

<https://doi.org/10.29289/259453942024V34S1069>

Is it possible that there is a relationship between meningioma and the appearance of breast cancer? A systematic review

Gustavo Moreira Andrade¹, Isabela Alves Milhomens¹, Giovana Netto Pinheiro¹, Gustavo Nunes Ramos¹, Giovana Martins da Silva¹, Marcos Vinícius Milki¹, Júlia França Montanini¹

¹Pontifícia Universidade Católica de Goiás, Department of Undergraduate Medicine.

Objective: This study aimed to verify whether there is a relationship between the appearance of breast cancer in patients previously diagnosed with meningioma. If this relationship is found, this research will also aim to encourage other research to understand the reason for this relationship. **Methodology:** We comprehensively searched the PubMed database for case reports and case series that included the incidence of meningioma and patients with the diagnosis of breast cancer in their papers. Our systematic review followed the PRISMA statement guidelines. **Results:** There are more than 49 reported and dated cases of the association between meningioma and breast cancer. Therefore, it is clear that there is an implicit association between meningiomas and breast carcinoma when we look at these data. Many of these cases occur during pregnancy, which can lead to a hormonal hypothesis in their genesis. In a bidirectional study, 795,000 patients were observed who had follow-up for years, in which the standardized incidence ratio was 1.27 for meningioma after a case of breast cancer; in 28,000 patients, the standardized incidence ratio was 1.32 for breast cancer after meningioma. However, in a mono-institutionalized study, 12,330 patients were analyzed and only 33 were observed to have meningioma, presenting a low relational value. **Conclusion:** It was observed that there is an inconsistency between the numerous clinical cases found and the research carried out, so there is no way to conclude the correlation between the tumors, but we cannot discard these data. Therefore, further research must be carried out so that we can further improve screening against these tumors; however, from this review, it is now possible to think of meningioma as a differential diagnosis for neurological symptoms in patients with breast cancer or a previous history.

Keywords: breast cancer; meningioma; relation.