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Subclinical thyroid disorders should not be considered to be a non-classical risk factor for cardiovascular diseases

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Dear Editor,

I read with interest the editorial about subclinical thyroid disorders as a non-classical risk factor for cardiovascular disease.[1] Although the editorial discusses some particularly important issues regarding the epidemiology of cardiovascular diseases and points out that there is a high burden of underdiagnosed subclinical thyroid diseases, especially among women and individuals with low socioeconomic status, some remarks about this need to be made.

There is no doubt about the importance of studying the association of subclinical thyroid disorders and cardiovascular risk. However, this association is weak and there is no evidence that treatment of these disorders is associated with reduced cardiovascular outcomes. Epidemiology, like science itself, is not value-free and it may be used as a tool to support predetermined ideas, as has been pointed out by many commentators.[2] In the case of subclinical thyroid disorders, although many studies have shown that they have an association with surrogate markers for cardiovascular disease, their associations with clinical outcomes are less clear. The magnitude of the association is low and, hence, presence of such an association might only be a representation of residual confounding. Moreover, no randomized trial on treatment effect has been conducted.[3]

Sir Richard Doll has suggested that for an epidemiological study to be reasonably convincing, the lower limit of the 95% confidence level of increased risk should fall above a threefold increase (> 200% increase).[2,4] Other authors have even suggested that a fourfold increase in risk should be the lower limit.[2,4] On the other hand, subtler risks, such as the 30 to 50% increase in risk that has been observed in some studies on subclinical thyroid disorders, are not compelling. However, use of subclinical thyroid disorders as a novel cardiovascular risk factor would affect a large segment of the population (high prevalence of subclinical thyroid disorders) and have a potentially huge negative impact on public health, through transforming healthy people into sick people, without the expected benefits from treating a true risk factor.

We are increasingly embedded in a culture of overuse of medical services and medicalization of society. Our never-ending search for risk factors has been very favorable to and has been stimulated by the biomedical industry. Over the last few decades, we have gradually seen a change in preventive strategies such that high-risk strategies have become prioritized through reducing the cutoff points of traditional risk factors and creating new ones.

In fact, this sort of high-risk strategy has departed from the original strategy conceptualized by Geoffrey Rose almost three decades ago.[5] This misinterpretation of Rose's concept tries to encompass some of the characteristics of the original population strategy, to produce an intermediate type of prevention strategy that only exhibits the downsides of both the high-risk and the population strategy. It may also produce more fear and morbidity than what it is supposed to prevent, through transforming healthy people into sick individuals.

Therefore, I fear that attributing the status of a new cardiovascular risk to subclinical thyroid disorders is a misunderstanding that may reinforce the overmedicalization of an already medicalized society that perfectly suits a neoliberal approach to healthcare.[6] This leads to labeling (i.e. heightened awareness of pseudo-risk factors), a range of psychological and physical side-effects, rising healthcare costs and overutilization of healthcare services without delivering better outcomes.

Healthcare needs to be directed towards sick and suffering people, such that prevention is left to interventions that are mostly outside the healthcare system. Indeed, the distinction between clinical care and prevention of future disease is essential for any robust healthcare system to thrive.

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INSTRUCTIONS FOR AUTHORS

Scope and indexing

São Paulo Medical Journal (formerly Revista Paulista de Medicina) was founded in 1932 and is published bimonthly by Associação Paulista de Medicina, a regional medical association in Brazil.

The Journal accepts articles in English in the fields of evidence-based health, including internal medicine, epidemiology and public health, specialized medicine (gynecology & obstetrics, mental health, surgery, pediatrics, urology, neurology and many others), and also physical therapy, speech therapy, psychology, nursing and healthcare management/administration.

São Paulo Medical Journal's articles are indexed in MEDLINE, LILACS, SciELO, Science Citation Index Expanded, Journal Citation Reports/Science Edition (ISI) and EBSCO Publishing.

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São Paulo Medical Journal supports Open Science practices. It invites reviewers to join Open Peer Review practices through acceptance that their identities can be revealed to the authors of articles. However, this is purely an invitation: reviewers may also continue to provide their input anonymously.

São Paulo Medical Journal is an open-access publication. This means that it publishes full texts online with free access for readers.

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The Journal recommends that all articles submitted should comply with the editorial quality standards established in the Uniform Requirements for Manuscripts Submitted to Biomedical Journals,[1] as updated in the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals. These standards were created and published by the International Committee of Medical Journal Editors (ICMJE) as a step towards integrity and transparency in science reporting and they were updated in December 2018.[1]

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Acknowledgements and funding

Grants, bursaries and any other financial support for studies must be mentioned separately, after the references, in a section named "Acknowledgements." Any financial support should be acknowledged, always with the funding agency name, and with the protocol number whenever possible. Donation of materials used in the research can and should be acknowledged too.

This section should also be used to acknowledge any other contributions from individuals or professionals who have helped in producing or reviewing the study, and whose contributions to the publication do not constitute authorship.

Authorship

The Journal supports the position taken by the ICMJE (http://www.icmje.org) regarding authorship. All authors should read ICMJE's recommendations to obtain clarifications regarding the criteria for authorship and to verify whether all of them have made enough contributions to be considered authors.[10]

All authors of articles published in *São Paulo Medical Journal* need to have contributed actively to the discussion of the study results and should review and approve the final version that is to be released. If one author has not contributed enough or has not approved the final version of the manuscript, he/she must be transferred to the Acknowledgement section.

