Management of complex ventral hernias

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Ventral hernias are complex because of different factors including the presence of local infection, size of the defect, obesity, and the unusual location away from the common midline hernias.

To compare ventral hernias in the face of infection, we must use the appropriate classification. Currently, the widely accepted classification scheme is the modified ventral hernia classification with three grades [1]. Group A is clean hernias. Group B consists of patients on immunosuppressive medications, obese patients, immunocompromised patients, diabetics, patients with COPD or a history of wound infection or infected mesh. Group C is patients with clean contaminated, contaminated or dirty wounds [1]. For the Group A patients, the use of synthetic mesh is considered appropriate. For Group B, there is a debate between the use of synthetic mesh or biologic mesh. For the infected Group C hernias, the placement of absorbable (biologic meshes) is considered standard of care, despite some recent data that has shown that large pore low-weight synthetic meshes could be acceptable. The high cost of these biologic meshes and their rapid degradation have allowed a new category of meshes to establish themselves as an elegant alternative: biosynthetic meshes represented by PhasixTM (Bard; Murray Hill, New Jersey) [2, 3] and also Bio A (Gore; Flagstaff, Arizona) [4] have taken the market by storm. TM

These biosynthetics cost a fraction of the biologics and represent a good alternative to the patients who are apprehensive of the current controversy surrounding permanent mesh, as they are generally replaced by a strong fibrous layer in 18 months. Large hernias are defined by the size of the defect as measured on CT scan. The closure of the defect is mandatory. Bridging techniques have pretty much been abandoned (unless one is in an emergent situation) as they will lead invariably to a recurrence. Most authors define

large abdominal hernias by a CT-proven defect of more than 7 cm. To avoid closure under tension, these hernias require an addition of component separation techniques.

Currently, the retromuscular repair with placement of mesh behind the rectus muscle as described by Rives and Stoppa is preferred when possible and the posterior component separation of the rectus abdominis can be enhanced if need be by the addition of a transverse abdominis release (TAR). It is the most elegant choice. If this does not suffice, an anterior external oblique component separation can be added, but there is an increased risk of necrosis of the skin flaps.

When large hernias occur in severely obese patients, current data suggest the benefit of proposing weight-loss surgery as a first step. This can be followed 6–8 months later by a technically easier ventral hernia repair. For difficult and rare locations such as flank or posterior hernias, a laparoscopic approach can be offered, but an open approach could be preferred as the mesh can be anchored more easily to the bony structures. Finally, the issue of robotic versus laparoscopic repair of complex ventral hernias is still the subject of much debate. Data favoring the robotic approach is very scarce and inconclusive at this time to draw definitive conclusions. Nevertheless, robotic management of a complex hernia with component separation is technically challenging and offered currently by few highly skilled surgeons.

In summary, the management of complex hernias necessitates a deep knowledge of the “science” of hernia and advanced hernia skills.

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