TOOLS FOR PRACTICE #354 | December 11, 2023

TOOLS FOR PRACTICE

PEER PATIENTS EXPERIENCE EVIDENCE RESEARCH

Preventing RSV in the elderly

CLINICAL QUESTION

What is the effectiveness and safety of Respiratory Syncytial Virus (RSV) vaccination in older adults?

BOTTOM LINE

For every ~380 medically-stable patients aged ≥60, RSV vaccine prevents 1 RSV-associated lower respiratory tract disease (LRTD) per season over placebo. Study conducted during COVID-19 pandemic, potentially lowering baseline RSV incidence. Fatigue occurs in 34% versus 16% (placebo). General guidance suggests administration based on shared decision-making, particularly those at higher-risk (example long-term care, COPD), but higher-risk largely not studied.

EVIDENCE

- Statistically significant unless noted.
- Randomized controlled trial (RCT):[1] 24,966 adults ≥60 years given single-dose adjuvanted RSV prefusion F protein vaccine (RSVPreF3 OA vaccine, Arexvy®) or placebo. Planned 3-years; First RSV-season (6.7 months) results:
    - RSV-LRTD: 0.06% versus 0.3% (placebo); Number needed to vaccinate (NNV)=379.
    - "Severe" (≥2 clinical signs or investigator-assessed) RSV-LRTD: 0.008% versus 0.1% (placebo), NNV=781.
    - Injection site pain (61% versus 9%); fatigue (34% versus 16%): no statistics.

- RCT:[2] 34,284 adults ≥60 years given single-dose unadjuvanted RSVpreF vaccine (Abrysvo®) or placebo. First RSV-season (7 months) results:
    - RSV-LRTD (≥2 signs/symptoms): 0.07% versus 0.2% (placebo), NNV=742.
    - RSV-LRTD (≥3 signs/symptoms): 0.01% versus 0.08% (placebo), NNV=1360.
    - Local reactions: 12% versus 7%, no statistics.
- Systematic review: Published/unpublished two-season results of above RCTs (no statistics).[3]
    - RSV-LRTD relative efficacy:
        - Arexvy®: 83% (season 1) versus 56% (season 2).
        - Abrysvo®: 89% (season 1) versus 79% (season 2).
        - Actual events not reported.
    - Hospitalizations/deaths:
        - Arexvy®: 0.008% versus 0.04%.
        - Abrysvo®: 0.006% versus 0.02%.
        - No RSV-related deaths.
    - Safety:
        - Atrial fibrillation: 0.06%-0.08% versus 0.02%-0.03% (placebo).
        - 3 inflammatory neurologic events (example Guillain-Barré) with each Arexvy® (non-placebo-controlled trials) and Abrysvo® (placebo=0).
- Limitations: Industry-funded; studied during pandemic; immunocompromised, unstable comorbidities, and long-term care generally not included.

CONTEXT

- Arexvy® approved in Canada; ~$250/injection.[4]
    - Abrysvo® not yet approved in Canada.
- RSV risk ≥50 years: 1.6-4.9%/year,[5-7] declined during pandemic.[5,8]
    - RSV hospitalization risk ≥65: 0.02%-0.26%/year.[7,9-12]
    - Mortality 7-15% in RSV-hospitalized ≥60,[7,12] increased with advancing age, long-term care, and comorbidities like chronic kidney disease/COPD.[9,12]
- Risk of contracting influenza either 2-10x higher[8,10-13] or similar to RSV.[14]
- US guidance recommends shared decision-making (aid available)[15] for vaccinating ≥60.[3]

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