

Clinical Pathology Abstracts, 4/16

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Effects of testosterone treatment in older men: a set of clinical trials

Serum testosterone levels decrease as men age. The symptoms and conditions of low testosterone levels include decreases in mobility, sexual function, and energy. Previous studies on replacing testosterone gave equivocal results. The authors conducted a study based on a set of clinical trials to determine if testosterone would benefit older men who had low testosterone levels due solely to age and who had clinical conditions for which low testosterone might be a contributor. They coordinated seven double-blind, placebo-controlled testosterone trials that were conducted at 12 sites. To enroll in the trials, overall, participants had to qualify for at least one of the three main trials: the sexual function trial, physical function trial, or vitality trial. They could participate in more than one trial if they qualified. In the study, 790 men 65 years of age or older with a serum testosterone concentration of less than 275 ng/dL and symptoms suggesting hypoandrogenism received either testosterone gel or a placebo for one year. The results showed that testosterone increased to the mid-normal range for men 19 to 40 years of age in the treated group. This resulted in a moderate benefit with sexual function and some benefit with mood and depressive symptoms but no benefit with vitality or walking distance. However, a significant difference in walking distance was noted when the results were expanded beyond the physical function trial to include all three main trials. The rates of adverse events were similar in the treated and placebo groups. The authors concluded that the study involved too few participants to draw conclusions about the risks of testosterone treatment. They suggested that all seven trials should inform decisions about testosterone treatment for men 65 years of age and older whose testosterone levels are low for no apparent reason other than age.

Snyder PJ, Bhasin S, Cunningham GR, et al. Effects of testosterone treatment in older men. *N Engl J Med*. 2016;374:611-624.

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Multifaceted intervention to reduce inpatient laboratory costs

Inappropriate laboratory testing is considered a significant contributor to rising health care costs. Studies estimate that 30 to 50 percent of laboratory tests for hospitalized patients are unnecessary. The American Board of Internal Medicine Foundation's Choosing Wisely campaign has focused on laboratory testing as an area in which to reduce hospital waste. Multiple interventions to address excessive laboratory utilization, including physician education, audit and feedback, display of cost information, and administrative rules to restrict ordering, have been described in the literature. The authors conducted a study to incorporate multiple strategies and evaluate the impact of these laboratory reduction interventions on laboratory costs. They performed a retrospective, controlled, interrupted time series (ITS) study at the University of Utah Health Care medical center, Salt Lake City, where they used a multifaceted quality improvement approach in a hospitalist service to reduce laboratory costs. The authors compared changes in lab costs between hospitalists (intervention study group) and other providers (control study group). Their intervention included education, process change, cost feedback, and financial incentives. The authors

developed a value-driven outcomes tool to give direct data related to costs of care, including the actual cost paid by the hospital to the university-owned laboratory vendor for testing. The results showed that among the intervention group, the mean cost per day was reduced from \$138 before the intervention to \$123 after the intervention. The ITS analysis showed significant reductions in cost per day, cost per visit, and number of basic metabolic panel, comprehensive metabolic panel, and complete blood count tests per day. The authors concluded that a multifaceted approach to reducing laboratory utilization demonstrated a significant decrease in laboratory cost per day and per visit as well as a reduction in the number of common tests ordered per day at a major academic medical center.

Yarbrough PM, Kukhareva PV, Horton D, et al. Multifaceted intervention including education, rounding checklist implementation, cost feedback, and financial incentives reduces inpatient laboratory costs [published online ahead of print February 4, 2016]. *J Hosp Med*. doi:10.1002/jhm.2552.

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