Low-dose CT noninferior for diagnosing appendicitis

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(HealthDay) -- For young adults with suspected appendicitis, low-dose computed tomography (CT) is noninferior to standard-dose CT with respect to negative appendectomy rates, according to a study published in the April 26 issue of the *New England Journal of Medicine*.

Kyuseok Kim, M.D., from the Seoul National University College of Medicine in South Korea, and colleagues conducted a single-blind noninferiority trial for 891 patients with suspected appendicitis, aged 15 to 44 years. Participants were randomly allocated to low-dose CT (444 patients; median radiation dose, 116 mGy/cm) or standard-dose CT (447 patients; median radiation dose, 521 mGy/cm). The rate of negative appendectomies was measured, with a noninferiority margin of 5.5 percent.

The researchers found that the negative appendectomy rate was 3.5 and 3.2 percent in the low-dose and standard-dose CT groups, respectively (difference, 0.3 percent). There were no significant between-group differences in the appendiceal perforation rate (26.5 percent for low-dose CT versus 23.3 percent for standard-dose CT; P = 0.46) or in the proportion of patients who required additional imaging (3.2 and 1.6 percent, respectively; P = 0.09).

"We found that the use of low-dose CT as the first-line imaging test was noninferior to standard-dose CT with respect to the negative appendectomy rate among young adults with suspected appendicitis," the authors write.

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More information: Full Text (subscription or payment may be required)