LETTERS TO EDITOR

## Reply to the Letter to the Editor: Evidence based clinical practice manual: Patient preparation for surgery and transfer to the operating room theater<sup> $\star$ </sup>



Réplica a la Carta al Editor: Manual de práctica clínica basado en la evidencia: preparación del paciente para el acto quirúrgico y traslado al quirófano

At the end of 2014 the Colombian Society of Anesthesiology and Reanimation (Sociedad Colombiana de Anestesiología y Reanimación – S.C.A.R.E.) undertook a project that culminated with the publication of four evidenced-based manuals, resulting from a systematic adaptation process.<sup>1–4</sup> Mainly, these manuals aimed to provide a base for clinics and hospitals who did not have access to these documents or the operative capacity to developed them. This was done in order to comply with Colombian regulations.<sup>5</sup> Our goal was never to replace documents previously developed by other health institutions.

Ibarra and collaborators disagree with two recommendations published on the manual on preparing the patient for surgical procedures.<sup>6</sup> Those disagreements are related to preoperative evaluation and correspond to only one of the eight sections of the manual.<sup>1</sup>

The development and writing to the manual was carried out through a process of systematic adaptation that follows Colombian<sup>7</sup> and international guidelines,<sup>8</sup> as adequately specified in the method section of the manual.<sup>1</sup>

We found no justification to disqualify the protocol used for the adaptation<sup>9</sup> based on the (lack of) recognition of the institution that endorsed it, the authors' work experience or publishing background or the lack of support from a scientific society of any particular country. In fact, tools used for the methodological evaluation in terms of validity and risk of bias in primary<sup>10,11</sup> and secondary<sup>12,13</sup> do not take these aspects into account as a source of methodological shortcomings.

To our knowledge, there is no published classification that shows that the American College of Cardiology/American Heart Association (ACC/AHA) 2014 guides<sup>14</sup> are the most relevant academically. This arbitrarily ignores the scientific value of other publications,<sup>15,16</sup> even more so when some authors have criticized the ACC/AHA guides base done empirical evidence.<sup>17,18</sup>

It is very important that the recommendations of the manual be interpreted and applied in the context of the level of evidence and the strength of recommendation following the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) classification.<sup>19</sup> In the case of preoperative request of electrolytes the manual recommends it while warning that the level of evidence is very low and the strength of recommendation is weak. Nevertheless, other publications make similar recommendations.<sup>16,20</sup> Furthermore, there is evidence of the independent association of electrolyte disorders (hypernatremia and hyponatremia) and mortality after 30 days in patients undergoing elective surgery.<sup>21</sup>

The use of a 12-lead preoperative electrocardiogram (EKG) has been the object of intense debate.<sup>20</sup> The manual recommends<sup>1</sup> adjusting the paraclinical request for cardiovascular assessment to one of the guides currently used internationally. $^{14,15}$  Though the 2014 ACC/AHA guides $^{14}$  and the 2012 American Society of Anesthesiologists (ASA) guide<sup>16</sup> do not take preoperative EKGs based on age into account, the 2014 European Society of Cardiology/European Society of Anaesthesiology (ESC/ESA) guidelines recommend it in patients over the age of 65, even when risk factors are not present, in patients scheduled for surgeries of intermediate risk.<sup>15</sup> This is based on observational evidence<sup>22</sup> and on the idea that the usefulness of preoperative EKGs goes beyond preoperative risk-determination, as it can be useful to have a base pattern to correctly interpret abnormalities detected during or after surgery that could be interpreted incorrectly as new findings.<sup>23</sup> Furthermore, apart from age, an abnormal preoperative EKG is associated independently with perioperative complications (OR 2.8; CI 95% 1.4-5.8).<sup>24</sup> In patients with coronary disease, the prognostic utility of the EKG is independent from findings in the health record.<sup>25</sup>

As such, this manual continues to be available, and surgical services of health institutions that require it are invited to take it into account as an option to be adopted or adapted.

## Financing

The authors did not receive any sponsorship to produce this article.

<sup>\*</sup> Please cite this article as: Rincón-Valenzuela DA, Escobar B. Réplica a la Carta al Editor: Manual de práctica clínica basado en la evidencia: preparación del paciente para el acto quirúrgico y traslado al quirófano. Rev Colomb Anestesiol. 2016;44:71–73.

## **Conflict of interest**

The authors declare having no conflicts of interest.

