

RESEARCH SUMMARY

Hydrochlorothiazide and Prevention of Kidney-Stone Recurrence

Dhayat NA et al. DOI: 10.1056/NEJMoa2209275

CLINICAL PROBLEM

Thiazide diuretics are widely used for the prevention of kidney-stone recurrence, but data regarding their efficacy and dose-response effects are limited.

CLINICAL TRIAL

Design: A double-blind, randomized trial was conducted to evaluate three doses of hydrochlorothiazide (HCT) in patients with recurrent calcium-containing kidney stones.

Intervention: 416 adults were assigned to receive HCT at a dose of 12.5 mg, 25 mg, or 50 mg once daily or placebo once daily. The primary end point was a composite of symptomatic or radiologic recurrence of kidney stones. Radiologic recurrence was defined by the appearance of new stones on imaging or the enlargement of existing stones that had been observed on the baseline image.

RESULTS

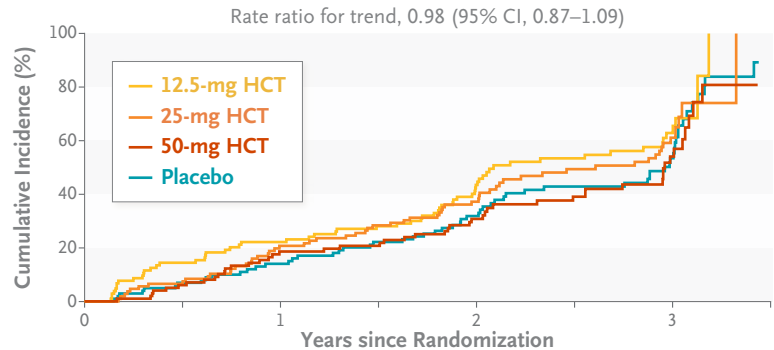
Efficacy: During follow-up (median, 2.9 years), the incidence of stone recurrence did not differ substantially among the four groups.

Safety: New-onset diabetes mellitus, hypokalemia, gout, skin allergy, and a plasma creatinine level exceeding 150% of the baseline level were more common in the HCT groups than in the placebo group. The incidence of serious adverse events was not higher with HCT than with placebo.

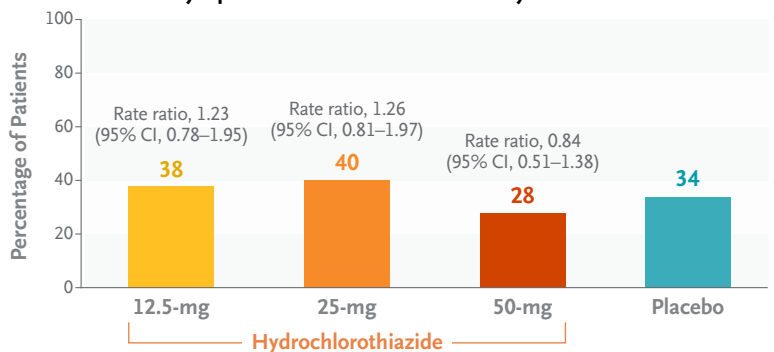
LIMITATIONS AND REMAINING QUESTIONS

- Women were underrepresented in the trial population, and most patients were White.
- The incidence of nonadherence was high — up to 26%.
- Whether the results also apply to other thiazides is unclear.
- The median follow-up was 2.9 years; the findings do not exclude the possibility that HCT may confer benefit with longer follow-up.

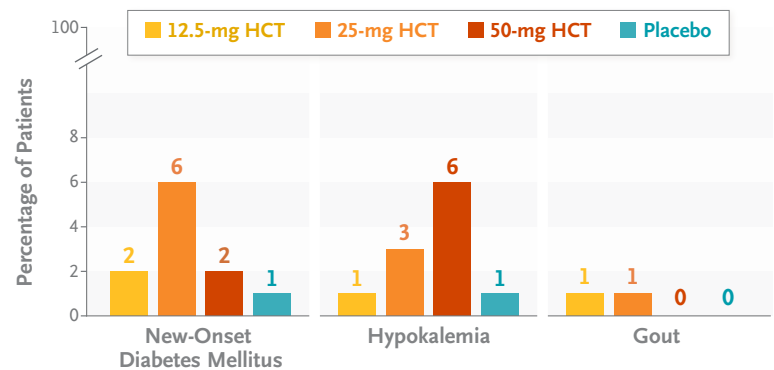
Symptomatic or Radiologic Recurrence of Kidney Stones



Symptomatic Recurrence of Kidney Stones



Selected Adverse Events of Special Interest



CONCLUSIONS

Among patients with recurrent kidney stones, the incidence of recurrence did not differ substantially among patients receiving once-daily hydrochlorothiazide at a dose of 12.5 mg, 25 mg, or 50 mg or once-daily placebo.

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