Tangential burn excision

Tangential, laminal excision removes devitalized tissue in thin layers. It is mainly indicated for partially deep skin loss - IIb degree burns. Transplant knives or dermatomes are used for this procedure.

Execution

Excision

The principle of this method is to cut away thin layers of burned skin gradually until living tissue is reached. Theoretically quite clear and simple, but in practice requiring experience, good assistance, correct tension of the operated area and, of course, a very sharp blade of a calibrated transplant knife. For localized swelling of the burned area, plaques approximately 0.5 mm thick can be removed using a Watson or Goulian knife. The optimal level of a correctly excised burn is at the level of half of the capillarostasis zone below the necrosis.

In more superficial lesions, diffuse capillary bleeding appears immediately after one plate has been worn. If the excised area does not bleed immediately, another layer of the same thickness is removed. In the deeper layers, the vessels are larger and less branched, so bleeding in the dermis (corium) needs to be carefully checked. If the surface is grayish and dull without capillary bleeding rather than vividly bleeding white and shiny, or if thrombosed vessels are visible, the excision should be deepened. A properly excised grade IIb burn should bleed as well as the sampling area when harvesting the dermoepidermal graft. If it penetrates at III. degree of burn of the rumen down to the subcutaneous tissue, small fat lobes are revealed during the next cut. There are no longer many blood capillaries in this layer, the vascular trunks are larger in diameter and more sporadic. If we excrete in the fat layer, then yellow-white fat without bleeding or with thrombosed vessels means dead tissue. A yellow-orange color and bleeding small subcutaneous vessels are a sign that the excision was performed correctly. If we are sure that the excision is performed correctly, it is necessary to immediately stop the bleeding so that the total blood loss is as small as possible. (Hemorrhagic shock may also develop with extensive excision).

Stopping the bleeding

Diffuse capillary bleeding is usually treated with mule dressings with 1% hydrogen peroxide and compression while the adjacent part is excised. For the limbs, it is advisable to press the included compresses with a firm bandage and leave them alone for about ten minutes. The outer layers of the dressing are then slowly removed. After the dressing is removed, persistent bleeding is stopped with a tap, a tourniquet, or gentle electrocautery. Excision in "bloodlessness" with the use of Esmarch's scalpel is not recommended for the inexperienced, as orientation about the depth of the involvement is lost. There is no capillary bleeding at the base and healthy tissues are often unnecessarily excised.

It is possible to operate in a certain "bloodlessness" if the procedure is performed between 12-36. an hour after the injury, when local edema is at its peak in the case of non-extensive injuries. This significantly reduces bleeding from non-rectomized areas and it is also assumed that burns are still minimally contaminated at this early stage.

For extensive injuries, generalized edema can be used, which reaches its peak in 24-36 hours or even later. It means the ongoing pathophysiological changes of burn shock, when the general condition of the patient is not yet stabilized, because fluid and sodium mobilization has not yet occurred. However, it is not recommended to burden the patient with this procedure at an unaccredited workplace. In the case of a more extensive surgery, it is necessary to supplement blood loss with transfusions during the surgery.

Links

Related articles

- Surgical treatment of burns
- Burns

Bibliography

- KÖNIGOVÁ, Radana – BLÁHA, Josef. *Komplexní léčba popáleninového traumatu.* 1. edition. Karolinum, 2010. ISBN 978-80-246-1670-4.