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Conference Presidents: Univ. Prof. Dr. med. Gerhard Pierer, Univ. Prof. Dr. med. Peter M. Vogt, Univ. Prof. Dr. med. Anton Schwabegger, Prof. Dr. med. Dr. med. habil. Wolfgang Gubisch

Abstract

V127 The titanium mesh as "camouflage mesh" in prosthetic breast surgery?

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Objective:

The positive tissue properties of titanium and its tissue integration as well as biocompatibility are sufficiently well known. Titanium meshes manufactured by PFM are the only meshes which can firmly bond titanium with covalent bonding onto the mesh. Thus the titanium cannot be wiped off or scaled off. These titanium meshes are known in hernia surgery and have been used for several years. These meshes were also used successfully in regions previously subjected to radiotherapy. Several studies confirm this.

It was my objective to show the good tissue tolerance of the TiLOOP Bra meshes on the breast in plastic surgery procedures, with the meshes also applied in tissue previously subjected to radiotherapy. This has a high level of relevance as, following ablation and radiotherapy, patients cannot always undergo reconstruction with autologous tissue or do not always wish to do so and prosthetic reconstruction following radiotherapy results in a high rate of capsular fibrosis.

Patients and methods:

Since 2008 34 patients have been operated on with a total of 55 meshes. Of these 23 patients received a prosthetic reconstruction following ablation with radiotherapy. The prostheses were tucked in submuscularly into the titanium mesh or the pectoral muscle was attached in the caudal section with the mesh over the prosthesis. 34 patients had follow-up examinations. One patient out of the 23 underwent a follow-up operation due to rotation of the prosthesis, 4 further patients underwent a follow-up operation in order to improve the aesthetic image. The meshes were exclusively inserted into vital tissue.

Results:

Tissue intolerance, such as allergies or tissue rejections, could not be established at any time. In 2 cases a slight infection developed, which was easily controllable with antibiotic treatment. No postoperative bleeding occurred; however, more serous swellings were shown, which were easily treatable by leaving the Redon drain in place for a longer period. No slipping of the prostheses involving displacement occurred, although one anatomical prosthesis twisted and had to be operated on subsequently. In this patient the neofascia with the titanium mesh could be well examined intraoperatively. Within the three years of using this method for prosthetic reconstruction following radiotherapy only one patient showed Baker II-III capsular fibrosis. This is a rate of 4.3%.

Conclusion:

Through tissue integration the titanium meshes can develop a "neofascia" in the breast, which holds the prosthesis stable in its position. Furthermore, it protects the pectoral muscle from slipping away across the prosthesis towards the mediocranial region. In addition, it shows a very low capsular fibrosis rate, which was not to be expected due to the radiotherapy. A capsular fibrosis rate of 4.3% corresponds to the value of patients who have not undergone radiotherapy over a period of 10 years. Now it remains to be observed whether this astonishingly low fibrosis rate will last over several years.