



Round : ..Major surgery.....

Group no : B8.....

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Plastic surgery

INTRO:

Plastic surgery includes both cosmetic surgery and reconstructive surgery. However, the main goal in both types of surgeries is to restore both form and function.

Reconstructive surgery: it is a surgery that's done in order to reshape or rebuild a defected organ in order to regain its form and function. It often follows a traumatic skin or soft tissue injury, burns or disease complications.

Cosmetic surgery: here we have the organ with preserved relevant structure but the cosmetic function of it is lost so we do the surgery to restore an acceptable appearance.

PRINCIPLES:

1. Make an Informed Decision to Operate or Not Operate.

When deciding whether to operate or not, we need to take into consideration the harms and the benefits that are associated with this surgery. Especially if the surgery isn't mandatory. In mandatory surgeries, we operate as the harms outweighs the benefits.

Example: after resection of a sarcoma, the bone is exposed to the surroundings, in this case we need to provide adequate soft tissue covering to prevent infections and to provide durability for radiotherapy following resection. However, in some traumatic wounds, the injury could be managed with other options as it doesn't carry that much risk so we can choose less invasive measurements.

Sometimes the assessment of benefits and harms includes what the patient wants and the rate of success to achieve it and provide satisfaction to the patient. If we are very unlikely to do so, or the patient set unrealistic goal especially in cosmetic surgeries, this could be an indication to back out from the surgery.

2. Optimize Modifiable Patient Factors

There are certain risk factors that would increase the likelihood of complications, we aim at altering these factors to improve the benefit/harm ratio. The most important one of which is smoking, it's advised that patients stop smoking (2-6) weeks prior surgery. Other risk factors include anything that could affect wound healing such as infections, uncontrolled DM, obesity, steroid use, certain homeopathic medications, and malnutrition.

Plastic surgery

PRINCIPLES:

3. Perform Adequate Debridement Prior to Reconstruction

This is very important to provide healthy tissue that you can surgically work on whether it was reconstructively or cosmetically. It could be applied to all types of wounds, chronic and acute. As well as dirty and clean wounds.

4. If Possible, Replace Like With Like; If Not Possible, Create It.

Find the best donor area that has similar characteristics to the original area, like the thickness, color, elasticity. It's important to provide an efficient and durable solution as well as good appearance. If it's unavailable, search for a similar tissue that looks like the original tissue the most, and adjust it. If no donor sites exist, the last option we have is to innovate and use tissue expander that induces proliferation, then resect the formed tissue and use it as a flap.

5. Optimize Vascularity at Every Opportunity

Adequate blood supply is important for good healing. That's why smoking is contraindicated as it reduces blood flow. Also any wound that has poor blood supply is referred to a vascular surgeon first to restore good flow then the surgery is performed. Even during surgery, the plastic surgeon aims at maximising the vascularity at any given chance. Vascularity of a particular flap may also be enhanced by performing a delay procedure, which allows constricted vessels to physiologically dilate within the flap and results in greater flap reliability.

6. Preserve Form and Function

The aim is to always achieve these two goals, whether it was a cosmetic surgery or reconstructive. That's why in breast cancer mastectomy, reshaping of the other breast is done.

7. Minimize Donor Site Morbidity

Weigh the possibility of donor site morbidity against the benefits of the use of that tissue for reconstruction. As the affected site already holds risks of hematomas and infections and scarring. We don't want to maximise these adverse effects and creating it on another site. So if the harms outweighs the benefits of using this tissue, then we should search for another site.

Plastic surgery

PRINCIPLES:

8. Protect the Surgical Site Postoperatively

Evaluation of the success of the surgery is made only after complete healing in order to assess the function and the effectiveness of the surgery to preserve the form too. Until then, the wound should be taken care of by preventing surgical wound infections as well as injuries. And to restrict activities to allow full healing.

9. Have a Backup Plan (and a Backup Plan for THAT Backup Plan)

Complications could always occur, and failure of the primary surgery could occur which would require us to find another option. The most commonly faced complications include surgical wound infection, flap necrosis and dehiscence. That's why we need to always have backup plans in these cases.

☆ Always pick the option that's going to provide the best value to the patient rather than choosing the easiest option. We could use the reconstructive ladder to guide us.

10. Innovate New Solutions to Old Problems

Each surgery is individualized according to the clinical situation and specific patient needs. Thus, the plastic surgeon must strive to tailor every operation and often makes numerous adjustments to the accepted standard techniques. And during the operation the surgeon should remain flexible and modify the repair technique to account for the unique abnormalities present in each patient.

RECONSTRUCTIVE LADDER:

Main treatment options include:

- healing by primary intention (suturing helps)
- healing by secondary intention (left as it is)
- grafting (full thickness or partial)
- flaps (with all its types, distal/local/ free)

Flaps are better than grafting as they promote better healing and better protection against infection too.

