Cefuroxime is a safe alternative for penicillin allergic patients

The BC Centre for Disease Control (BCCDC) is collaborating with the UBC Therapeutics Initiative (TI) on a project related to providing prescribing Portraits to dentists on appropriate antibiotic use in dentistry.

Surveillance on dental antibiotic prescribing in BC have shown alarmingly high rates of clindamycin prescribing in comparison to international studies. One presumable reason for high rates of clindamycin prescribing is its use as an alternative agent for “penicillin allergic” (PCN-allergic) patients. The best available evidence indicates that clindamycin is not more efficacious yet is more strongly associated with the development of C. difficile colitis than other antibiotics.

Pharmacists are reminded that beta-lactam allergies, particularly allergies to penicillin, are overreported, with about 10% of individuals reporting an allergy in the US. However, most reported penicillin allergy is not associated with clinically significant IgE-mediated reactions after penicillin rechallenge.

Furthermore, recent studies show the cross-reactivity between penicillins and cephalosporins is less than 1% (and no way near the originally quoted 5% rate). Cross-reactivity rate between penicillin and cephalosporins depends on the similarity of side chain structure. Cephalexin has a similar side chain and is not safe for PCN-allergic patients. Because cefuroxime’s side chain does not resemble that of amoxicillin or penicillin, it can be used safely. Very rare but severe reactions such as Stevens-Johnson syndrome, which includes the peeling of skin and usually requires intensive care, remain contraindications to prescribing any beta-lactam (including all cephalosporins).

The following advice is being given by BCCDC and the TI to dentists:

Do not use clindamycin routinely for prophylaxis or management of dental infections. Cefuroxime is a safe option for most patients who HAVE a true penicillin allergy.
Details for antibiotic selection for prophylaxis and treatment of dental infections

In the few patients for whom Bugs & Drugs suggests prophylaxis, prescribe:

- A single 2g oral dose of amoxicillin given 30-60 minutes before dental surgery, OR
- A single 500mg oral dose of cefuroxime, if the patient has penicillin allergy

When you receive a cefuroxime prescription from a dentist for a patient with penicillin allergy, remember that it is a safe option, and may be dispensed. For further information, please see the Bugs & Drugs Guidelines on antibiotic use for dental infections.

References

https://bcmj.org/bccdc/beta-lactam-allergy-benefits-de-labeling-can-be-achieved-safely.