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The Value of Preoperative Thermography in Patients Undergoing Reduction Mammaplasty and Mastopexy

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The authors present telethermography as a complementary preoperative test. The procedure helps us choose the technique to be used, eliminating cases in which cutaneous glandular dissection is not advisable because of anomalous irrigation (deficient internal mammary artery). It also offers us a guide to the safe level of dissection and extirpation of the inferior internal sector of the breast, depending on the point of exit of the internal mammary vascular pedicles. Finally, it tells us which breast must be reconstructed first (the one with the least vascularization in its internal hemiglandula). Postoperative comparative telethermography may also be used to detect any pathological process that appears later.

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Throughout the years we have tried a variety of procedures for reducing the size of the breasts and for correcting ptosis. However, we have always returned to the basic principles of the Biesenberger [1] operation for reduction mammaplasty and mastopexy, for they have given us the best aesthetic results.

Our modified technique consists of wide separation of the skin and immediately underlying subcutaneous tissue from the gland [2, 3]. The lateral half of the mammary gland is then extirpated. The remaining glandular element is fixed to the chest wall in such a manner as to form a conical shape. A skin brassiere is next fashioned over the gland, removing the excess skin. The nipples are located so that they point downward to compensate for postoperative changes. The resulting scars are lateral, vertical with a lateral downward prolongation, or L-shaped. We prefer this method because no other operation has given better long-term results (Fig 1).

It is recognized, however, that due to variations in the blood supply of the breast, necrosis may follow Biesenberger's operation or a modification thereof in a small percentage of cases. The arterial blood supply and venous drainage of the nipple-areolar complex come not only from the mammary gland but also from the cutaneous vessels—primarily the internal mammary (internal thoracic) and the external mammary (lateral thoracic) arteries and veins. In the Biesenberger mammaplasty technique, the skin and subcutaneous tissues are separated from the gland. The entire lateral portion of the breast parenchyma is removed. The incision is S-shaped and penetrates the full thickness of the gland. This can impair both main elements of the blood supply to the glandular portion of the breast and to the nipple and areola.

To help us in selecting patients for the Biesenberger procedure, and to thereby avoid cases of necrosis, we employ preoperative thermography. Thermography enables us to visualize the venous pattern of the breasts. If the internal mammary circulation is good (Fig 2), as it is in more than 75% of our patients, we use our preferred technique. If the internal mammary circulation appears to be inadequate, as in Figure 7, we use some other operation that does not involve cutaneous-glandular separation [4].

Thermography is useful in another respect. In each case it offers a guide to the safe level of dissection of the inferior internal sector of the breast, should it be necessary to remove more than the ex-

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