

## Klinik für Plastische und Ästhetische Chirurgie

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### Brustchirurgie:

- Brustverkleinerungen
- Brustvergrößerungen
- Korrekturen angeborener Brustfehlbildungen/tubuläre Brust
- Korrekturen von Implantatfehlagen
- Korrekturen von Kapselfibrosen
- Gynäkomastieoperationen
- Angleichende Brustoperationen bei Transsexualismus (FzM/MzF)

### Rekonstruktive Brustchirurgie:

- Mikrochirurgische Eigengewebsrekonstruktionen (DIEP-, TMG-, S/I-GAP-, TDAP-Lappenplastik)
- Implantatrekonstruktionen

Rekonstruktive Chirurgie nach Tumor und Unfall

Handchirurgie

Zweitmeinungssprechstunde

Ihr Schreiben Unser Zeichen

Datum  
08.06.2022

Of the member of the dissertation council for the dissertation of *Zolotykh Valeriy Gennadievich* on the topic: "Study of immuno-endocrine reactions after silicone mammoplasty", submitted for the degree of *candidate* of medical sciences in a scientific speciality 3.3.3. Pathological physiology 3.1.9. Surgery.

The dissertation research focuses on the study of the effect of silicone implants on the patients' organisms. It was planned and carried out in St. Petersburg, Russia. The relevance of the research topic is determined not only by a growing number of breast surgeries using silicone implants, but also by periodically updated scientific data on long-term effects of silicone implants on the patient's organism. This prospective, cohort, observational, analytical study traced the long-term results of surgical treatment outcomes in 79 out of 106 patients who underwent 119 operations for both aesthetic, reconstructive and oncological indications.

In patients, not only complications and parameters of the immune and endocrine status were assessed before, 3, 6 and 12 months after surgery, but also their statistical interactions both with each other and with clinical and anamnestic parameters.

The study resulted in seven peer-reviewed publications and six presentations at international conferences.

The following results should be mentioned:

- preoperative hyperprolactinemia, in about half of the patients, regardless of the nature of the indications for surgery (aesthetic correction, reconstruction after cancer treatment, oncological surgery), that was further arrested without additional prolactin-suppressive therapy.
- The hypothesis of the researchers about possible stimulation of prolactin directly by the silicone implant or surgical trauma was not confirmed.
- No statistical relationship was found between the patients' diagnoses ("aesthetic" and "oncological/reconstructive"), surgical complications and the presence of silicone implants.

- According to the study, the dynamics of titers of autoantibodies to the TSH receptor before and after operations using silicone implants indicates an increase in autoimmune processes in the thyroid gland.

Some of the important findings:

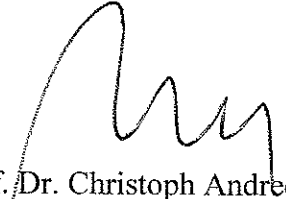
- In almost 80% of patients operated on with a silicone implant, starting from six months after surgery, a two-fold increase in the level of autoantibodies to the TSH receptor was observed;
- Temporary rises in prolactin and TSH levels before implantation of silicone should not be considered as a manifestation of immuno-endocrine reactions to silicone, as they are likely a consequence of psychophysiological stress phenomena;
- The researcher suggests that the implementation of silicone implants in patients with chronic lymphocytic thyroiditis and Basedow-Graves disease is contraindicated due to the adjuvant effect of the latter in relation to autoimmunity to the thyroid gland.

According to the results of the study, the following recommendations may have practical value:

1. All patients planned for surgery using silicone implants should be examined for the presence of antibodies to the TSH receptor in the blood serum as a marker of chronic lymphocytic thyroiditis and Basedow-Graves disease, and if they have one of the listed diagnoses, they should not be allowed for such an operation.
2. All patients who underwent breast arthroplasty need long-term follow-up with mandatory monitoring of the level of antibodies to the TSH receptor starting from 6 months after surgery.
3. The presence of a silicone implant should be considered by endocrinologists as a risk factor for the development of chronic lymphocytic thyroiditis and Basedow-Graves disease.

The design of the study was reasoned out taking into account the research works that had already been carried out and described in the scientific literature, taking into account the controversy of the issue under study, the variety of operated nosologies. Selected method of statistical data processing – R-programming, allows a qualitative interpretation of the data obtained. The number of patients received sufficient conclusions. The dissertation work can be recommended as meeting the requirements for a PhD thesis.

Dissertation of *Zolotykh Valeriy Gennadievich* on the topic: "Study of immuno-endocrine reactions after silicone mammoplasty" *meets* the basic requirements established by Order No.11181/1 dd. 19.11.2021 "On the procedure for awarding academic degrees at St. Petersburg State University". The applicant *Zolotykh Valeriy Gennadievich* *deserves* to be awarded the academic degree of *candidate* of medical sciences in a scientific speciality 3.3.3. Pathological physiology 3.1.9. Surgery. Paragraphs 9 and 11 of the specified Order have not been violated.



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Member of the Dissertation Council