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After receipt of the article through the electronic submission system, it will be read by the editorial team, who will check whether the text complies with the Journal's Instructions for Authors regarding format. The Journal has adopted the *CrossRef Similarity Check* system for identifying plagiarism and any text that has been plagiarized, in whole or in part, will be promptly rejected. Self-plagiarism will also be monitored.

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The modified article must be accompanied by a letter answering the referees' comments, point by point. The modified article and the response letter are presented to the editorial team and reviewers, who will verify whether the problems have been resolved adequately. The text and the reviewers' final evaluations, along with the response letter, will then be sent to the Editor-in-Chief for a decision.

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To format these documents, use Times New Roman font, font size 12, line spacing 1.5, justified text and numbered pages.

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All manuscripts must be submitted with a covering letter signed at least by the corresponding author. The letter must contain the following five essential items relating to the manuscript:

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General guidelines for original articles

The following are considered to be full-text original articles: clinical trials; cohort, case-control, prevalence, incidence, accuracy and cost-effectiveness studies; case series (i.e. case reports on more than three patients analyzed together); and systematic reviews with or without meta-analysis. These types of article should be written with a maximum of 3,500 words (from the introduction to the end of the conclusion).

Typical main headings in the text include Introduction, Methods, Results, Discussion and Conclusion. The authors can and should use short subheadings too, especially those concerning the reporting guideline items.

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Results from cases with DNA sequences must be deposited in appropriate public databases. The protocol number or URL can be requested at any time during the editorial review. Publication of other research data in public repositories is also recommended, since it contributes towards replicability of research, increases article visibility and possibly improves access to health information.

Sample size

All studies published in SPMJ must present a description of how the sample size was arrived at. If it was a convenience or purposive sample, the authors must declare so and explain the characteristics of this sample and recruitment method. For clinical trials, for instance, it is mandatory to inform each of the three main values used to calculate sample size:

- power (usually 80% or more);
- level of significance (usually 0.05 or lower);
- clinically meaningful difference (effect size targeted), according to the main outcome measurement.

Regardless of study results (if "positive" or "negative"), the journal will probably reject articles of trials using underpowered samples, when sample size has not been properly calculated or the calculation has not been fully described as indicated above.

Abbreviations, acronyms and products

Abbreviations and acronyms must not be used, even those in everyday use, unless they are defined when first used in the text. However, authors should avoid them for clarity whenever possible. Drugs or medications must be referred to using their generic names (without capital letters), with avoidance of casual mention of commercial or brand names.

Interventions

All drugs, including anesthetics, should be followed by the dosage and posology used.

Any product cited in the Methods section, such as diagnostic or therapeutic equipment, tests, reagents, instruments, utensils, prostheses, orthoses and intraoperative devices, must be described together with the manufacturer's name and place (city and country) of manufacture in parentheses. The version of the software used should be mentioned.

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Short communications are reports on the results from ongoing studies or studies that have recently been concluded for which urgent publication is important. They should be structured in the same way as original articles. The authors of this kind of communication should explain, in the covering letter, why they believe that publication is urgent. Short communications and case reports must be limited to 1,000 words (from the introduction to the end of the conclusion).

Case reports, case series, narrative reviews and letters to the editor

Starting in June 2018, only individual case reports dealing with situations of public health emergencies will be accepted by *São Paulo Medical Journal*. Case reports that had already been accepted for publication up to May 2018 will still be published in a timely manner.

After initial evaluation of scope by the editor-in-chief, case reports, case series and narrative reviews will be considered for peer-review evaluation only when accompanied by a systematic search of the literature, in which relevant studies found (based on their level of evidence) are presented and discussed.[12] The search strategy for each database and the number of articles obtained from each database should be shown in a table. This is mandatory for all case reports, case series and narrative reviews submitted for publication. Failure to provide the search description will lead to rejection before peer review.

The access route to the electronic databases used should be stated (for example, PubMed, OVID, Elsevier or Bireme). For the search strategies, MeSH terms must be used for Medline, LILACS, and Cochrane Library. DeCS terms must be used for LILACS. EMTREE terms must be used for Embase. Also, for LILACS, the search strategy must be conducted using English (MeSH), Spanish (DeCS) and Portuguese (DeCS) terms concomitantly. The search strategies must be presented exactly as they were used during the search, including parentheses, quotation marks and Boolean operators (AND, OR, and NOT). The search dates should be indicated in the text or in the table.

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The title page must contain the following items:

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The second page must include the title and a structured abstract in English with a maximum of 250 words. References must not be cited in the abstract.

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References

For any manuscript, all statements in the text that do not result from the study presented for publication in the *São Paulo Medical Journal* but from other studies must be accompanied by a quotation of the source of the data. All statements regarding health statistics and epidemiological data should generally be followed by references to the sources that generated this information, even if the data are only available electronically.

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For figures relating to microscopic findings (i.e. histopathological results), a scale must be embedded in the image to indicate the magnification used (just like in a map scale). The staining agents (in histology or immunohistochemistry evaluations) should be specified in the figure legend.

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