

Influence of fasting on contrast-enhanced CT scans in a cancer center.

Paula NVP Barbosa (AC Camargo Cancer Center, Brazil), Rubens Chojniak (AC Camargo Cancer Center, Brazil), Almir GV Blencourt (AC Camargo Cancer Center, Brazil), Chiang J Tyng (AC Camargo Cancer Center, Brazil), Rodrigo R Cunha (AC Camargo Cancer Center, Brazil), Demian J Travesso (AC Camargo Cancer Center, Brazil), Maria Fernanda A Almeida (AC Camargo Cancer Center, Brazil).

BACKGROUND: Computed tomography (CT) is one of the imaging modalities presenting major technological advances, producing a large volume of images with high resolution and short acquisition time. Most imaging centers routinely recommend fasting for 4 to 6 hours prior to use of intravenous contrast. Previous studies have shown that prolonged fasting can promote dehydration and vasovagal adverse reactions. And indeed, manufacturers claim that there is no need of special preparation for patients using nonionic agents, except that they are hydrated.

HYPOTHESIS: The aim of this study was to evaluate the effect of fasting on contrast-enhanced CT scans in a cancer center.

METHODS: After approval of the institutional ethics review board, this prospective randomized study evaluated 3206 oncologic outpatients. These patients were divided randomly into two groups. The group 1 consisted of patients fasted for at least 4 hours and the group 2 was formed by non-fasted patients. The comparative analyses between the variables found in the groups were performed by the chi-square test and Fisher's exact test.

RESULTS: We evaluated 1619 patients in group 1 and 1587 in group 2. There were no differences between groups 1 and 2 in relation to gender, age, cancer type, staging or treatment. On group 1, 45 patients (1.5%) had adverse symptoms after intravenous contrast administration. On group 2, 30 patients (0.9%) had adverse symptoms. The most common symptoms presented were nausea (32), weakness (12) and vomiting (5). No statistically significant changes were observed between the groups ($p > 0.05$). In conclusion, low frequency of adverse symptoms was observed in our sample of oncologic outpatients after intravenous non-ionic iodinated contrast administration, regardless of fasting. These results confirm that no special preparation is required for contrast-enhanced CT scans, which improves the logistics of the cancer center and makes a comfortable and convenient routine for patients.