

Surgical Approach of a giant hiatal hernia in a Lupus patient using Clamshell thoracotomy – A case report

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Abstract

Bilateral transverse thoraco-sternotomy, known colloquially as “clamshell thoracotomy,” initially used for open-heart procedures using the bilateral incision for safe exposures. Median sternotomy became the incision of choice for open-heart surgery in early 1960s; however, up to one-half of reported emergency thoracotomies at busy trauma centers were clamshells. There have been reports of hernial repairs using thoracotomy approaches

Case presentation

We present a case of a 55-year-old woman with recurrent hiatal hernia, in this case with a giant hiatal hernia.

With a medical history of SLE, Von Willebrand disease, SAHOS and history of two hiatal hernioplasties in the last year which were repaired with abdominal approaches first with a Nissen fundoplication and second with a gastropexy and hiatoplasty.

After the second hernioplasty surgery she began with retrosternal pain and regurgitations, a CT scan was performed fining a a giant anterior hiatal hernia (hernial sac of 10.1 cm into the thoracic cavity defect of 2.7 x 6.7 cm) . We decided on the surgical approach via clamshell due to the level of tear that extended into the lower face of the heart and to both cardiophrenic angles.

An incision was performed a at the level of the 5th intercostal space, from the right mid-clavicular line transsternal and to the left mid-clavicular line, followed by a transverse sternotomy. The intercostal muscles are removed from the upper edge of the 6th costal arch, using an automatic separator, Visualization of the thoracic cavity and Diaphragmatic hernia repair was made using a mesh that was fixed to the 6th and 7th thoracic arches, “diaphragm - mesh- diaphragm” stitches with a non-absorbable suture, so that the fist mesh was placed under the diaphragm in contact with the peritoneum, the second mesh was placed on top of the diaphragm. Finally, a diaphragm plication and a hiatoplasty were performed to close the diaphragm defect.

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Conclusions

The use of thoracoscopic approaches in hiatal hernia is not the common way of initial treatment, In this case report it was a way to strengthen the diaphragm muscle with the application of a mesh.

Acquired anterior giant diaphragmatic hernias may be related after complicated hiatal surgery due to increased tension and lack of diaphragmatic relaxation incisions, generating in this case this giant anterior hernia.

