

Review Form 3

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| Journal Name: | Asian Journal of Medicine and Health |
| Manuscript Number: | Ms_AJMAH_125968 |
| Title of the Manuscript: | Diagnostic accuracy of calcified aortic knob found in chest radiograph for detection of coronary Artery calcification |
| Type of the Article | |

Review Form 3

PART 1: Review Comments

| Compulsory REVISION comments | Reviewer's comment | Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part. | The article, <i>Diagnostic accuracy of calcified aortic knob found in chest radiograph for detection of coronary artery calcification</i> , investigates the diagnostic effectiveness of identifying coronary artery calcification (CAC) through calcified aortic knobs on chest radiographs. The authors conducted an observational cross-sectional study with 441 individuals aged 40-75 without known coronary artery disease or diabetes, utilizing coronary calcium scoring from CT scans as a comparison benchmark. Their findings indicate that while a calcified aortic knob (grades 1-3) correlates strongly with CAC (positive predictive value of 88.07%), the method lacks sufficient sensitivity (61.5%) and a strong negative predictive value (46.18%), suggesting that a non-calcified knob does not reliably exclude CAC. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | yes | |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | In methodology: <input type="checkbox"/> Describe study design and participants: Note the cross-sectional approach and sample criteria (e.g., non-diabetic, CAD-free). <input type="checkbox"/> Outline diagnostic comparison: Mention that chest radiograph findings (calcified aortic knobs) were assessed against CT-based calcium scores using specific accuracy metrics. | |
| Are subsections and structure of the manuscript appropriate? | Need improvements | |
| Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part. | The observational, cross-sectional study involved 441 non-diabetic, coronary artery disease-free participants aged 40-75. Researchers evaluated chest radiographs, scoring calcification in the aortic knob on a four-point scale (0-3) and correlating it with coronary calcium scores (CAC >0) obtained via CT scans. Key performance metrics for diagnostic accuracy were calculated, including sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV). | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | yes | |

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| Minor REVISION comments | Needs editing | |
| Is the language/English quality of the article suitable for scholarly communications? | | |
| Optional/General comments | <p>Study Overview</p> <p>Improvement Suggestions:</p> <ul style="list-style-type: none">• Add context to sample choice: Explain the reason for selecting non-diabetic, coronary artery disease-free participants.• Provide more on methodology: Specify imaging techniques, grading scale rationale, and statistical methods used to compare radiographs with CT results.• Summarize main metrics concisely: List the key diagnostic accuracy metrics (sensitivity, specificity, PPV, NPV) briefly and directly. <p>Discussion</p> <p>Improvement Suggestions:</p> <ul style="list-style-type: none">• Incorporate literature comparison: Relate the study's findings to those of other studies, e.g., Adar et al. and Kalsch et al., to reinforce validity.• Expand on negative results: Explain why low sensitivity and NPV matter clinically and suggest potential reasons for these lower values.• Address diagnostic scenarios: Discuss specific clinical scenarios where this diagnostic method would be most beneficial or limited. | |

PART 2:

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| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
| Are there ethical issues in this manuscript? | (If yes, Kindly please write down the ethical issues here in details) | |

Reviewer Details:

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| Department, University & Country | Minia University, Egypt |