

KIDNEY GRAFT REJECTION AFTER SILICONE BREAST IMPLANT SURGERY

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In the patient presented in this study, bilateral breast implant surgery was performed by a submuscularly placed silicone gel implant. Unfortunately, a surgical team from another healthcare facility did not consult a nephrologist before the surgery, which was a necessary step in order to adjust the dosage of immunosuppressive therapy. During the early postoperative period, the patient developed febrility and acute mastitis, as well as acute renal transplant rejection. The patient was hospitalized at the Clinic of Nephrology, Clinical Center of Montenegro. After two weeks of treatment and care, her kidney transplant function recovered.

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Key words: *transplantation, acute renal rejection, silicone implant*

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Introduction

Renal transplantation is a method of choice for treatment of end-stage renal disease. It requires permanent use of immunosuppressive drugs for prevention of acute rejection. Although antigen-dependent immune responses have traditionally been considered critical for induction of both acute and chronic allograft rejection, there is accumulating evidence supporting the observation that antigen-independent injury and subsequent inflammation may trigger allograft rejection. There is no data on the use of silicone breast implants in renal transplant recipients (1, 2).

Discussion

A 49-year-old woman with end-stage renal disease was treated with hemodialysis for three

months, after which a cadaveric kidney transplantation was performed. Her posttransplant immunosuppressive protocol included cyclosporin, mycophenolate mofetil and prednisolone. Three years later, she was diagnosed with right-sided breast cancer, treated with right mastectomy and radiotherapy. Throughout this period, the kidney graft function remained satisfactory. Eighteen months after the right mastectomy, the patient was diagnosed with cancer in her left breast, treated with left mastectomy, after which she requested bilateral breast reconstruction for aesthetic reasons. A bilateral breast implant surgery was performed with the submuscularly placed silicone gel implant. Unfortunately, the surgical team that performed the breast implant surgery did not consult a nephrologist prior to the operation, which was a necessary step in order to adjust the dosage of immunosuppressant drugs. During the early postoperative period, she developed fever and acute mastitis (C-reactive protein level of 168 mg/L with pain and serohemorrhagic discharge from breasts), as well as acute kidney graft rejection (creatinine level of 178 μ mol/L, blood urea nitrogen level of 7.3, creatinine clearance of 0.36 ml/s and proteinuria of 2.98 g/24h with a diuresis of 2000 ml, and echosonographic signs of acute graft rejection). She exhibited generalized edema with a body mass of 78 kg. Also, drug monitoring showed a cyclosporine level of 71.8 ng/mL. A sudden failure of graft function required pulse corticosteroid therapy with the adjustment of the immunosuppressive regimen, as well as a broad-spectrum antibiotic therapy. After two weeks of treatment, the graft function recovered. On discharge, the creatinine clearance was 0.57 ml/s. Also, there was a marked decrease in proteinuria (0.08 g/24h with a diuresis of 2600 ml), and

her body mass was reduced to 72 kg. Cyclosporine level was 112.1 ng/mL. The inflammation of the breasts also subsided, and her clinical course is uneventful to this day, with a good renal function. Immunosuppressed kidney recipients have a higher incidence of malignant tumors in comparison with the general population, with overall risks ranging from 3.3 to 3.6. (3, 4). However, the relative risk for breast cancer is 0.7, meaning that immunosuppression may not increase the incidence of breast malignancy (3, 5). There are hypotheses considering the role of oncogenic viral infections flaring up during immuno-suppression, as well as the depressed immune reaction to tumor antigens (3). Of 2.139 kidney recipients described in a study by Kwak et al., 11 patients suffered from breast cancer, with a similar prognosis to the general breast cancer population. The authors emphasize the importance of immunosuppressant adjustment and hemodialysis

access in posttransplant cancer treatment (4). On the other hand, exposure to silicone potentially results in autoimmune phenomena, due to the fact that silicone is not immunologically inert (6, 7).

Conclusion

In this case, it is plausible that silicone triggered an immune reaction to the kidney graft – a complication of breast augmentation that has not been described before. This report serves to illustrate the need for a nephrologist consultation and the adjustment of immunosuppressants in breast implantation surgery of kidney recipients.

Conflict of interest

The authors declare no conflict of interest.

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Prikaz bolesnika

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ODBACIVANJE BUBREŽNOG GRAFTA NAKON UGRADNJE SILIKONSKIH IMPLANTATA U DOJKE

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Kod bolesnice, koju smo prikazali u ovom radu, izvedena je bilateralna operacija implantata dojki submuskularnom primenom implantata silikonskog gela. Nažalost, hirurški tim iz druge zdravstvene ustanove pre operacije nije konsultovao nefrologa, što je bilo neophodno za prilagođavanje doziranja imunosupresivne terapije. Tokom ranog postoperativnog perioda, kod bolesnice se razvila febrilnost, razvio se akutni mastitis i došlo je do akutnog odbacivanja grafta. Bolesnica je hospitalizovana na Klinici za nefrologiju Kliničkog centara Crne Gore. Nakon dve sedmice lečenja i nege, funkcija njenog transplantovanog bubrega se oporavila.

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Ključne reči: *transplantacija, akutno odbacivanje bubrega, silikonski implantant*