

Botulinum Toxin A for Large Midline Ventral/Incisional Hernias

Can we avoid Extensive Component Separation?

Anang PANGENI, Anuj SHRESTHA, Harpreet SODHI, Ashish Kiran SHRESTHA, Sanjoy BASU

William Harvey Hospital, Ashford, Kent, United Kingdom

Aim

Botulinum toxin A (BTA), as an adjunct, in abdominal wall reconstruction (AWR) has been increasingly used and consistently shown promising results with low morbidity. We share our institutional experience in BTA to complement available literature.

Material & Methods

This is a retrospective analysis of a prospectively collected data of 6 consecutive patients. Variables included demographics, ASA, BMI, symptoms, investigations, perioperative details including complications and follow up. Following dedicated AWR multidisciplinary discussion, all patients underwent preoperative 300units BOTOX® bilaterally to lateral abdominal muscle bundles followed by repair within 4-6 weeks between June23-October24.

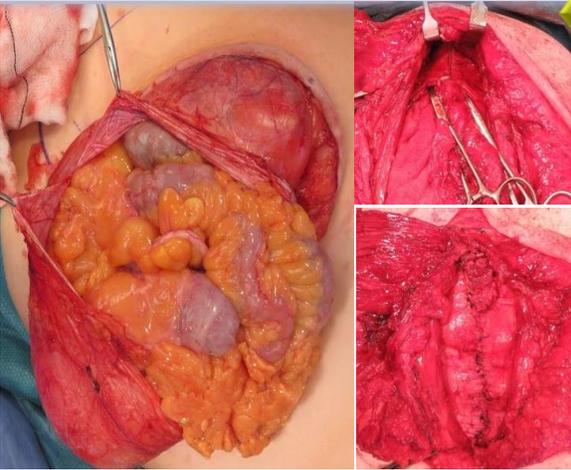


Panel I: Representative Preop Imaging

Results

Three males and three females aged 65*(45-83)years, ASA II*(I-III), BMI 31*(24-34) with symptomatic 1 primary and 5 incisional hernias were operated. The transverse defect was 8.5*(6.3-12)cm and cross-sectional defect was 143*(56-250)cm². One had >20% loss of abdominal domain (LOD). Midline access, adhesiolysis, retro-rectus release allowed tension free closure of posterior (PRS) and anterior rectus sheath (ARS), with retro-rectus polypropylene mesh of cross-sectional area 368*(300-700) cm² fixed to PRS and ARS (as required) with interrupted PDS. Appropriate skin fashioning and closed-wound negative pressure dressing system was used. There were no immediate complications, LOS 7 *(5-14) days and follow up 4*(0-15) months with uneventful recovery were recorded.

Panel II: Representative Intra-op Images



SN	Age	Sex	Defect (cm)	EHS Class	RDR	LOD	BMI	ASA	LOS (days)
1	70	F	10	M1-3 W3	1.38	No	34	3	14
2	76	M	8.9	M1-4 W2	1.79	No	29	2	9
3	83	M	7.5	M2-4 W2	2	No	31	3	7
4	47	F	8	M3 W2	1.52	No	33	2	5
5	45	M	12	M3/4 W3	1.72	No	27	1	4
6	59	F	6.3	M2-4 W2	1.6	26%	30	2	7

Conclusion

Our cohort reiterate the benefit of BTA resulting in successful reconstitution of linea alba and sound repair with retro-rectus dissection only avoiding complex AWR- a procedure associated with significant morbidity (>30%) and even mortality (3%).

References

- Soltanizadeh S et al Botulinum Toxin A as an Adjunct to Abdominal Wall Reconstruction for Incisional Hernia. *Plast Reconstr Surg Glob Open*. 2017 Jun 21;5(6):e1358. doi: 10.1097/GOX.0000000000001358. PMID: 28740773; PMCID: PMC5505834.
- Zamkowski M, Lerchuk O, Porytsky A, Ushnevych Z, Khomyak V, Smietański M. The Impact of Botulinum Toxin A Application on Reducing the Necessity for "Component Separation Techniques" in Giant Incisional Hernias: A Dual-Center, Polish-Ukrainian, Retrospective Cohort Study. *Pol Przegl Chir.* (2024);96(6):12-19. <https://doi.org/10.5604/01.3001.0054.49.19>.