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Renal dose dopamine RIP?

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Comments

After decades of debate based on anecdote and a tiny number of trials, a sensible and unsurprising answer has been reached to whether 'renal dose dopamine is of benefit'. No, low dose dopamine does not do any good. Nor indeed is there any evidence from this trial that it does any harm, despite an almost vitriolic denunciation of its use in the accompanying commentary (see Additional information). The trial is exemplary in its design and execution, and, though it frankly discusses its own shortcomings, I can see no justification for the continued use of low-dose dopamine in light of this evidence. What is perhaps surprising and rather depressing is that it has taken this long for such a trial to be undertaken.

Introduction

Low-dose dopamine ($< 3 \mu\text{g/kg/min}$) has long been advocated as a strategy to effectively manage acute renal impairment. This approach has persisted despite a lack of supporting evidence, and significant, although equally unproven, concerns about its safety. To finally address this longstanding debate a large multicentre, randomised, placebo controlled trial was undertaken.

Methods

- All patients admitted to the 23 participating ICUs who presented with or developed acute renal impairment were screened
- Patients entered into the trial were randomised to receive either continuous low dose dopamine (at $2 \mu\text{g/kg/min}$) or placebo

- Outcome measures included peak serum creatinine concentration, the need for renal replacement therapy, survival, and cardiac complications

Results

- 467 patients were screened over a 3 year period
- 328 patients were randomised of whom four were later withdrawn
- 161 patients were randomised to dopamine and 163 to placebo
- Baseline characteristics including renal dysfunction and haemodynamic status were identical between the two groups
- There was no significant difference between the two groups for any of the outcome measures

Additional information

See related Commentary

Galley HF: **Renal-dose dopamine: will the message now get through?** *Lancet* 2000, **356**:2112-2113.

References

1. Korkeila M, Ruokonen E, Takala J: Low-dose dopamine in patients with early renal dysfunction: a placebo-controlled randomised trial. *Lancet*. 2001, **356**: 2139-2143.