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THEME: ACUTE FEMORAL HERNIAS

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Title: Acute Femoral Hernias: A Decision-Making Algorithm for the On-Call Surgeon

Background

- Femoral hernias (FH) represent **2–4%** of all groin hernias and disproportionately affect older, thinner, female patients presenting emergently with incarceration/strangulation .
- Elective FH guidelines are well-established, but acute FH (AFH) lacks standardized recommendations.
- With rising use of MIS (laparoscopic/robotic) techniques and evolving mesh technology, a decision-support algorithm for AFH is needed .

Study Objectives

1. Compare demographics, clinical features, and operative approaches between **EFH** (n=2,502) and **AFH** (n=61) cohorts.
2. Identify key trends and challenges in AFH management.
3. Propose a decision-making algorithm to optimize AFH care .

Methods

Design: Retrospective cohort using the ACHQC registry (2017–2023).

Inclusion: Adults ≥18 y undergoing EFH or AFH repair; exclusions— incomplete data entries.

Data Collected: Age, sex, BMI, ASA class; hernia size/laterality; surgical approach; mesh use.

Statistics: χ^2 for categorical, t-tests/Mann-Whitney for continuous; $p < 0.05$.

Key Results

1. Demographics & Hernia Characteristics

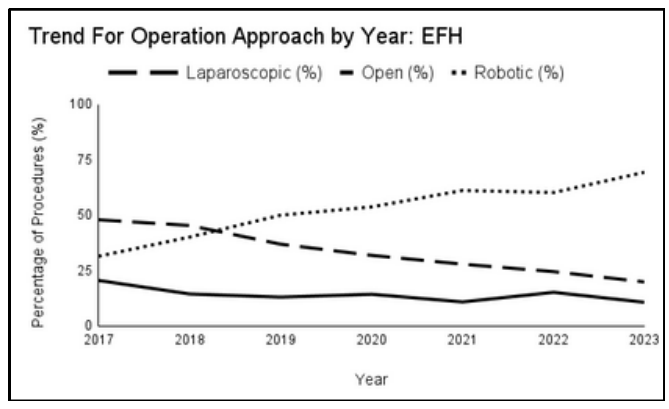
- AFH patients: **older** (mean 72.3 vs. 62.2 y), **female** 68.9% vs. 38.4% ($p < 0.01$), **higher ASA III–IV** (58% vs. 30%) .
- Size: 50.8% of AFH defects ≥1.5 cm vs. 34.4% in EFH ($p < 0.01$).

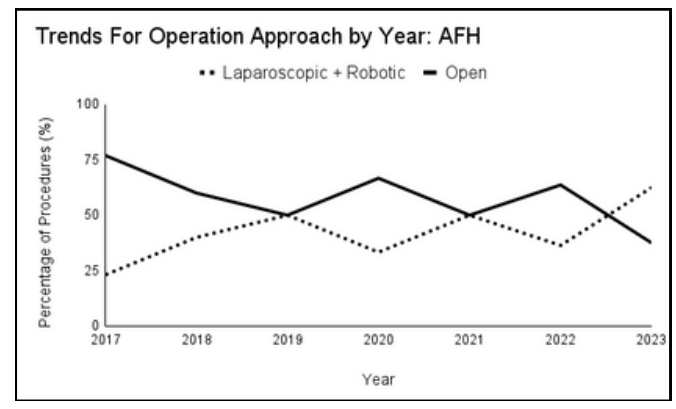
2. Surgical Approach Trends

- **EFH:** robotic ↑ from 31% to 69%; laparoscopic ↓ from 48% to 20%.
- **AFH:** MIS (lap + robotic) ↑ from 23% to 63%; open ↓ from 77% to 37.5% .

3. Mesh Usage

- Mesh in **97%** of EFH vs. **72%** of AFH ($p < 0.01$).
- AFH: synthetic permanent mesh still dominant (89%), but biologic mesh used more (9%).





Femoral Hernias	EFH (N=2502)	AFH (N=61)	p-value
Hernia Size			**<0.01**
• <1.5 cm	1642 (65.6%)	30 (49.2%)	
• ≥1.5 cm	860 (34.4%)	31 (50.8%)	
Hernia Laterality			**<0.01**
• Bilateral	990 (39.6%)	5 (8.2%)	
• Unilateral, Right	935 (37.4%)	45 (73.8%)	
• Unilateral, Left	577 (23%)	11 (18%)	
Mesh Used, N (%)	2,474 (96.5%)	44 (72.1%)	**<0.01**
• Permanent Synthetic	2,413 (97.5%)	39 (88.6%)	
• Biological Tissue-derived	47 (1.9%)	4 (9.1%)	
• Synthetic Absorbable	14 (0.6%)	1 (2.3%)	

Limitations and Conclusions

Limitations:

1. Retrospective design, potential selection bias.
2. ACHQC participants may not reflect general community surgeons.
3. Short-term follow-up only; long-term outcomes not captured .

