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Association between silicone breast implants and autoimmune diseases: is there any evidence?

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Background and Aim: Silicone breast implants (SBI) have for long been considered as biologically inert and harmless. However the relationship between SBI and the risk of autoimmune diseases has generated intense medical interest over the past few years. The aim of our review is to summarize the data linking SBI and autoimmune diseases.
Method: A clinical research was conducted including articles from the last 16 years, in Portuguese and English languages, using the Mesh terms "breast implants" and "autoimmune diseases". The literature searches were done in MEDLINE databases; National Clearinghouse; Canadian Medical Association Practice Guidelines InfoBase; Guidelines Finder of the National Electronic Library for Health in the British NHS; Database of Abstracts of Reviews of Effectiveness - Centre for Reviews and Dissemination; Bandolier and The Cochrane Library. We used the the Oxford 2011 Levels of Evidence to assign a level-of-evidence. Eligible articles included those who described a population of adult women (>17 years), which have breast implants versus women without implants. The clinical outcome measured was the development of an autoimmune disease.
Results: of the 244 articles obtained, 3 matched eligibility criteria (2 meta-analysis and 1 cohort study). One of the meta-analysis suggests that the evidence remains inconclusive. The other meta-analyses concluded that there was no evidence of association between SBI and any of the individual connective-tissue diseases or other autoimmune or rheumatic conditions. The cohort study concluded that in susceptible women, with pre-existent allergies, SBI was associated with an autoimmune syndrome.
Conclusions: Evidence remains inconclusive about any association between SBI and autoimmune diseases. We will need better evidence from large studies, with long time follow-up and with accurate methodology.