Prophylactic Antibiotics for Nasal Packing

Where’s the Evidence?

“Articles review”
Introduction:

- Epistaxis is a common problem, with a lifetime incidence of about 60% (Gifford 2008).

- While the majority of cases do not require medical attention, epistaxis remains a common presenting complaint in the Emergency Department.
Introduction:

- The management of epistaxis can be highly variable, with different techniques being used in nasal packing with either coagulant impregnated balloons, nasal tampons, or petroleum gauze.
Anterior nasal packing is the commonest type of packing used for the management of epistaxis, when initial treatment by pressure and cautery are failed.
Concern for the development of infectious complications (sinusitis, otitis, toxic shock syndrome) after nasal packing seems to have motivated the clinical recommendations. *American College of Emergency Physicians 2009*
Introduction:

- **Toxic Shock Syndrome**: It’s a toxin-mediated acute life-threatening rare complication.

- Characterized by high fever, rash, hypotension, multiorgan failure.

- Usually precipitated by infection with either *Staphylococcus aureus* or group A *Streptococcus* (GAS).
The incidence of TSS with nasal packing following nasal surgery is approximately 16.5 in 100,000, or 1 in approximately 6000 cases (Jacobson 1986).
Controversy exists regarding the use of systemic prophylactic antibiotics with anterior nasal packing.
Articles review:

- **One important note**, the literature base is scant on all topics regarding Prophylactic antibiotics after nasal packing for epistaxis.

- Randomized Double-Blind Control Trials (RDCT) are rare and study quality is overall very poor.
Article 1

Ricci G, D'Ascanio L. *Antibiotics in septoplasty: evidence or habit?*

- **In this study**: a large randomized trial evaluating the use of prophylactic antibiotics with nasal packing following septoplasty.

- **Result**: They found no difference in post-operative pain, infectious symptoms, or the amount of purulent nasal discharge with or without prophylactic antibiotics.

**In this study:** They examined 149 consecutive patients who underwent nasal packing, over a six-month period.

- 78 patients were routinely prescribed prophylactic antibiotics (Amoxicillin/Clavulanic Acid) and 71 patients were not routinely prescribed antibiotics.
Exclusion criteria included antibiotics prescribed for unrelated pathology and post-operative epistaxis. Signs and symptoms of acute otitis media, sinusitis and toxic shock syndrome were assessed.

**Result:** They found neither group had infectious complications.

- **In this study**: Over a period of 6 months, 21 patients had anterior packing of which 9 received antibiotics.

- **Result**: after removal of pack, the investigators sent swabs from the packed and unpacked nares and found no difference in bacterial growth in the antibiotic and no antibiotic group.

- **In this study**: Twenty patients were prospectively randomized into this placebo-controlled, double-masked pilot study to receive either placebo or cefazolin sodium.
**Result**: They found that no infectious complications were noted in either group. The packings from the patients in the placebo group were foul smelling and heavily colonized with *gram-negative bacteria* while the packings from the antibiotic group were odor-free and lightly colonized with only *one gram-positive organism*. 
Conclusion:

- The available evidence does not defend the routine use of prophylactic antibiotics in patients who require nasal packing for epistaxis.
Conclusion:

- While site of packing (anterior vs. posterior), sterility of the environment (operative room vs. ED), and entry into nasal cavity (post-surgical vs. non-instrumented) may have some effect on the incidence of infectious outcomes.
Conclusion:

- However, the applicability of these results to patients with anterior nasal packing for epistaxis is unclear.
Based on a survey of physicians in the United Kingdom conducted in 2005.

78% of physicians believe that the use of prophylactic antibiotics with anterior nasal packing reduce the incidence of infection (toxic shock syndrome, sinonasal infection and middle ear infection).
Conclusion:

- (6%) of physicians suggested prophylactic antibiotics may help to reduce the incidence of re-bleeding.
- (16%) of physicians were unsure of the benefit of antibiotic use.
Thank you