

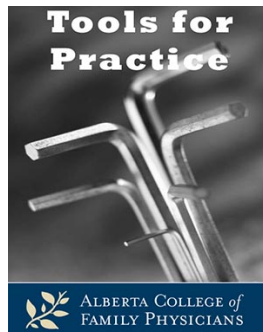
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Reviewed: August 5, 2016

Evidence Updated: New evidence for vaccine not available in Canada

Bottom Line: No change

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Zoster vaccine: Zoster Loster or Imposter Coster?

Clinical Question: What are the benefits of the zoster vaccine to our patients?

Bottom Line: Over three years, zoster vaccine will prevent one case of shingles for every 60-70 patients vaccinated, and one case of post-herpetic neuralgia in 350. Long-term benefits, and effectiveness in specific patient populations (immunocompromised, previous shingles) are unclear.

Evidence:

Two Randomized Controlled Trials (RCTs) in immunocompetent patients of zoster vaccine (Zostavax®) versus placebo vaccine:

- 38,546 age ≥ 60 (median age 69). Outcomes at three years:¹
 - Herpes zoster (Shingles):
 - Vaccine 1.67%, placebo 3.42%, Number Needed to Treat (NNT)=58.
 - Post-herpetic neuralgia (PHN):
 - Vaccine 0.14%, placebo 0.42%, NNT=358.
 - Seven-year outcomes of a subgroup² of patients not helpful as all placebo patients offered vaccine, thus numbers difficult to interpret.
- 22,439 age 50-59 (mean age 55) followed 1.3 years:³
 - Shingles: Vaccine 0.27%, placebo 0.88%, NNT=164.
 - Limitations: Short follow-up, PHN rates not reported.
- Adverse events: ~1% more patients had systemic adverse events^{1,3,4} and serious adverse events also greater with vaccine (1.9% versus 1.3%).¹

RCT of 15,411 immunocompetent patients ≥ 50 years-old (mean age 62, 39% male) of new adjuvant zoster vaccine (not yet available in Canada) followed 3.2 years:⁵

- Shingles: Vaccine 0.12%, placebo 3.05%, NNT=35.
- PHN rates not reported.
- Adverse events:

- 9% more patients had systemic adverse event, but no difference in serious adverse events.

Context:

- Although vaccine reduces relative risk of shingles 50-70%, we need to vaccinate 60-70 patients to prevent one case of shingles over three years with currently-available vaccine.^{1,3}
- Shingles rates increase with age: 3/1000 per year in age 40-64 to 7.5/1000 per year in age ≥ 75 .⁶
 - ~11% of patients age >60 who develop shingles develop PHN.¹
 - PHN risk increases with age,^{7,8} and is rare (~1%) when <50 years.⁷
- Low risk of recurrent shingle,^{1,9} but when including immunocompromised patients, may be as high as 5.7% over 7 years.¹⁰
- Guideline recommendations:
 - Canada: Vaccinate >60 years, may vaccinate 50-59 year-olds.¹¹
 - US: Vaccinate >60 years, do not recommend vaccinating 50-59 years.¹²
- Cost of Zostavax ~\$200.
- Remaining questions:
 - Safe and effective in immunocompromised patients?
 - Beneficial if previous shingles?
 - Long-term efficacy (will booster be required)?

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