Conclusions:

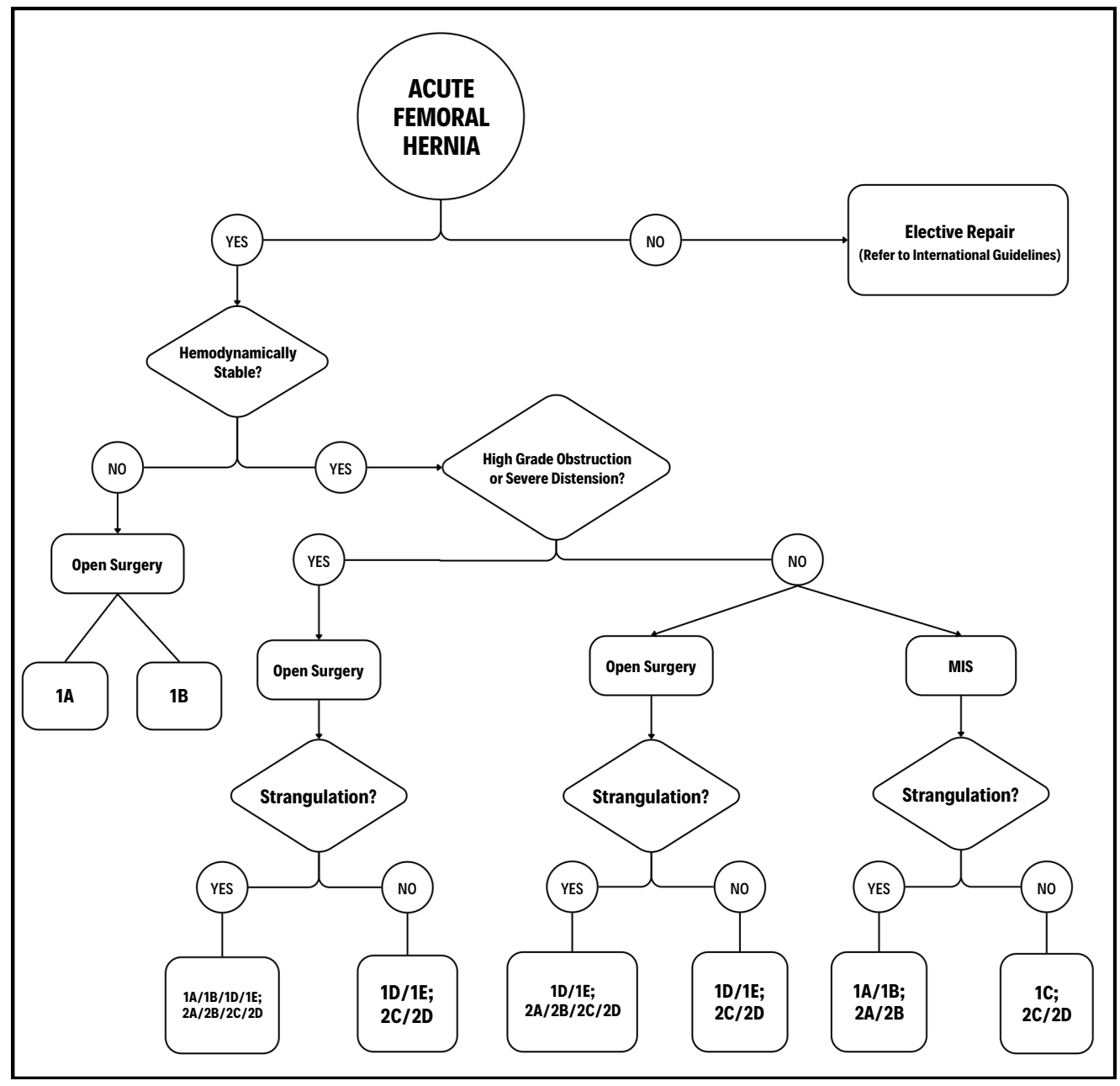
- AFH vs. EFH: distinct patient profiles and surgical patterns.
- MIS and mesh use in AFH is rising; outcomes appear favorable in selected cases.
- This algorithm synthesizes data and expert consensus but must be adapted per clinical judgment.

Discussions

- AFH patients are a distinct high-risk group requiring tailored approaches—often older, sicker, larger defects.
- MIS is feasible in hemodynamically stable AFH patients and has grown in use.
- Mesh (especially modern macroporous synthetics) can be safely used in most acute repairs, even contaminated fields .

Proposed Algorithm

1. Assess hemodynamic stability (ABCs).
2. Unstable or severely distended → Open repair (life-saving priority).
3. Stable → MIS (laparoscopic/robotic) if expertise/resources available.
4. Mesh strategy:
   - Clean/clean-contaminated: permanent synthetic mesh (extraperitoneal).
   - Moderate contamination: consider biologic or absorbable mesh.
   - Dirty field: no mesh.



Legend

1. Hernia Repair Options

A. No Hernia Repair (i.e., staged repair)
B. Pack Femoral Space (e.g., with absorbable hemostatic agent; staged repair)
C. MIS (Laparoscopic/Robotic) Preperitoneal (TEP/TAPP) with Mesh
D. Open Preperitoneal (TIPP/TREPP) with Mesh
E. Open Tissue-Based Repair Without Mesh

2. Mesh Options

A. No Mesh
B. Absorbable (Biologic/Synthetic) Mesh
C. Hybrid Mesh
D. Synthetic Mesh (e.g., lightweight, macroporous)