RADIOLOGICAL ASSESSMENT OF GASTRIC EMPTYING OF WATER SOLUBLE CONTRAST MEDIA: NEW DATA SECURITY FROM A COHORT STUDY

*MC. Niño, L. Ferrer, D. Romero, J. Diaz, D. Aguirre.
Hospital Universitario Fundación Santa Fe de Bogotá*

Introduction

Practice Guidelines for preoperative fasting have not clearly established the time needed after oral administration of water soluble contrast media (WSCM) (1).

The objective of this study was to define how long it takes for WSCM to completely transit the stomach when an enhanced abdominal CT scan is done in patients with acute abdominal pain who may undergo surgery.

Materials and methods

This prospective longitudinal cohort study included sixty-eight patients with acute abdominal pain requiring a WSCM enhanced abdominal CT (computed tomography) study.

Plain radiographs were obtained hourly until complete gastric emptying of WSCM was achieved. Patients with probable bowel obstruction were excluded from the study.

Results

31 (45.6%), 54 (79.4%), and 64 (94.1%) patients achieved complete gastric clearance of barium in 1, 2 and 3 hours, respectively.

All patients achieved complete gastric emptying of WSCM within 6 hours. Gastric emptying time was not associated with gender ($p=0.44$), body mass index ($p=0.35$), fasting time prior to WSCM intake ($p=0.12$), administration of opioids in the emergency room ($p=0.70$), or presence of comorbidities ($p=0.36$).

Figure 1. Gastric emptying at first and third hour

Time to emptying (hours)	n=68	%
1	31	45,6
2	54	79,4
3	64	94,1
4	66	97,1
5	67	98,5

Table 1. Patients with complete gastric emptying at each hour.

Conclusions

94% of the patients with acute abdominal pain and no bowel obstruction achieved complete gastric emptying within 3 hours of the administration of WSCM. All of them achieved complete gastric emptying within 6 hours. We consider it is clinically relevant to wait 6 hours after oral intake of the contrast media to ensure the complete transit of WSCM through the stomach and avoid unnecessary risks.

References

1. American Society of Anesthesiologists Committee. Practice guidelines for preoperative fasting and the use of pharmacologic agents to reduce the risk of pulmonary aspiration: application to healthy patients undergoing elective procedures: an updated report by the American Society of Anesthesiologists Committee on Standards and Practice Parameters. Anesthesiology 2011;114:495– 511.