## REFERENCES

- Rincón-Valenzuela DA, Escobar B. Manual de práctica clínica basado en la evidencia: preparación del paciente para el acto quirúrgico y traslado al quirófano. Rev Colomb Anestesiol. 2015;43:32–50.
- Navarro-Vargas JR, Matiz-Camacho H, Osorio-Esquivel J. Manual de práctica clínica basado en la evidencia: Reanimación cardiocerebropulmonar. Rev Colomb Anestesiol. 2015;43:9–19.
- 3. Benavides Caro CA, Prieto Alvarado FE, Torres M, Buitrago G, Gaitán Duarte H, García C, et al. Manual de práctica clínica basado en la evidencia: Controles posquirúrgicos. Rev Colomb Anestesiol. 2015;43:20–31.
- 4. Calvache JA, León Guzmán É, Gómez Buitrago LM, García Torres C, Torres M, Buitrago G, et al. Manual de práctica clínica basado en la evidencia: manejo de complicaciones posquirúrgicas. Rev Colomb Anestesiol. 2015;43:51–60.
- 5. Ministerio de Salud y Protección Social. Resolución 2003 de 2014, Colombia, Diario Oficial no. 49.167; 2014.
- 6. Ibarra P, Zárate E, Robledo B, Arango E, Bille Fals E, Sarmiento Á, et al. Manual de práctica clínica basado en la evidencia:preparación del paciente para el acto quirúrgico y traslado al quirófano. Rev Colomb Anestesiol. 2016;44:69–70.
- International Committee of Medical Journal Editors. Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals; 2014. Available from http://www.icmje.org/icmjerecommendations.pdf [accessed 15.12.14].
- Card R, Sawyer M, Degnan B, Harder K, Kemper J, Marshall M, et al. Health care protocol. Perioperative protocol. Institute for Clinical Systems Improvement; 2014 [Consultado 15 Nov 2015]. Disponible en: https://www.icsi.org./\_asset/0c2xkr/ Periop.pdf
- Jadad AR, Moore RA, Carroll D, Jenkinson C, Reynolds DJ, Gavaghan DJ, et al. Assessing the quality of reports of randomized clinical trials: is blinding necessary? Control Clin Trials. 1996;17:1–12.
- **11**. Higgins JPT, Altman DG, Gøtzsche PC, Jüni P, Moher D, Oxman AD, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. BMJ. 2011;343:d5928.
- 12. Shea BJ, Grimshaw JM, Wells GA, Boers M, Andersson N, Hamel C, et al. Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. BMC Med Res Methodol. 2007;7:10.
- **13.** Brouwers MC, Kho ME, Browman GP, Burgers JS, Cluzeau F, Feder G, et al. The Global Rating Scale complements the AGREE II in advancing the quality of practice guidelines. J Clin Epidemiol. 2012;65:526–34.
- 14. Fleisher LA, Fleischmann KE, Auerbach AD, Barnason SA, Beckman JA, Bozkurt B, et al. 2014 ACC/AHA guideline on

perioperative cardiovascular evaluation and management of patients undergoing noncardiac surgery: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Circulation. 2014;130:e278–333.

- 15. Kristensen SD, Knuuti J, Saraste A, Anker S, Bøtker HE, De Hert S, et al. 2014 ESC/ESA Guidelines on non-cardiac surgery: cardiovascular assessment and management: The Joint Task Force on non-cardiac surgery: cardiovascular assessment and management of the European Society of Cardiology (ESC) and the European Society of Anaesthesiology. Eur J Anaesthesiol. 2014;31:517–73.
- 16. Committee on Standards and Practice Parameters, Apfelbaum JL, Connis RT, Nickinovich DG, American Society of Anesthesiologists Task Force on Preanesthesia Evaluation, Pasternak LR, et al. Practice advisory for preanesthesia evaluation: an updated report by the American Society of Anesthesiologists Task Force on Preanesthesia Evaluation. Anesthesiology. 2012;116:522–38.
- Tricoci P, Allen JM, Kramer JM, Califf RM, Smith SC. Scientific evidence underlying the ACC/AHA clinical practice guidelines. JAMA. 2009;301:831–41.
- Bangalore S, Wetterslev J, Pranesh S, Sawhney S, Gluud C, Messerli FH. Perioperative beta blockers in patients having non-cardiac surgery: a meta-analysis. Lancet. 2008;372:1962–76.
- 19. Guyatt GH, Oxman AD, Schünemann HJ, Tugwell P, Knottnerus A. GRADE guidelines: a new series of articles in the Journal of Clinical Epidemiology. J Clin Epidemiol. 2011;64:380–2.
- 20. Feely MA, Collins CS, Daniels PR, Kebede EB, Jatoi A, Mauck KF. Preoperative testing before noncardiac surgery: guidelines and recommendations. Am Fam Physician. 2013;87:414–8.
- 21. Bishop MJ, Souders JE, Peterson CM, Henderson WG, Domino KB. Factors associated with unanticipated day of surgery deaths in Department of Veterans Affairs hospitals. Anesth Analg. 2008;107:1924–35.
- Correll DJ, Hepner DL, Chang C, Tsen L, Hevelone ND, Bader AM. Preoperative electrocardiograms: patient factors predictive of abnormalities. Anesthesiology. 2009;110: 1217–22.
- 23. De Hert SG. Preoperative electrocardiograms: obsolete or still useful? Anesthesiology. 2009;110:1205–6.
- 24. Fritsch G, Flamm M, Hepner DL, Panisch S, Seer J, Soennichsen A. Abnormal pre-operative tests, pathologic findings of medical history, and their predictive value for perioperative complications. Acta Anaesthesiol Scand. 2012;56:339–50.
- 25. Jeger RV, Probst C, Arsenic R, Lippuner T, Pfisterer ME, Seeberger MD, et al. Long-term prognostic value of the preoperative 12-lead electrocardiogram before major noncardiac surgery in coronary artery disease. Am Heart J. 2006;151:508–13.

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