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A concerning case of headache emerging during dialysis.

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Case Study : Background: Hypersensitivity reactions to dialyzers in chronic hemodialysis patients, though acknowledged, are underreported with limited available data. These reactions manifest as severe anaphylactic (type A) and milder nonspecific (type B) forms. Typical type B symptoms include chest and back pain, dyspnea, nausea, vomiting, and hypotension, occurring approximately 20-40 minutes into dialysis. This report details a case of atypical type B dialyzer reaction. Case Presentation: A 43-year-old Thai male with unknown cause end-stage renal disease initiated chronic hemodialysis due to uremia. During sessions, he experienced severe headache and nausea 30-60 minutes after initiation, with no concurrent allergic reactions. His interdialytic period was symptom-free, and lab results were normal. There were no eosinophilia and pre-dialysis BUN was 60-70 mg/dL. MRI showed no intracranial abnormalities. The patient used a high-flux Polysulfone dialyzer with INLINE steam sterilization, featuring Polyurethane potting compound and Polycarbonate housing materials. Despite investigations and prescribed pre-dialysis chlorpheniramine and steroids, symptoms persisted. Switching to a Polyester-Polymer Alloy (PEPA) membrane dialyzer, with Polyurethane potting and Polycarbonate housing sterilized by gamma rays, led to marked improvement. The patient can now undergo dialysis without pre- dialysis medication, free of intradialytic headache or nausea. Conclusion: This case presents an unconventional dialyzer reaction featuring severe intradialytic headache and nausea, consistent with type B hypersensitivity reactions. The mild nature and incongruence with type A reactions supported the type B diagnosis, further confirmed by symptom resolution. The hypothesis that the initial reaction was linked to the Polysulfone material gains credence. This case underscores the importance of recognizing atypical presentations and considering dialyzer composition in managing hypersensitivity reactions, facilitating tailored therapeutic interventions for improved patient outcomes.