

Survey Shows Dogma, Not Data, Can Dictate Doctors' Decisions

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(PhysOrg.com) -- New research published this month gives a glimpse into how medicine is often based on habit, not hard data, according to study author Jacob Moalem, M.D., FACS, an endocrine surgeon at the University of Rochester Medical Center.

A glimpse into how medicine is often based on habit, not hard data, is provided in a new research published in this month's <u>Journal of the</u> <u>American College of Surgeons</u>.

The article describes results from an international survey that asked endrocrine surgeons how they decide whether or not to prescribe antibiotics in advance of removing all or part of the thyroid or parathyroid glands. Typically, these glands are removed because of suspected cancer or because they overproduce their respective hormones, causing metabolic problems and irritability (thyroid) or <u>kidney stones</u> and <u>bone loss</u> (parathyroid).

"Since there's such great supply of blood to the neck area and these procedures don't involve parts of the body rife with bacteria, like the colon or airway, they're considered 'clean' cases -- meaning that the risk for surgical site infections is very low," said lead author Jacob Moalem, M.D., FACS, an endocrine surgeon at the University of Rochester Medical Center (URMC). "Given the very low risk, treating a patient with an antibiotic in advance isn't typically indicated. Even so, we wanted to learn what surgeons actually did in practice - and why."



Dogma, not data

Moalem's team found that most surgeons stick very closely to a set routine before performing thyroid and parathyroid operations; nearly 90 percent of respondents reported using antibiotics either "almost always" (26.2 percent) or "almost never" (62 percent).

"Only about 11 percent of surgeons said they varied their prescribing habits based on the unique health needs of their patients," he said.

Interestingly, Moalem noticed that neither their annual caseloads nor their past histories of having patients who developed surgical site infections or adverse reactions to antibiotics were linked to their unique prescribing habits. What was associated, however, was their environment: whether or not they worked in a hospital connected with a university and which continent they practiced on.

"We found that doctors in community hospitals were twice as likely to routinely prescribe antibiotics as their university hospital counterparts -49.6 percent of them almost always prescribed antibiotics, compared to 24.5 percent at teaching hospitals," Moalem said.

He also noticed that surgeons in Asia were far more likely (58.3 percent) to always give antibiotics in advance than were those in America (27.9 percent) or Europe (8.8 percent).

"Surgeons seem to have very fixed patterns depending on the setting they work in," Moalem said.

"I think this speaks to a universal reality in medicine: that, in the absence of hard data, there is a subset of things we'll continue to do simply because we've always done them that way," he said. "We do what we think is best based on what's seemed to work in the past, how we've been



trained, or what our organization's culture suggests. If we only practiced medicine that was grounded in randomized and controlled clinical data, much of what we do would come to a grinding halt."

Collecting data that nails down exact rates of surgical site infections for thyroid/parathyroid operations is complicated. Not only does the definition of what constitutes such infections vary with each physician's own interpretation, but many infections are sometimes missed altogether. What about patients with minor infections that don't merit a trip back to the hospital or emergency room? And, what about severe infections that do have to be treated, but are treated elsewhere? It could be that doctors underestimate the true incidence of these surgical site infections.

"Even so, when you consider the concerns related to antibiotics, you can see why many endocrine <u>surgeons</u> don't use them proactively in cases that carry low-risk for infection," he said. "First, there's the issue of antimicrobial stewardship - an effort to prescribe antimicrobials only when absolutely necessary, to minimize the risk of encouraging an uprising of drug-resistant bacteria. Then, there's the rare chance that the antibiotic upsets the delicate balance of good-to-bad intestinal flora, causing a potentially life-threatening colon infection."

Until hard data are available to gather the true incidence of surgical infections, as well as of adverse and allergic reactions to <u>antibiotics</u>, official recommendations can't be made and each surgeon should continue to employ his or her best judgment, Moalem said.

"Whatever their leaning, I would caution, however, that they remain flexible and be willing to modify their routines to best fit a patient's unique needs and risk factors," he said.



Provided by University of Rochester Medical Center

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