The Evolving Role of a Plastic Surgeon in Sarcoma Management: Suggested Guidelines Based on a Reconstructive Case Series of 244 Patients by a Single Unit.

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Abstract:

Background: 3,800 patients are diagnosed with sarcoma each year in the UK with 10% requiring specialist reconstruction. Improving complimentary therapies have lead to greater attempts at limb preserving surgery, resulting in increased referrals for reconstruction[1-5].

For the plastic surgeon this presents a reconstructive challenge. Frequently primary closure is achievable, however larger tumours necessitate significant undermining of skin, causing seroma formation and when subjected to radiotherapy, often breakdown. Reconstruction is best-achieved utilising regional or free flaps, and skin grafting is reserved for cases not requiring radiotherapy.

We present suggested guidelines based on a case series of 244 patients from the senior authors experience.

Methods: A prospective chart review of all referred patients from the London Sarcoma Unit requiring reconstruction between February 2006 and May 2014 was performed. A single unit performed all 244 reconstructions.

Results: The total number of operations performed was 244. Mean follow-up was 14 months (1 – 36 months), 40% of patients had significant co-morbidities and 37 required revisional procedures and patients could be separated into early (0 – 6 weeks post-operatively, n=137) and late reconstructions (>6 weeks post-operatively, n=107). 27 patients were reconstructed with skin grafts, 111 patients were managed with regional flaps and 106 patients were treated with free flaps. Nine different free flaps and seven pedicled flaps were used.

Conclusions: As a result of limb preserving treatments there is an increased demand for reconstructive surgery. Our experience with limb-salvage has lead us to develop the following guidelines: small defects are closed primarily and skin grafts are used when radiotherapy is not considered. The gold standard for all other defects should be with fascio-cutaneous or myocutaneous flaps.

Establishment of excellent referral pathways between the cancer and reconstructive surgeons is crucial. All surgeons should be present at a multi-disciplinary team meeting. Patients should undergo primary excision and managed with a vacuum dressing until margins are clear and then be reconstructed. Defects should be filled with similar tissue to protect the patient from wound healing problems associated with radiotherapy and requires the surgeon to be familiar with a large number of flap types to obtain the best result possible.

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