

Donors with Stones

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ISSUE

Should kidney donors with asymptomatic small stones be allowed to donate?

Kidney stones are found incidentally in 4-9% of potential renal donors (1, 2) and there is concern that they may become symptomatic and cause damage in the remaining kidney.

DATA

While studies of patients with small asymptomatic stones (4 mm) in the general population have a high incidence of future stone events, 23% at 2.6 years follow up (3), renal donors with small asymptomatic stones (2-3mm) seem to have a low incidence of stone events , 0-2% at 2 years follow up (4,5, 6). This is perhaps due to the donors being healthier overall. In a study of 1957 kidney donors, 9.7 % had asymptomatic stones. These donors were not characterized by the typical risk factors for symptomatic stone formation such as older age, male gender, hypertension, obesity, metabolic syndrome, decreased GFR, hyperuricemia, hypercalcemia or hypophosphatemia (2). The authors suggest that perhaps they have a different pathophysiology than other stone formers, which leads to a lower rate of stone events.

In a database study by Thomas et al (7) 2000 kidney donors in Ontario were compared to 20,000 healthy non-donors linked from health care databases. Donors were not reported to have more surgical interventions for kidney stones nor did they have more hospital encounters for kidney stones. At 8 years follow up over 99% of donors had no need for stone interventions, comparable to the general healthy population with 2 kidneys.

RECOMMENDATION

1. Kidney donors with small incidental renal stones have a low rate of stone events, 0-2% at two-year follow-up. While longer follow-up is needed to obtain stronger data, we recommend allowing such donors to donate as long as they are left with the stone-free kidney and the metabolic stone work-up is negative.
2. While it is generally agreed that potential donors with symptomatic stone disease should be denied (8), one may consider accepting donors with a distant history of a single passed stone, as long as there are no stones on current imaging and the metabolic testing is negative. There is now a useful online calculator to predict stone recurrence (9) and help guide that decision.

References

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Note: The recommendations in these chapters are the opinions of the Living Donor Community of Practice of AST. They are not meant to be prescriptive and opinions by other groups or institutions may be equally valid.