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PROTOCOL

Mapping recommendations on aortic aneurysm in elderly patients: a scoping review protocol

Recomendaciones para la elaboración de mapas sobre aneurismas aórticos en pacientes ancianos: protocolo de revisión del alcance

Mapeamento de recomendações sobre aneurisma de aorta em pacientes idosos: protocolo de revisão de escopo

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Abstract

The aim was to map and characterize the scientific evidence from 2020 to the time of the search regarding recommendations and guidelines related to aortic aneurysm in elderly people in a hospital setting. This is a structured scoping review protocol following the methodological guidelines of the Joanna Briggs Institute and reported according to PRISMA-ScR. The review question was developed based on the PCC strategy, considering elderly people, care practices, and management of aortic aneurysm in a hospital setting. Searches will be conducted in the MEDLINE/PubMed and Embase databases and in the grey literature of the Virtual Health Library, with study selection by independent reviewers and data extraction using a structured form. It is expected that the results will allow for mapping and systematizing the main evidence on recommendations and care practices directed at elderly people with aortic aneurysm in a hospital setting, contributing to the improvement of care and the identification of gaps in the literature.

Descriptors: Aortic Aneurysm; Elderly; Hospital Setting; Person-Centered Care; Cardiovascular Diseases.

Resumén

El objetivo fue mapear y caracterizar la evidencia científica desde 2020 hasta el momento de la búsqueda sobre recomendaciones y guías relacionadas con el aneurisma aórtico en personas mayores en el ámbito hospitalario. Se trata de un protocolo de revisión del alcance estructurada que sigue las directrices metodológicas del Instituto Joanna Briggs y se informa según PRISMA-ScR. La pregunta de revisión se desarrolló con base en la estrategia de Atención Centrada en la Persona (ACP), considerando a las personas mayores, las prácticas de atención y el manejo del aneurisma aórtico en el ámbito hospitalario. Se realizarán búsquedas en las bases de datos MEDLINE/PubMed y Embase, así como en la literatura gris de la Biblioteca Virtual en Salud (VBS). La selección de estudios estará a cargo de revisores independientes y la extracción de datos se realizará mediante un formulario estructurado. Se espera que los resultados permitan mapear y sistematizar la evidencia principal sobre recomendaciones y prácticas de atención dirigidas a personas mayores con aneurisma aórtico en el ámbito hospitalario, contribuyendo a la mejora de la atención y a la identificación de lagunas en la literatura.

Descriptores: Aneurisma Aórtico; Personas Mayores; Ámbito Hospitalario; Atención Centrada en la Persona; Enfermedades Cardiovasculares.

Resumo

Objetivou-se mapear e caracterizar as evidências científicas desde 2020 até o momento da realização da busca sobre recomendações e orientações relacionadas ao aneurisma de aorta dirigido a pessoas idosas em ambiente hospitalar. Trata-se de um protocolo de revisão de escopo estruturado conforme as orientações metodológicas do *Joanna Briggs Institute* e relatado segundo o PRISMA-ScR. A questão de revisão foi elaborada com base na estratégia PCC, considerando pessoas idosas, práticas de cuidado e manejo do aneurisma de aorta em ambiente hospitalar. As buscas serão realizadas nas bases de dados MEDLINE/PubMed, Embase e na literatura cinzenta Biblioteca Virtual em Saúde, com seleção dos estudos por revisores independentes e extração de dados em formulário estruturado. Espera-se que os resultados permitam mapear e sistematizar as principais evidências sobre recomendações e práticas de cuidado direcionadas à pessoa idosa com aneurisma de aorta em ambiente hospitalar, contribuindo para a qualificação da assistência e para a identificação de lacunas na literatura.

Descritores: Aneurisma de Aorta; Idoso; Ambiente Hospitalar; Cuidado Centrado na Pessoa; Doenças Cardiovasculares.

Introduction

Population aging is one of the most striking demographic phenomena of the 21st century, with accelerated growth in the elderly population, especially in low- and middle-income countries. United Nations estimates indicate that the number of people aged 60 or older is expected to double in the coming decades, significantly reshaping the organization of health systems[1]. The World Health Organization highlights that increased longevity is accompanied by a significant growth in complex chronic diseases, demanding care models that integrate clinical care, disability prevention, psychosocial support, and health education strategies centered on the elderly. In this context, cardiovascular diseases stand out as the leading cause of morbidity and mortality in the elderly population[2,3].

Aortic aneurysm is generally an asymptomatic and highly serious condition with a potentially fatal risk, the incidence of which increases with age. The risk of rupture is influenced by factors frequently present in this population, such as age-related structural changes, frailty, and multiple comorbidities, including hypertension and atherosclerosis[4-6]. International and national guidelines converge on defining an aneurysm as a focal and permanent dilation of the aorta equal to or greater than 50% of the expected normal diameter, although they adopt different operational thresholds and therapeutic approaches, varying between absolute diameter values, indexing to body surface area, and individualized criteria for intervention[5-7].

