

## **Silicone breast implants and echocardiographic interactions: A brand new study**

Sir,

We present a retrospective observation of 120 patients who underwent implantation of prosthetic devices in the mammary region over a period from April 2010 to April 2014 to assess the impact of the prosthetic implant on the execution echocardiographic examination.<sup>[1]</sup>

The cohort of patients was divided into four groups of thirty patients:

- Group A: Patients submitted to the left breast reconstruction with tissue expander and implant after modified radical mastectomy
- Group B: Patients submitted to the left breast reconstruction with expander and implant after skin/nipple sparing mastectomy
- Group C: Patients submitted to subglandular breast augmentation
- Group D: Patients submitted to submuscular breast augmentation.

No limitations on implant volumes were present.

All patients were subjected to echocardiographic investigation to study cardiac chambers and valves with the possibility of assessing abnormalities of all type.

In four cases were observed interferences on the acquisition and interpretation of echocardiographic images.<sup>[2]</sup>

The patients who experienced echocardiographic limitations both belonged to Group A (patients who underwent breast reconstruction with expander and implant after modified radical mastectomy) and among the patients of this group, were those with implants of greater volume and size.

From a clinical point of view, on the basis of the study, we can state that the implantation of prosthetic devices in the breast region, both in cosmetic that in oncoplastic surgery of the breast, does not cause considerable difficulties in

the acquisition and interpretation of echocardiographic images.<sup>[1,3]</sup> Nevertheless, in the case of implants with large volume and size, we detected limitations confined to a single acoustic windows. However, they did not affect the ability to execute the echocardiographic examination that could be easily performed through traditional or modified projections.

Still further studies are required to establish better the connection between silicone implants and echocardiographic images, to appraise surgeons and patients about eventual diagnostic difficulties.

From a medical-legal point of view, especially in patients submitted to breast reconstruction with expander and implant, it is important, in our opinion, to include in the informed consent information about the possibility that the breast implant can limit, in some projections, the execution of echocardiography, which remains, by the way, executable.

Breast implants are not considered 'long-life-devices' from the Food and Drug Administration, but they remain for years in the patients' body, so they must be informed on the issues highlighted by this letter, to reduce medical-legal repercussions.

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### Conflicts of interest

There are no conflicts of interest.

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