Penicillin allergy

- Artificial intelligence and the potential for perioperative delabeling of penicillin allergies for neurosurgery inpatients
- Impact of Penicillin Allergy-Based Alternative Antibiotics on the Risk of Postoperative Central Nervous System Infection: A Retrospective Cohort Study
- Perioperative Antibiotic Use in Endoscopic Endonasal Skull Base Surgery
- Optimizing preoperative antibiotics in patients with beta-lactam allergies: A role for pharmacy
- Intracerebral Abscess Caused by Actinomyces israelii
- Ultra-short antibiotic prophylaxis guided by preoperative microbiological nasal swabs in endoscopic endonasal skull base surgery
- Case report: vertebral osteomyelitis secondary to a dental abscess
- Cefazolin versus vancomycin for neurosurgical operative prophylaxis - A single institution retrospective cohort study

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Penicillin allergy is an abnormal reaction of your immune system to the antibiotic drug penicillin.

Penicillin is prescribed for treating various bacterial infections.

Common signs and symptoms of penicillin allergy include hives, rash, and itching.

About 10% of people report that they are allergic to penicillin; however, 90% of this group are not actually allergic.

Serious allergies only occur in about 0.03%.

Patients with penicillin allergy labels are more likely to have postoperative wound infections. When penicillin allergy labels are interrogated, a significant number of individuals do not have penicillin allergies and may be relabeled.

Jiang et al. conducted a study to gain preliminary evidence into the potential role of artificial intelligence in assisting with perioperative penicillin adverse reaction (AR) evaluation.

A single-center retrospective cohort study of consecutive emergency and elective neurosurgery admissions was conducted over a two-year period. Previously derived artificial intelligence algorithms for the classification of penicillin AR were applied to the data.

There were 2063 individual admissions included in the study. The number of individuals with penicillin allergy labels was 124; one patient had a penicillin intolerance label. Of these labels, 22.4% were not consistent with classifications using expert criteria. When the artificial intelligence algorithm was applied to the cohort, the algorithm maintained a high level of classification performance (classification accuracy 98.1% for allergy versus intolerance classification).

Conclusions: Penicillin allergy labels are common among neurosurgery inpatients. Artificial intelligence can accurately classify penicillin AR in this cohort and may assist in identifying patients suitable for delabeling [1].

1)

Jiang M, Lam A, Lam L, Kovoor J, Inglis J, Shakib S, Smith W, Abou-Hamden A, Bacchi S. Artificial intelligence and the potential for perioperative delabeling of penicillin allergies for neurosurgery inpatients. Br J Neurosurg. 2023 Feb 16:1-4. doi: 10.1080/02688697.2023.2173724. Epub ahead of print. PMID: 36794659.