Some guidelines prioritize absolute values for diagnostic and epidemiological purposes, such as the 3.0 cm cutoff point for abdominal aortic aneurysm[6,7], while others emphasize indexing the diameter to body surface area and patient phenotype, particularly in thoracic aneurysms and associated genetic conditions[5]. At the thresholds for surgical intervention, with the classic recommendation of 5.5 cm for men and lower values for women, due to the higher risk of rupture[7], whereas recent approaches reinforce individualization based on aneurysm growth rate, family history, anatomical characteristics, and overall surgical risk[5,6]. Furthermore, they differ in the emphasis placed on frailty and advanced age in therapeutic decision-making, with geriatric assessment and life expectancy being central components in the most recent recommendations[5], while other guidelines predominantly emphasize the assessment of perioperative risk and cardiovascular comorbidities[6,7].

Caring for elderly individuals with aortic aneurysms involves complex clinical decisions, including appropriate monitoring, treatment indication and selection, as well as individualized management based on clinical and functional conditions[4].

Although clinical guidelines are available for the management of aortic aneurysm, the recommendations often treat the adult population in an aggregated way, with less focus on the clinical, functional, and decisional particularities of the elderly individual[5,7]. In this context, there is a lack of systematically organized guidelines for elderly individuals with aortic aneurysms in the hospital setting, especially considering aspects such as frailty, decision-making, and the specific needs of their care.

Given this gap, this study aims to conduct a scoping review to map recent scientific evidence on guidelines related to aortic aneurysm, directed at elderly people in a hospital setting.

Methodology

This scoping review protocol was structured in accordance with the methodological guidelines of the Joanna Briggs Institute (JBI)[8]. The review will be conducted and reported in accordance with the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, Scoping Reviews Extension (PRISMA-ScR) checklist[9]. Registered with the Open Science Framework (OSF) under the registration: DOI 10.17605/OSF.IO/BZMRU.

Research question

The review question was developed using the PCC (Population, Concept, and Context) strategy: Population (P): older adults (60 years or older); Concept (C): clinical care, management strategies, and guidelines/recommendations for aortic aneurysm; Context (C): hospital setting.

Thus, this review seeks to answer the following question: "What clinical care practices, management strategies, and guidelines/recommendations have been described in the recent literature for older adults with aortic aneurysm in a hospital setting?".

Eligibility criteria

Based on the research question, eligibility criteria were defined. All studies with participants aged 60 years or older, using quantitative, qualitative, or mixed approaches, will be included. Only fully available studies obtained will be included.

The time frame was defined starting in 2020 to ensure the inclusion of updated evidence, in line with recent changes in diagnostic and therapeutic recommendations for aortic aneurysm. Studies addressing clinical practices, care protocols, clinical management strategies, and guidelines/recommendations in a hospital setting related to aortic aneurysm will be considered. Studies in English, Spanish, and Portuguese will be selected. Studies addressing infected aneurysms, studies focused on reoperations, late postoperative complications, comparative surgical techniques for reintervention, opinion articles, letters to the editor, duplicate publications, and those that do not address the guiding question defined by the PCC strategy will be excluded.

Information sources and search strategies

To identify relevant studies, searches will be conducted in the electronic databases MEDLINE/PubMed, Embase, and the Virtual Health Library (VHL) platform. Additionally, a search of grey literature will be carried out through the Brazilian Digital Library of Theses and Dissertations (BDTD). A preliminary search was conducted on April 14, 2025, for the purpose of initial exploration of the topic and verification of the existence of similar studies. The search strategy will include descriptors from the Medical Subject Headings (MeSH) and the Health Sciences

Descriptors (DeCS), "Aortic Aneurysm", "Aged", "Elderly", "Health Literacy", and "Hospitals", combined with alternative terms using the Boolean operators "AND" and "OR". The initial search strategy in PubMed was developed as follows (Chart 1):

