What is the place of hand-assisted liver surgery?

Alan J Koffron, MD

Director, Transplant and Hepatobiliary Surgery
Beaumont Health System, Michigan, USA
Hand-Assisted Laparoscopic Surgery (HALS)

• Utilizing the hand (via small adjunct incision) as:
  • Multi-purpose instrument
  • Liver retraction
  • Specimen extraction (cancer)
  • Safety in surgical education
  • Ad hoc use of “open techniques”
  • Rapid control (hemorrhage)
HALS vs. pure laparoscopic

- personal experience and preference
- Assistant’s abilities
- Case specifics
  - Cancer
  - Lesion size/location
  - Patient factors
  - Patient expectations
- Style and comfort level
• Consider its *function*:
  • Extraction
  • Hand-assist (retraction vs. dissection)
  • Adjunctive procedure (ex. Autotransplant)
  • Maintain visualization

• Consider abdominal wall *structures*
  • Cosmesis?
  • musculature

• Consider *potential* for:
  • Conversion
  • Hybrid events
Hand-assist in surgical education

- Surgical “maestro” concept
- Description on operative field
- Real-time control
- Tactile feedback (tissue fragility, stapler passage)
- Speed
Programmatic trends (hemihepatectomy)
Laparoscopic “hybrid”

• an extension of HALS
• Either intermittent open techniques or completion approach
• Thoughtful location of incision allows full spectrum of MIS approaches
• Allows progression of MIS experience (ex. Mobilization -> vascular dissection -> transection)
• Reduces incision size in open surgery by performing laparoscopic “remote” tasks (ex. Adhesiolysis, Roux limb construction)
Review of literature

- The “hybrid” method (*Surgery*, 2008): attempts to coax progress of LLS
  - Literature 1991-2014
  - 75 studies, 18 series (9 HALS, 9 hybrid)
  - Most centers utilize the MIS spectrum in LLS
  - Non-superiority of methods
  - Question of progression to PLS with experience
SUMMARY

• HALS bridges the crevasse between pure laparoscopic and open liver surgery
• Use of HALS is case-specific
• Obvious situational advantages, but not superior approach
• Fosters surgical education in LLS
• Promotes consideration of MIS in the treatment of liver disease
Questions?