
Evaluation of techniques for detecting breast implant rupture

Framarin A

Record Status

This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Framarin A. Evaluation of techniques for detecting breast implant rupture. Montreal: Agence d'évaluation des technologies et des modes d'intervention en santé (AETMIS). AETMIS 02-01 RE. 2002

Authors' objectives

The aim of this report is to examine the efficacy of mammography in detecting breast silicon implant rupture and the potential risks associated with this technique, in order to determine if these risks justify the use of an alternative imaging modality, such as MRI.

Authors' conclusions

- The current state of knowledge reveals a lack of scientific data demonstrating the toxicity of silicone breast implants or the adverse health effects of silicone in women. This said, breast implant rupture is a local complication that has mainly esthetic consequences. However, if silicone turns out to be toxic to women, research should focus on the very use of breast implants rather than on implant rupture, for it is recognized that silicone migrates by sweating, even from intact implants, and that an implant shell is a source of silicone exposure.
- For now, published study reports do not provide explicit justification for setting up a program for implant rupture screening in asymptomatic women, since most of these studies involved women in whom the likelihood of rupture was high.
- Few studies have examined the role of mammography in iatrogenic implant rupture. The compression required during mammography could exacerbate a preexisting defect or cause an intracapsular rupture to become extracapsular, without constituting the primary cause of the rupture.
- The utility of MRI seems to reside in better detection of intracapsular rupture. However, such ruptures are generally asymptomatic, and there is no consensus regarding the indication for removal.
- Since MRI is slightly less specific than mammography in detecting extracapsular rupture, its use could result in the removal of intact implants. Yet, the risks and adverse esthetic consequences of this procedure could be worse than those associated with keeping the implant in place, despite an intracapsular rupture.
- MRI is an expensive technique, and in Quebec, time on the waiting list for MRI is at least one year. On the other hand, mammography and ultrasonography are accessible screening tools and are already being used by the vast majority of the women in the Quebec Breast Cancer Screening Program or, outside this program, for diagnostic purposes.

Recommendation: - Given the data on the efficacy and accessibility of the different techniques, AETMIS believes that, if there is a clinical presumption of rupture, the course of action should be modeled on the one which is detailed in the algorithm proposed by Samuels and colleagues and which is embraced by the IOM. A mammographic examination followed by a breast ultrasound is the recommended strategy of first recourse. If the results of these two examinations are normal, it is advisable to provide a clinical follow-up. If either of these examination reveals an extracapsular rupture, the implant is removed. If the results of these examinations reveal an intracapsular rupture, some women may choose to keep their implants and to undergo a periodic clinical follow-up. Lastly, if the results are equivocal or suspicious or do not agree with the findings of the clinical examination, MRI is performed.

Project page URL

<http://www.aetmis.gouv.qc.ca/>

Indexing Status

Subject indexing assigned by CRD

MeSH

Breast Implants; Postoperative Complications; Rupture, Spontaneous /diagnosis

Language Published

English, French

Country of organisation

Canada

Province or state

Quebec

Address for correspondence

2021, Union Avenue, Bureau 10.083 Montreal (Quebec), H3A 2S9 CANADA Tel: +1 514 873 2563 Fax: +1 514 873 1369 Email: aetmis@aetmis.gouv.qc.ca

AccessionNumber

32002000411

Date bibliographic record published

04/12/2002

Date abstract record published

04/12/2002