

Red Breast Syndrome following implant reconstruction: Is the mesh to blame?

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➤ Background

Implant-based reconstruction is nowadays the most common method of breast reconstruction. Biological meshes, such as Acellular Dermal Matrixes (ADM) are often used as scaffolds in single-stage direct-to-implant reconstruction. Synthetic meshes, such as those made of vicryl, are considered as a viable and cost-effective alternative to ADM. Red Breast Syndrome (RBS) is an inflammatory condition following the use of ADM for breast reconstruction, however there is to this day no documentation with synthetic meshes



➤ Hypothetic etiologies of RBS

- Disruption of the lymphatic drainage after mastectomy
- ADM as an obstructive barrier causing fluid entrapment
- Lymphedema and rubor overlying area of ADM
- Other hypothesis : angiogenesis / lymphangiogenesis of the mastectomy skin flap (postop day 14-20)

➤ Case Report

We describe the case of 45 yo otherwise fit and well female patient who underwent a left breast nipple sparing skin reducing mastectomy with SLNB for a DCIS followed by a single stage DTI reconstruction using a Vicryl Mesh. Two weeks postoperatively, she developed a localized blanching erythema of the reconstructed breast. She denied symptoms like fever.



➤ Results

Her blood tests were aligned (leukocytosis 7 g/l, CRP 2 mg/l) and breast imagery through USS showed no obvious collection. These results were unchanged at a 48hrs follow-up in our clinic. Given the above, decision was made for conservative management and watchful wait. No antibiotics were given. We observed a gradual spontaneous resolution of the erythema within 2 weeks.

➤ Conclusion

Despite the reported cases of RBS following IBR with biological meshes, there is nowadays an increased popularity in the use of synthetic meshes and those might also be responsible for RBS-like symptoms. An ongoing infection should be ruled out first by performing blood tests and breast USS. As observed in our case, conservative management is preferred if no infection is incriminated. Further case series are encouraged to understand the underlying mechanisms of the disease and to establish guidelines for prevention and management of RBS in the context of synthetic mesh use.