Review of: "A Literature Review on the Levels of Toxic Metals/Metalloids in Meat and Meat Products in Asian Countries: Human Health Risks"

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Potential competing interests: No potential competing interests to declare.

1. Strengths of the Article

a. Relevance of the Research Context

The article addresses a critical global issue, linking the nutritional benefits of meat consumption to potential health risks arising from environmental contamination. By focusing on Asia, particularly China, the review effectively utilizes the region's abundant data availability, making it both timely and regionally relevant.

b. Evidence-Based Approach

The study employs comprehensive searches through PubMed and Scopus to gather literature, demonstrating a systematic approach to evidence collection. While not a meta-analysis, this methodology ensures coverage of diverse perspectives and findings.

c. Detailed Discussion

The article comprehensively explores multiple toxic metals and metalloids, including arsenic (As), cadmium (Cd), mercury (Hg), and lead (Pb). It provides specific data on concentrations and dietary intakes from various Asian countries, offering an insightful overview of regional exposure and risks.

2. Areas for Improvement

a. Need for Clearer Structure

The article lacks explicit segmentation into standard sections such as *Introduction*, Methodology, Results, Discussion, and Conclusion. A more structured format would make the review easier to follow and align it with European and U.S. academic standards.

b. Limited Statistical Analysis

While the review consolidates substantial data, it does not attempt statistical aggregation or meta-analysis. Incorporating such methods would strengthen the findings and provide greater statistical rigor.

c. Absence of Methodological Critique

The authors assume that all reviewed studies used reliable analytical methods because they were published in reputable journals. However, European and U.S. standards require critical evaluation of methodologies to ensure the validity and comparability of data.

d. Lack of Discussion on Socioeconomic Implications

The article primarily focuses on health risks without exploring broader socioeconomic impacts, such as potential economic costs and public health challenges associated with toxic metal contamination in the food supply chain.

3. Recommendations for Improvement

To enhance the article's alignment with international standards, the following improvements are recommended:

- Systematic Structure: Reorganize the article into distinct sections, including an introduction, detailed methodology with inclusion/exclusion criteria, results, discussion, and conclusions.
- Incorporate Statistical Analysis: Apply meta-analysis techniques or statistical comparisons to better quantify risk levels and reinforce conclusions.
- Critique Methodologies: Include an evaluation of the analytical methods used in the reviewed studies, such as validation of inductively coupled plasma mass spectrometry (ICP-MS) or atomic absorption spectrometry (AAS).
- Expand Discussion: Explore the socioeconomic and environmental dimensions of toxic metal contamination, such as impacts on food safety regulations, public health interventions, and consumer trust.
- Global Contextualization: Compare findings with data from other continents to illustrate similarities and differences in toxic metal exposure via meat consumption.
- Policy Recommendations: Provide actionable recommendations for policymakers and stakeholders to mitigate risks associated with toxic metal contamination in the meat supply.

4. Overall Assessment

The article offers valuable insights into toxic metal contamination in meat products across Asian countries. It successfully identifies regional variations and potential health risks, supported by a wide range of data. However, to meet the standards of leading European and U.S. journals, the article would benefit from a more structured presentation, including statistical analyses and a critical appraisal of the methodologies employed in the reviewed studies.