

UPDATES



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in SURGERY

New Technologies in Surgical Oncology



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Surgery for Inguinal Hernia

Chapter 4: Prosthetic materials in Surgical Oncology
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The treatment of an inguinal, crural or umbilical hernia, which currently can be carried out with minimally invasive surgery under local anesthetic in most cases and almost always with patient discharge on the same day as the operation (day-surgery), allows the surgeon to easily remedy this disorder which is often the cause of functional limitations and painful and particularly invalidating symptoms in the oncological patient. High grading of the treatment, the limited costs, and above all the ability to improve the residual quality of life beyond prognostic forecasts of tumor disease impose careful evaluation of this therapeutic opportunity on the part of carers, which, moreover, if correctly applied proves to be conclusive.

While also bearing in mind the possible risk of complications such as the strangled or obstructed hernia which this disease can cause and which in patients of this type can be particularly serious, the arguments above must be considered all the more seriously also on the part of the person suffering from the problems which a negative event of this nature might determine. Although the traumas involved in hernioplasty are limited, the benefits which can be brought by its implementation should however be related to the histological type and stage of the tumor, its site, age, general clinical conditions, and any presence of aggravating factors such as ascites, patient build and personality. Thus establishing a priori indication and timing of its execution with respect to oncological (surgical or not) care that the tumor requires and to which precedence should be given is not always possible.

The in-depth analysis of all the elements connected with the entity of the principal disease and disorders suffered due to the hernia should not lead to simplistic or hurried considerations concerning vital decisions, confirming the need of a multidisciplinary approach for the cancer. Moreover, the possibility of combining the oncological operations (carried out both with a radical intent and for a palliative purpose)

with the concomitant hernia repair has become realistic in many situations. Although not often proposed and perhaps also debatable up until relatively recent times, this simultaneous execution, which has the current support of clinical results, may be taken into consideration also in the case of highly complex surgical procedures and those with a high probability of contamination like those concerning intestinal tumors.

The implementation of an operation that is “not clean” would make a simultaneous hernioplasty inadvisable, forbidding ‘tailoring’ with the usual prosthetic meshes for reasons that can be imagined connected with a possible infection. Nevertheless, even if plausible, all this is only partially true due to the evolution that the materials used have undergone in recent years. New composition prostheses, other fully biological prostheses made up of bovine collagen, light meshes or meshes which are

resorbable by the body after implantation, or combined with non-stick substances, and lastly the use of aids like adhesives able to secure the prostheses without suture are all innovations able to disprove past statements questioning the ability of the prosthesis to be held safely in place and the risk of complications in the field of sepsis, and able to achieve a high percentage of success.

For these intrinsic characteristics, in cases where deep repair proves necessary, the operative technique may also envisage “underlay” placing, namely in a retromuscular position, in the pre-peritoneal sphere or the abdominal cavity itself in close contact with

the loops, together with the removal of the intestinal tract affected by the tumor.

Above all in the elderly patient, an inguinal hernia may sometimes reveal the presence of an unacknowledged carcinoma of the colon, acting as a sign of tumor disease. Thanks to the new finds, also in this setting the simultaneous double operation of colon resection and plastic surgery of the wall is feasible in the same way as

may take place in the presence of a voluminous hernial swelling combined with a benign disease of an inflammatory type like diverticulitis.

In the light of these facts, new routes able to modify the therapeutic conduct for a hernia of the abdomen associated with a tumor appear as pathways mainly due to the new instruments at the surgeon’s disposal. The need for a “reinforcement patch” in hernia repair and the recent development of new prostheses is confirmation of the direction in which modern research will have to address its efforts in the coming years. In particular the total absence of intrusion of synthetic materials foreign to the body for hernioplasty, and with the aid of supporting nanotechnology for the framework upon which the new reinforcement tissue will be able to be built, may in the

future represent the gold standard of care for this common disorder especially if combined with an illness still in many ways obscure and with many unknown features.

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