**GRADE Table 2. Effectiveness of one dose varicella vaccination in immunocompetent children (9 months to 12 years of age) in preventing severe varicella (evidence available for within the first 10 years after vaccination)**

**Population:** Immunocompetent children (9 month to 12 years of age)
**Intervention:** One dose varicella vaccination
**Comparison:** Placebo/ no vaccination
**Outcome:** Severe varicella (mostly defined as >500 lesions, complication requiring physician visit, hospitalization, death); two studies defined severe disease as >250 and >200 lesions and two defined severity in accordance with a modified disease severity score from clinical trials

| *What is the scientific evidence of the effectiveness of one dose of varicella vaccination (versus placebo/no vaccination) in preventing severe varicella disease (≥500 lesions) in immunocompetent children (9 month to 12 years of age)?* | | | | |
|---|---|---|---|---|
| | | | Rating | Adjustment to rating |
| **Quality Assessment** | No. of studies/starting rating | | 29/ Observational[1] | 2 |
| | Factors decreasing confidence | Limitation in study design | None serious | 0 |
| | | Inconsistency | None serious | 0 |
| | | Indirectness | None serious | 0 |
| | | Imprecision | None serious | 0 |
| | | Publication bias | None serious | 0 |
| | Factors increasing confidence | Large effect | Applicable[2] | +2 |
| | | Dose-response | Not applicable | 0 |
| | | Antagonistic bias and confounding | Not applicable | 0 |
| | **Final numerical rating of quality of evidence** | | | **4** |
| **Summary of Findings** | **Statement on quality of evidence** | | | **We are very confident that the true effect lies close to that of the estimate of effect on health outcome** |
| | **Conclusion** | | | **A single dose of varicella vaccination is highly effective to protect children of 9 months to 12 years against severe varicella disease, with vaccine effectiveness (VE) of 95% for preventing moderate-severe disease and VE of 99% for preventing severe disease only.** |

[1] Two systematic reviews (Seward et al. 2008; Bayer et al. 2007) and a systematic review conducted by WHO on the current literature (through October 2013) identified 25 relevant observational studies. Included studies provided vaccine effectiveness data on the predefined outcome of severe varicella or on moderate-severe varicella. Studies that did not specifically report a VE value reported that no cases of hospitalization or severe complications were observed. Single dose varicella VE against moderate and severe disease ranged from 78 – 100%, with an approximate mean VE of 95%, irrespective of vaccine type. Of the sixteen studies reporting a VE value against severe varicella, fifteen reported a VE of 100% and only one study (Huang, 2011) reported a VE of 85%.

[2] Upgraded by two levels as strong evidence from observational studies of a vaccine effectiveness of 80% or higher with no major residual confounders. Vaccine effectiveness against severe varicella was 100% in 15/16 studies. In addition to effectiveness on an individual level, decline in incidence in all age groups over time, not only age-group targeted by vaccination program, suggests induction of community protection (Marin et al 2008, Marin et al 2011, Lopez et al 2011, Guris et al 2008).

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