

Review of: "Early-Life Antibiotic Exposure Associated With Varicella Occurrence and Breakthrough Infections: Evidence From Nationwide Pre-Vaccination and Post-Vaccination Cohorts"

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Potential competing interests: The author(s) declared to have participated as a consultant for Globe Life Sciences in the area of vaccines.

- The article presented an interesting observational study that may show adverse results in the early exposure of antibiotics to the varicella occurrence.
- In the pre vaccination era the exposure of antibiotics was greater than in the vaccination era, influencing the post analys, however, the matched study subjects among the antibiotics cohort may prevent this bias.
- In the assessment of covariates, demographic factors such as gender, comorbidities, and medications were considered potential confounders, but some unreported self-medicated medications that could cause disruption of the gut microbiota were not included.
- Another possible bias was the lack of information on dietary habits and travel information that can cause dysbiosis of the gut microbiota.
- In conclusion, I acknowledge the authors' scope to investigate the effect of early-life antibiotic exposure on childhood varicella risk and breakthrough infections. However, the conclusion of the study is turned down by the amount of potential confounders that were not addressed and by the absence of a clear definition of the vaccination failure.
- I suggest delimiting the conclusion of the study to the relation between early-life antibiotic exposure on childhood varicella risk, and not in the vaccine efficacy.
- For my perspective, early exposure to antibiotics is a concern in pediatric practice, these sort of studies can raise awareness of parents and pediatricians to administer antibiotics without a real indication and open up a field of research in the relationship between early antibiotic exposure and varicella occurrence.