



Supine and erect abdominal radiographs are both feasible in patients with acute abdomen

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DEAR EDITOR,

We have read the article entitled “Diagnostic values of supine and erect abdominal radiographs for patients with acute abdomen: which is better for decision making?” published in the June issue of the *Journal of the Chinese Medical Association* with interest.¹ Lee et al.¹ tried to evaluate whether supine or erect abdominal radiographs are more suitable in cases of acute abdomen. The authors found that there was no significant difference in diagnostic sensitivity between the two modalities among all causes-inducing acute abdomen. As for bowel obstruction, the study revealed statistically better diagnostic relevance in erect abdominal radiographs. We congratulated the authors’ successful publication but there are some questions that need clarification.

First, is it possible that one computed tomography (CT) scan reported more than one diagnosis? For example, a patient might simultaneously have a tubo-ovarian abscess associated with either adynamic ileus or obstructive bowel syndrome. Could the authors kindly provide the rationale about their strategy to evaluate the acute abdomen or whether their study would influence the further therapeutic plan (surgical intervention or conservative treatment)? Second, the authors concluded that erect abdominal radiographs were strongly suggested to use if highly suspected bowel obstruction. We appreciated the authors’ effort to propose this recommendation; however, no matter whether an erect or supine abdominal radiograph was used, it may hardly influence the decision and the subsequent management as shown above. In cases with extremely severe abdominal pain or uncertain diagnosis of acute abdomen, most of the clinicians may arrange a CT scan for further evaluation regardless of abdominal radiograph findings.^{2–5} Besides, it is uncomfortable and difficult for patients with acute abdomen to keep an erect

posture. Additionally, the position of standing may be much distorted during the examination because of intolerance of pain.

Despite the aforementioned questions, the authors provided evidence of abdominal radiographs choice regarding to acute abdomen.¹ Based on this study, clinicians may save their time and effort to struggle with whether erect or supine abdominal radiographs should be taken. Though the CT scan had relatively higher accuracy, the importance and role of conventional radiographs or much convenient and little or absence of radiation-exposure ultrasound in the setting of emergency department should not be neglected.^{6,7} Especially in the era of the coronavirus disease 2019 (COVID-19) pandemic^{8,9}, timely CT scan may be less available to individuals with acute abdomen. Also, conventional radiographs bring the least pressure to staff in hospital than other modalities for fear of getting infection.¹⁰ Overall, we appreciate the authors’ great work focusing on this topic. We hope to learn more from the authors with positive response.

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REFERENCES

1. Lee CY, Chen JD. Diagnostic values of supine and erect abdominal radiographs for patients with acute abdomen: which is better for decision making? *J Chin Med Assoc* 2022;85:709–16.
2. Liu CH, Liu WM, Wang PH. Laparoscopic-aid procedure for complicated gynecologic surgery. *Taiwan J Obstet Gynecol* 2022;61:195–6.
3. Laméris W, van Randen A, van Es HW, van Heeswijk JP, van Ramshorst B, Bouma WH, et al; OPTIMA study group. Imaging strategies for detection of urgent conditions in patients with acute abdominal pain: diagnostic accuracy study. *BMJ* 2009;338:b2431.
4. Hsueh YW, Lin YC, Lin CH, Chen HC, Huang ZY, Chai JW, et al. Trends in computed tomography scan uses in Taiwan from 2000 to 2013. *J Chin Med Assoc* 2019;82:948–56.
5. Ye BW, Lee KC, Hou MC. Endoscopic management of malignant gastric outlet obstruction. *J Chin Med Assoc* 2021;84:346–53.
6. Lo PF, Chang WH, Wang PH. Is ultrasound valuable for the diagnosis of women with abnormal detrusor activity? *J Chin Med Assoc* 2022;85:3–4.
7. Geng WZM, Fuller M, Osborne B, Thoires K. The value of the erect abdominal radiograph for the diagnosis of mechanical bowel obstruction and paralytic ileus in adults presenting with acute abdominal pain. *J Med Radiat Sci* 2018;65:259–66.

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8. Tseng JY, Hsu SH, Lai HY. A disposable envelope for video-assisted intubating stylet during tracheal intubation in COVID-19 pandemic. *J Chin Med Assoc* 2022;85:136.
9. Ma HH, Tsai SW, Chen CF, Wu PK, Chen CM, Chiang CC, et al. Impact of screening COVID-19 on orthopedic trauma patients at the emergency department: a consecutive series from a level I trauma center. *J Chin Med Assoc* 2021;84:423–7.
10. Akudjedu TN, Botwe BO, Wuni AR, Mishio NA. Impact of the COVID-19 pandemic on clinical radiography practice in low resource settings: the Ghanaian radiographers' perspective. *Radiography (Lond)* 2021;27:443–52.