

DID 2020 ACOG GUIDANCE ON MANAGEMENT OF PENICILLIN ALLERGY IN PREGNANCY INFLUENCE PRACTICE PATTERNS?

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INTRODUCTION

- Group B Streptococcus (GBS) is a leading cause of neonatal infections, responsible for significant morbidity and mortality worldwide.
 - In 2020, the American College of Obstetricians and Gynecologists (ACOG) updated guidelines for GBS prevention, recommending allergy testing to verify reported penicillin allergies, reserving clindamycin and vancomycin for patients at high risk for severe allergic reactions.
 - Despite the importance of these recommendations, studies indicate that adherence to the updated ACOG guidelines remains variable across institutions, with some hospitals implementing penicillin allergy testing more readily than others.
- Objective:**
- To evaluate referral rates for penicillin allergy testing and to examine patterns in antibiotic use before and after the 2020 ACOG guidelines on GBS prophylaxis

RESULTS

- A total of 168 GBS-positive birthing parents with a reported penicillin allergy were included in the study. Of these, 83 delivered prior to the 2020 ACOG guidelines update, and 85 delivered in 2020 or later
- Proportion of allergy referrals did not increase (0% of patients referred pre-2020 vs. 1.2% of patients referred post-2020, p=0.322).
- No significant change in the proportion of patients receiving clindamycin or vancomycin (65.1% pre-2020 vs. 65.9% post-2020, p=0.563).

Table 1. Characteristics of included participants

	Delivered prior to 2020 N= 83	Delivered 2020 or later N= 85
Maternal Age (years, median (range))	30 (19-42)	30 (20-43)
Race and Ethnicity (n,%)		
American Indian or Alaskan Native	0, 0	0, 0
Asian	2, 2.4	1, 1.2
Black or African American	17, 20.4	14, 16.5
Hispanic or Latino	6, 7.2	22, 25.9
Native Hawaiian or Other Pacific Islander	2, 2.4	1, 1.2
White	38, 45.8	50, 58.8
Unknown or not reported	1, 1.2	0, 0
Other	2, 2.4	3, 3.5
Penicillin Allergy Reaction History (n,%)		
Rash	50, 60.2	60, 70.6
Itching	31, 37.3	42, 49.4
Swelling	9, 10.8	13, 15.3
Vomiting	0, 0	1, 1.2
Difficulty breathing	7, 8.4	5, 5.9
Other	5, 6.0	9, 10.6
Missing or Unknown	6, 7.2	3, 3.5
Concurrent Cephalosporin Allergy (n, %)	8, 9.6	3, 3.5
Allergy Referral Placed (n, %)		
Yes	0, 0	1, 1.2
No	83, 100	84, 98.8
Allergy Evaluation Completed (n, %)		
Yes	-	0, 0
No	-	1, 100
GBS Sensitivity (n, %)		
Not performed	19, 22.9	22, 25.9
Clindamycin sensitive	36, 43.4	32, 37.6
Clindamycin resistant	28, 33.7	31, 36.5
GBS Prophylaxis Regimen (n, %)		
Penicillin	14, 16.9	10, 11.7
Ampicillin	0, 0	0, 0
Cefazolin	15, 18.1	18, 21.2
Clindamycin	28, 33.7	34, 40.0
Vancomycin	26, 31.4	22, 25.9
Other	0, 0	1, 1.2
Infant Sex (n, %)		
Male	39, 47.0	36, 42.4
Female	44, 53.0	49, 57.6
Gestational Age (median, range)	39w3d (37w0d-42w2d)	39w1d (30w3d-41w5d)
Birth Weight (g, median, range)	3276 (2315-41920)	3085 (2085-4286)
Infant Blood Culture (n, %)	3, 3.5	1, 1.2
Infant Placed on Antibiotics (n, %)	3, 3.5	2, 2.4
Infant Prolonged Hospital Stay After Delivery (n, %)*	12, 14.5	5, 5.9

METHODS

- **Search:**
- Retroactive review of electronic medical records (EMR) of eligible participants at an academic hospital (UCHealth - Anschutz Medical Center).
- **Eligibility criteria:**
- We included GBS-positive pregnant patients with reported penicillin allergies who delivered between 2018 and 2022.
- We excluded patients who underwent scheduled cesarean deliveries, as these infants do not pass through the birth canal and are therefore not at risk for vertical GBS transmission, as well as those who delivered preterm (<37 weeks gestation) or did not receive intrapartum GBS prophylaxis.
- **Data extraction:**
- We used the SlicerDicer tool in Epic (our EMR platform) to identify eligible patients.

CONCLUSIONS

- Despite these guidelines, referrals for allergy evaluation remain low, and use of alternative antibiotics has not decreased, potentially limiting the effectiveness of GBS prophylaxis.
- Further research is needed to explore barriers to allergy referral and develop strategies to facilitate appropriate antibiotic selection for GBS prophylaxis in patients reporting penicillin allergies.



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