Chart 1. Search strategies. Rio de Janeiro, RJ, Brazil, 2025

Search No.	Search strategies	Studies identified
1#	"aortic aneurysm"[MeSH Terms] OR ("aortic"[All Fields] AND "aneurysm"[All Fields]) OR "aortic aneurysm"[All Fields] OR ("aortic aneurysm"[MeSH Terms] OR ("aortic"[All Fields] AND "aneurysm"[All Fields]) OR "aortic aneurysm"[All Fields] OR ("aortic"[All Fields] AND "aneurysms"[All Fields]) OR "aortic aneurysms"[All Fields]).	19,595
2#	"aged"[MeSH Terms] OR "aged"[All Fields] OR "aged"[MeSH Terms] OR "aged"[All Fields] OR "elderly"[All Fields] OR "elderlies"[All Fields] OR "elderly s"[All Fields] OR "elderlys"[All Fields].	1,289,632
3#	"hospital s"[All Fields] OR "hospitalisation"[All Fields] OR "hospitalization"[MeSH Terms] OR "hospitalization"[All Fields] OR "hospitalised"[All Fields] OR "hospitalising"[All Fields] OR "hospitality"[All Fields] OR "hospitalisations"[All Fields] OR "hospitalizations"[All Fields] OR "hospitalize"[All Fields] OR "hospitalized"[All Fields] OR "hospitalizing"[All Fields] OR "hospitals"[MeSH Terms] OR "hospitals"[All Fields] OR "hospital"[All Fields] OR "hospital s"[All Fields] OR "hospitalisation"[All Fields] OR "hospitalization"[MeSH Terms] OR "hospitalization"[All Fields] OR "hospitalised"[All Fields] OR "hospitalising"[All Fields] OR "hospitality"[All Fields] OR "hospitalisations"[All Fields] OR "hospitalizations"[All Fields] OR "hospitalize"[All Fields] OR "hospitalized"[All Fields] OR "hospitalizing"[All Fields] OR "hospitals"[MeSH Terms] OR "hospitals"[All Fields] OR "hospital"[All Fields].	3,299,188
4#	**1# AND 2# AND 3#**	**4,773**
Languages: Portuguese, Spanish and English		

The search strategy will be adapted to the specific characteristics of each information source researched. When applicable, filters will be used to limit the studies to those published in defined languages, to studies involving humans, focused on elderly populations, and within a time frame.

Study selection process

The studies will be made available in electronic RIS (Research Information Systems) format, imported into Rayyan software for duplicate removal and subsequent screening and selection of documents for the review study, reducing errors and/or biases. The screening and selection process will be conducted by two independent, blinded reviewers in two distinct phases. In phase 1, titles and abstracts will be read to assess eligibility criteria for inclusion and exclusion. In phase 2, the selected studies will be read in full, evaluating their ability to answer the guiding research question to compose the final sample for the scoping review. In cases of disagreement between reviewers, consensus will be reached; if the disagreement persists, a third reviewer will be consulted. A manual search will be conducted in the reference lists of the included studies to identify relevant publications. The final sample of selected studies will be imported into EndNote for reference management and bibliographic formatting. Before the screening and data extraction stages, a meeting will be held with the reviewers to present the protocol, clarify the eligibility criteria, and standardize the data extraction form, with the aim of ensuring consistency and minimizing discrepancies.

Data extraction process from selected studies

Data extraction from the selected studies will be performed using a structured form to facilitate the synthesis of evidence, utilizing an Excel spreadsheet adapted for this study, based on the form recommended by the JBI. The extraction will be carried out by two independent reviewers, with disagreements resolved by a third reviewer. The characteristics to be extracted include: author(s), title, year of publication, country of origin, study objective, methodological design, sample, data collection method, main findings and conclusions, limitations, relevant observations, as well as the inclusion decision and its justification. Methodological evaluation of the studies will not be necessary, since this is a scoping review, whose objective is to map the available evidence, and not to identify the best evidence to answer a specific question.

Data summary

At the end of the process, a cross-check of the information extracted from the studies will be carried out, with discrepancies resolved by a third reviewer. The synthesis of the results will be organized into thematic axes constructed from the recommendations identified in the included studies, contemplating, when applicable, aspects related to diagnosis, clinical surveillance, therapeutic indication, decision-making, educational practices, and particularities of care for the elderly. The organization and interpretation of the findings will be carried out through descriptive thematic analysis, allowing the categorization and systematization of the recommendations identified in the literature. The data will be presented in tables and graphs, accompanied by a qualitative (narrative) synthesis of the guidelines described in the literature. All scientific works used will be duly cited and referenced, in accordance with copyright regulations.

Expected results

This scoping review is expected to contribute to the mapping and systematization of available evidence on

recommendations and guidelines related to the care of elderly people with aortic aneurysm in a hospital setting.

The review aims to produce a map of the selected evidence and describe the recommendations organized into thematic areas related to diagnosis, surveillance, therapeutic management, decision-making, and educational practices focused on the elderly. Furthermore, the synthesis of the evidence will allow for the identification of gaps in scientific knowledge and aspects that are still underexplored in literature. The findings may support clinical practice, care planning, and the development of educational strategies and care protocols, contributing to improved care, patient safety, and shared decision-making.

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