

Watch Out for Drug List Discrepancies and MDAPEs

Geriatricians shouldn't trust the medication lists provided by their patients' general practitioners (GPs) or pharmacies—and they should be on the lookout for medication discrepancy adverse patient events (MDAPEs). These were the conclusions of researchers from Slotervaart Hospital, Amsterdam, The Netherlands after studying medication list discrepancies, MDAPEs, and possible contributing factors to both problems in 120 patients at their hospital's geriatric outpatient clinic.

In reviewing data on a cohort of patients who were older than 65 years and were taking at least one medication, the researchers looked for discrepancies between the medication lists provided by the patients (a source that was regarded as authoritative) and the medication lists provided by the patients' GPs and pharmacies. They recorded three types of discrepancies: deletions, or drugs reported by the GP or pharmacy but not by the patient; additions, or drugs reported by the patient but not by the GP or pharmacy; and differences between a medication dosage reported by the patient and the dosage reported by the GP or pharmacy. The researchers also recorded three types of MDAPEs: undertreatment of a condition due to a deletion, undertreatment of a condition due to an addition, and adverse drug reaction due to an addition. Finally, they assessed patients' cognitive status, depressive symptoms, and number of treating physicians other than the GP in order to determine the impact of these factors.

The patients had a mean age of 82 years, and 72% of them were women. Of the 120 patients, 113 (94%) were taking more than one medication and 88 (73%) were taking four or more medications. In comparing the various medication lists, the researchers found that a mean of 6.4 medications were reported per patient.

They also found at least one medication-list discrepancy in 104 (87%) of patients. Of the overall cohort, 90 (75%) of patients had a discrepancy involving the GP list, 88 (73%) had a discrepancy involving the pharmacy list, and 74 (71%) had discrepancies involving both the GP list and the pharmacy list. Acetaminophen,

laxatives, and dermatologic and ophthalmologic formulations were the medications with the highest discrepancy rates.

MDAPEs occurred in 29 (24%) of the patients. These events included dehydration, worsening heart failure and renal dysfunction, renal failure, anemia, hyponatremia, hypotension, and apathy. In 25 (86%) of the patients with MDAPEs, the pharmacy medication list reported the relevant drugs correctly.

A patient's number of prescribing physicians was associated with discrepancies between medication lists. In addition, a high number of medications reported by a patient was associated with discrepancies and with MDAPEs. Age, sex, cognitive decline, and depression were not associated with discrepancies or MDAPEs.

The researchers conclude that geriatricians "should assume that the medication lists supplied by GPs are incomplete or incorrect" and that about one fourth of their patients may have symptoms "caused by medication use inaccurately described in the referral." They add that, as most pharmacy medication lists also included discrepancies, geriatricians should confirm medication lists with patients even when those lists are derived from a joint physician/pharmacy database. Finally, the researchers note that their study was performed in a country where patients typically obtain their prescription drugs in one public pharmacy and GPs can gain access to pharmacy records easily. In countries where patients are likely to get medications from more than one pharmacy, they say, pharmacy medication lists may be even less reliable.

Source: *Am J Geriatr Pharmacother*. 2009;7(2):93–104. doi:10.1016/j.amjopharm/2009.04.006.