

Repair of Giant Inguinal Hernias (GIH) with Loss of Domain (LOD) using Botulinum Toxin A and the Madrid Repair Technique: a Case Report

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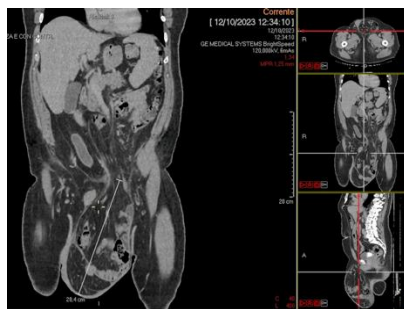
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CASE REPORT



♂, 64 years old, Type II GIH (40 years lasting) with LOD, concurrent renal cystic neoplasm (Bosniak III)

Comorbidity: arterial hypertension; mild obesity



TREATMENT



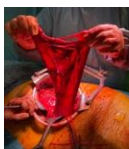
60 days



Botox 300 UI/20 mm saline
 6 point injection under ultrasound
 1 ml/each of 3 lateral muscle



Sac isolation

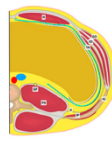


Hernia reduction



Reverse TAR and Madrid reconstruction (BIOA + polypropylene mesh)

Munoz-Rodriguez JM, et al Reverse TAR may be added when necessary in open preperitoneal repair of lateral incisional hernias: a retrospective multicentric cohort study. Surg Endosc. 2022 Dec;36(12):9072-9091.



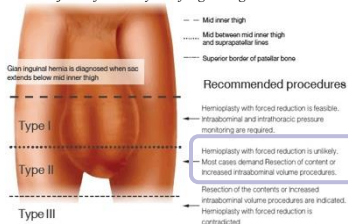
6 hour OR (including partial nephrectomy)
 End IA pressure + 3mmHg
 Immediate extubation
 No ICU
 Complications: FA
 Hospital stay: 7 days



No recurrence
 12 months FU

GIH

Sriraj classification system for giant inguinal hernia



Recommended procedures

Hernioplasty with forced reduction is feasible. Intraabdominal and intrathoracic pressure monitoring are required.
 Hernioplasty with forced reduction is unlikely. Most cases demand Resection of content or increased intraabdominal volume procedures. Resection of the contents or increased intraabdominal volume procedures are indicated. Hernioplasty with forced reduction is contraindicated.

Table 1 Comparison of different surgical approaches to giant inguinal hernia

Approach	Open anterior	Open posterior	Endoscopic	Hybrid	Resection	Component separation	Stitch in preperitoneum
Open anterior	+	+	+	+	+	+	+
Open posterior	+	+	+	+	+	+	+
Endoscopic	+	+	+	+	+	+	+
Hybrid	+	+	+	+	+	+	+
Resection	+	+	+	+	+	+	+
Component separation	+	+	+	+	+	+	+
Stitch in preperitoneum	+	+	+	+	+	+	+

Table 2 Location of surgical access for repair

Location	Percentage
Groin incision alone	46.4%
Abdominal incision alone	33.4%
Combined Abdominal and groin	5.7%
Laparoscopic	9.3%
Groin + Laparoscopic approach	1.4%
Two stages	1.4%

Olaye I, Adesina MD. Management of giant inguinal hernia: report of four cases and review of literature. Hernia. 2025 May 23;29(1):175.

high risk of postoperative abdominal compartment syndrome

Need for resection

Need for prolonged extubation and ICU

Staibitz JJ et al Surgical treatment strategies for giant inguinoscrotal hernia - a case report with review of the literature. BMC Surg. 2017 Dec 19;17(1):135



Resection

Zuvela M et al. Management strategy of giant inguinoscrotal hernia - a case series of 24 consecutive patients surgically treated over 17 years period. Hernia. 2024 Dec 20;29(1):50

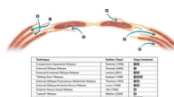


Hug and TOP technique

G Campanelli The Art of Hernia Surgery Springer



Progressive pneumoperitoneum



Component separation

Ayuso et al (2023). State-of-the-art abdominal wall reconstruction and closure. Langenbeck's Archives of Surgery. 408.

CONCLUSION

Giant inguinal hernias with loss of domain are a significant surgical challenge. Combining botulinum toxin A and the Madrid repair technique shows promise in terms of safety and efficacy. Larger studies are needed to confirm these results and better define this surgical strategy's role.