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Analysis of the Relationship Between Migraine and Cardiovascular Diseases: an Integrative Review

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Introduction
Migraine is a common type of primary headache which, affecting approximately 1.04 billion people, is considered the third most disabling pain in the world. Parallel to this, it is known that cardiovascular diseases are quite present in society and are related to several other comorbidities. In this sense, since migraine and vascular diseases are very prevalent, it is legitimate to assume that there is some relationship between them. Thus, since this study is relevant because it addresses very important themes in contemporary times, its justification is given by the intention of better understanding how migraine is related to cardiovascular diseases.

Objective
To analyze the relationship between migraine and cardiovascular diseases.

Methods
This is an integrative review based on research in the MEDLINE, EMBASE, LILACS and SciELO databases, using the descriptors "Cardiovascular Diseases", "Headache" and "Migraine Disorders", combined using the Boolean operator "AND". We selected studies available in their full versions, published in English, Portuguese or Spanish, between 2019 and 2023. After screening by stages, excluding studies of the review type and those that were not directly related to the aforementioned descriptors, eight articles were selected that addressed the relationship between cardiovascular diseases and migraine.

Results
Initially, a national population-based study conducted in South Korea demonstrated that the diagnosis of migraine was significantly associated with an increased risk of acute myocardial infarction, stroke, and cardiovascular death. Population and prospective research has reported an increased risk of ischemic stroke and atrial fibrillation in migraine patients, associating migraine with a high occurrence of known vascular risk factors. In addition, a prospective cohort study of 29,040 women demonstrated that, compared with those with no history of migraine, those with migraine with aura had a 9% increased risk of developing hypertension (95% CI: 1.02; 1.18); those who have migraine without aura, an increase of 21% (95% CI: 1.14; 1.28); and those with a history of migraine, an increase of 15% (95% CI: 1.07; 1.23), demonstrating that women who have migraine have a greater chance of developing hypertension and, consequently, some cardiac complication in the future. Ratifying this, a cohort survey conducted with 27,488 women demonstrated that individuals who suffer from migraine with aura have a higher risk of cardiovascular death. Starting now for analyses by age groups, it was observed that a comparative approach performed with young people reported that spontaneous coronary artery dissection was more present in people with migraine. A study of middle-aged individuals showed that people with cardiovascular diseases resulting from metabolic changes were more likely to have migraine, especially those with aura. Finally, a retrospective cohort study conducted with older Americans demonstrated that individuals with migraine are at increased risk of ischemic stroke.

Conclusion
It can be concluded that the relationship between migraine and cardiovascular diseases is quite significant. It is valid to state that, in a relationship of mutual cause and effect, migraine has the potential to favor the emergence of cardiovascular diseases and vice versa, in the most diverse age groups. Therefore, more and more studies are needed to deepen the knowledge about this relationship, in order to better understand it and, consequently, to combat, more efficiently, both cardiovascular diseases and migraines.

Keywords: Headache Disorders; Primary; Migraine Disorders; Cardiovascular Diseases.