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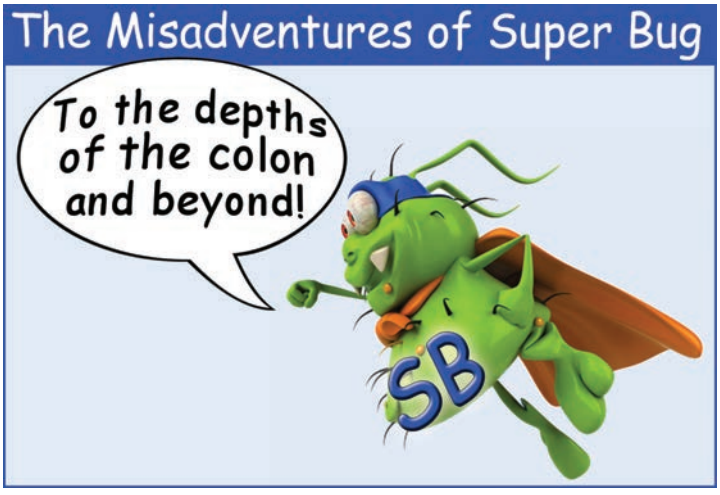
Antibiotics Overused by Physicians. Imagine That!

Yes, ingrown toenails can be treated without these pharmaceuticals.

Practice Perfect is a continuing every-issue column in which Dr. Shapiro offers his unique personal perspective on the ins and outs of running a podiatric practice.



A recent article was titled: *Doctors May Play Big Role in Antibiotic Overuse: Study*.[1] The bottom line of the report was that physicians and other healthcare providers at the VA system prescribed antibiotics for an excessively large number of patients for upper respiratory tract infections, most of which are viral in origin. The article attributed differences in practice patterns to habitual differences of providers.[2]

There's nothing strikingly new about healthcare providers over-prescribing antibiotics. We've known about this problem for many years. There is a plethora of information about the risks of antibiotic overuse and the potential for the creation of "superbugs" that would destroy our ability to fight bacterial infections.

Layered on top of that is the idea that these "bugs" somehow have superpowers. Can you picture it? There's a little E. coli rod in a Superman outfit, undies on the outside of its tights and all, with cape fluttering in the breeze, flagella wriggling, as it leaps tall buildings in a single bound, only to end up jumping into your throat and causing some comic book-sized infection. Now it's just poor little mortal you versus the horrible superbug. Your gastrointestinal tract just became the setting of an epic battlefield unlike any other in history.

We all know that this entire phenomenon is simply due to Darwinian evolution. We create a selective pressure on the bacterial fauna of our bodies when prescribing antimicrobials, and some of those bacteria have what it takes to survive to breed another day. They have the genetic wherewithal to resist certain antimicrobial medications. It is true that this is a problem? Does the medical community leadership really take it seriously?

It's fairly common to see patients referred for ingrown toenails who have been on at least one, and sometimes more than one, course of antibiotics.

In fact, this has been long proven to be unnecessary in the medical literature by members of our own profession. Reyzelman and colleagues, prospectively enrolled 154 patients with infected ingrown nails and randomized them to either one week of antibiotics plus chemical matrixectomy, antibiotics and then matrixectomy, or matrixectomy alone. 54 healthy patients were studied (after exclusion criteria). These researchers concluded that the antibiotics did not improve the outcome of treatment of infected ingrown nails.[3]

We podiatrists know an ingrown toenail is essentially a foreign body reaction that will only resolve with removal of the offending nail. It does not require antibiotics. One should almost never prescribe antibiotics for this condition, even when purulence is noted. Unless you see frank cellulitis of the digit, don't prescribe it. Nail avulsion and matrixectomy is the optimal treatment. Unfortunately, we podiatrists have done a poor job educating our general practice colleagues about this, and indirectly contribute to the overprescribing problem.

Another place where this is a problem is in the operating room. It's generally best not to prescribe any antimicrobials unless the patient has a post-operative infection. Today, due to the SCIP program (Surgical Care Improvement Project), the local hospitals are really leaning on us to give an antibiotic preop. Take a look at Table 1 (abstracted from http://www.jointcommission.org/surgical_care_improvement_project/) and note that the first three measures have to do with antibiotics.

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There has never been a study that demonstrates that simply doing surgery using today's sterile technique increases the risk of post-operative foot infection. We know that there are certain situations where it is likely to occur (immunocompromised patients, long procedures, break in sterility, etc.), but in the otherwise healthy patient undergoing elective podiatric surgery, there really is no need for antibiotics. It would greatly improve the situation if physicians and surgeons could simply practice medicine according to our training and the current research evidence, rather than have to worry about initiatives like the SCIP program, which tries to treat every surgery as if it fit into a box.

Though it's hard to argue that healthcare providers overprescribe antibiotics, we really should keep the whole thing in perspective. Watch out friends. We don't want to turn Clark Klebsiella into the evil superbug "Super Coli". If our national initiatives don't match the science, then how can we providers be expected to change our overprescribing ways? **PM**

TABLE 1:

Surgical Care Improvement Project

Set Measure ID #	Measure Short Name
SCIP Inf-1	Prophylactic antibiotic received within one hour prior to surgical incision
SCIP Inf-2	Prophylactic antibiotic selection for surgical patients
SCIP Inf-3	Prophylactic antibiotics discontinued within 24 hours after surgery end time
SCIP Inf-4	Cardiac surgery patients with controlled postoperative blood glucose
SCIP Inf-6	Surgery patients with appropriate hair removal*
SCIP Inf-9	Urinary catheter removed on postoperative day 1 (POD 1) or postoperative day 2 (POD 2) with day of surgery being day zero
SCIP Inf-10	Surgery patients with perioperative temperature management**
SCIP Card-2	Surgery patients on beta-blocker therapy prior to arrival who received a Beta-Blocker during the perioperative period
SCIP VTE-2	Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery

* The Joint Commission Only CMS Voluntary Only
** The Joint Commission—Retired CMS Voluntary Only

References

[1] Standards and Requirements for Approval of Podiatric Medicne and Surgery Residencies, Council on Podiatric Medical Education website, July 2015. Last accessed August 2, 2015.

[2] Sholfer D, Chuang T, Argade N. The Residency Training Experience in Podiatric Medicine and Surgery.J Foot Ankle Surg. 2015 Jul–Aug; 54(4):607-614.

[3] Arora S, Ahmed M, Paige H, et al. Objective structured assessment of debriefing: bringing science to the art of debriefing in Surgery. Ann Surg. 2012 Dec; 256(6):982-988.

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