

Antioxidant Prevents Organ Damage from Contrast Agents

Competitive Advantages

- ☑ Antioxidant already proven to reduce or prevent organ damage from contrast agents.
- ☑ Invention uses readily available compounds.
- ☑ Shown in pig studies to significantly reduce kidney and heart damage.
- ☑ Simplifies patient care.

Certain radiographic procedures, such as imaging of the vasculature, require large amounts of contrast agents that can inflict life-threatening damage on the kidneys.

Safe, Effective Protection

The readily available antioxidant compound N-Acetylcysteine (NAC) is known to protect many tissues and organs, including the kidneys.

The renal protection offered by NAC is especially advantageous in patients having pre-existing risk factors, such as renal failure and diabetes, that increase the potential for contrast-induced damage.

A Single Injection

The current invention is based on the simultaneous administration of NAC and a contrast agent. This approach simplifies preoperative and perioperative care, and it prevents the contrast agent from reaching the organs in the absence of the protective compound.

When tested in a standard pig model for myocardial infarction, simultaneous intracoronary administration of NAC and contrast agent reduced kidney

damage by 50 percent and reduced the size of myocardial infarctions.

Commercialization

This invention could be commercialized in the form of kits that combine NAC and a contrast agent. We believe a large market share could be realized if the kit were priced below the combined cost of the individual compounds.

Next Steps

A larger study of pigs will be conducted to confirm our findings and prepare a human trial. An NIH grant application has been filed to fund this study.

Patent / Licensing Status

Patent pending. Exclusive rights available.

Learn More

NAC abstract
interventions.onlinejacc.org/cgi/content/abstract/2/3/215

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