

**Perioperative nursing care in patient with skin transplant with  
artificial regeneration dermal matrix, and new standard of medication**

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Clinical history: patient is a man of 70 years old. his body is covered by extensive skin cancers, those were caused by a therapy based on arsenic for psoriasis, that doctors prescribed him when he was young.

He used this therapy for several years and the results have been tragic .

Some time ago the patient had an enormous basal cell carcinoma in the lumbar region, more big than the others one.

It was very big to be operated with the traditional method; so our dermatologist surgeons decided to use an artificial skin regeneration matrix.

This operation surgery has composed by two phases.

First phase: total removal of the cancer with the application of a skin matrix composed by three-dimensional derma. Patient is in topical anaesthesia. In the second phase (after about 21 days) there is the transplant derm of the same patient (from one leg) upon the new regenerated derma.

Nursing care in pre operative phase:

- ☞ control clinical and nurse documents
- ☞ communication and information to the patient
- ☞ body preparation
- ☞ put on the patient a special operating room dress and bracelet.

The same matrix can be used in another cases:

- ☞ deep burn
- ☞ after effect of deep burn (scars)
- ☞ treatment of extensive skin cancer
- ☞ surgery ulcer's treatment amputation.

The matrix has so composed:

Superior side: is composed by silicone, it allows an immediate wound closing, it gives a mechanics protection, it controls liquid loss, it is a barrier anti bacterial, it is permeable at water vapour like so a natural skin.

Inferior side: is the three dimensional dermal matrix, composed by animal collagen (chondroitin 6 sulphate), it allows the micro-porous control, it allows stimulation of collagen synthesis and stimulation of cells growth, it allows the progressive substitution of natural skin.

The regeneration matrix is dipped into a container full of 250 ml of 70% isopropyl alcohol, scrub nurse (about 30 minutes before the use) opens the package with sterile technique, takes the matrix, dips it in a normal sterile saline until alcohol smell has gone.

After the first operation nurse care is the following:

wound inspection at 24 hours as early stage minor complications can be easily rectified, if necessary the matrix area can be lifted from the wound bed and reapplied within the first 24 hrs, for the first week one medication daily with iodine povidone and lubricant non-adhering dressing with a final plosive dressing. For the other weeks medication every two days. Doctor therapy is based by antibiotic : ceftriaxone 1 gr / die for 14 days.

New target of advanced medication ( that we used for this operation) :

- ☞ to preserve wet ambience
- ☞ to permit exchange gaseous state
- ☞ to guarantee a thermic isolation
- ☞ to be sure: not allergic and sterile
- ☞ to have an high power of permeability
- ☞ to be barrier
- ☞ to be not adhesive
- ☞ do not cause pain during the change
- ☞ to be comfortable
- ☞ to be of simple use
- ☞ to change it every a week
- ☞ to be transparent

for this operation we used a dressing not adhesive, it has filaments saturate with iodine povidone in concentration of 10%. The weave permits the drainage of the serum and the perspiration of the wound , evading the maceration. It makes to fall bacterial level and it does not irritate the wound.

Second operation phase after about 21 days: the operation is in general anaesthesia with skin graft very thin, thickness 0,12 mm. Skin has removed from the left front leg surface with an electric device. The risk after this phase are the following:

- ☞ haematoma formation
- ☞ fluid accumulation
- ☞ signs of non take or detachment

Doctor controls the patient after 30 days, after 3 months, after 8months, and after one year doctor makes a punch biopsy to control that the derma is completely regenerated and that there is no more presence of cancer.

Conclusion:

To use this matrix gives those advantages:

- ☞ good reconstruction procedures when the cancer zone or operative zone are very vast
- ☞ less stress and pain for patient
- ☞ other kinds of surgeon proceedings do not give same result
- ☞ good result aesthetic and exuberant scar
- ☞ less itch for patient in the transplant zone.

but even disadvantages:

- ☞ the matrix is very expensive
- ☞ the patient need of two operation in 3 weeks.