Penicillin allergy delabelling in pregnancy

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■ Cite as: *CMAJ* 2023 March 27;195:E452-3. doi: 10.1503/cmaj.220973

1 Most patients who are pregnant and report a penicillin allergy can be successfully delabelled

Although 10% of patients who are pregnant report having a penicillin allergy,[1] after evaluation, 83%–95% of these patients can safely receive penicillin.[2,3] Penicillin allergy delabelling is associated with the prevention of antibiotic resistance and *Clostridium difficile* infection caused by other antibiotics, and with substantial savings in health care costs.[2]

2 Delabelling provides a direct benefit for the pregnant person and neonate

A penicillin allergy label has been associated with adverse obstetric outcomes, including higher rates of cesarean delivery and wound infections and longer hospital length of stay.[1] It is also associated with an inappropriate choice of antibiotic prophylaxis for patients who screen positive for Group B *Streptococcus*,[1,4] leading to an increased risk of early onset neonatal Group B *Streptococcus* disease.[5] Delabelling has been shown to increase the use of appropriate antibiotics during labour and delivery.[3]

3 Penicillin allergy reported during antenatal care should prompt referral to allergy delabelling services

Penicillin allergy delabelling during pregnancy is available in an outpatient setting at any stage of pregnancy. Patients are risk stratified using validated tools and receive a penicillin skin test if they are deemed to be at high risk or a direct oral challenge (with oral amoxicillin) if they are at low risk. Undertaken in 1 session and under observation by an allergist and obstetrician, emergency measures and monitoring are in place for the safety of the pregnant patient and fetus including access to fetal monitoring and resuscitation.

4 Delabelling during pregnancy has been shown to be safe and effective in a Canadian setting

Safety data for testing during pregnancy are available from several studies.[2,3,6] A 2022 study conducted at a tertiary care hospital in Canada reported that the direct oral challenge was safe for patients at low risk, with a delayed cutaneous reaction rate of 1.9% and no severe adverse events.[6] Delayed cutaneous reactions can be uncomfortable, but can be treated with antihistamines and low-dose steroid ointment to affected areas.

5 Emphasis should be placed on antibiotic selection and susceptibility testing if patients do not have access to penicillin delabelling services

The use of clindamycin for Group B *Streptococcus* prophylaxis can add to the burden of antibiotic resistance and adverse effects.[3,4] If a penicillin allergy is known at the time of screening for Group B *Streptococcus* (usually 36-weeks' gestation), susceptibility testing aids in appropriate antibiotic selection. Most patients with penicillin allergies can safely receive cefazolin for cesarean delivery and Group B *Streptococcus* prophylaxis.

References

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Competing interests: Vanessa Poliquin was the principial investigator at a site for a GSK vaccine study. She has received honoraria from Sanofi-Pasteur for teaching at a clinical medical education event. She has received payment for expert witness testimony from the Department of Justice Canada. She was the co-chair of the Infectious Diseases Committee for the Society of Obstetricians and Gynaecologists of Canada (SOGC), a department head for the Department of Obstetrics, Gynecology and Reproductive Sciences at the University of Manitoba and a provincial specialty lead for women's health at Shared Health Manitoba. Chelsea Elwood has received grants from the Canadian Institutes of Health Research, Public Health Agency of Canada and Women's Health Research Institute and consulting fees as a board speaker from Bayer. She has received honorarium fees from the Departments of Obstetrics & Gynaecology, Midwifery and Medical Education at the University of British Columbia, Faculty of Medicine. She has received payment for expert testimony from the Canadian Medical Protective Association and was a co-chair for the SOGC Infectious Diseases Committee. Andrea Atkinson received an early career reasearcher award at the Infectious Disease SOGC conference in August 2022. She was the recipient of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists Jean Murray Jones scholarship. No other competing interests were declared.

This article has been peer reviewed.

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Funding: No funding was received for this research. Andrea Atkinson is supported by the Jean Murray Jones scholarship through the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

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