A NOVEL BIPOLAR ELECTROSURGERY SYSTEM ELIMINATES STAPLES AND CLIPS IN LAPAROSCOPIC SURGERY

M Aleali, MD
R Sim, FRCS
A Ky, MD
J Milsom, MD, FACS



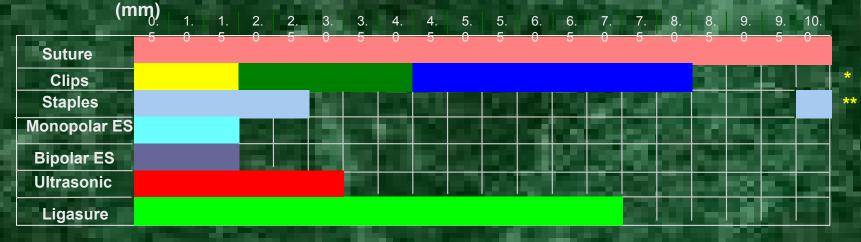


Introduction

Most energy-based techniques are labelled for vessels $\leq 3 \text{ mm}$

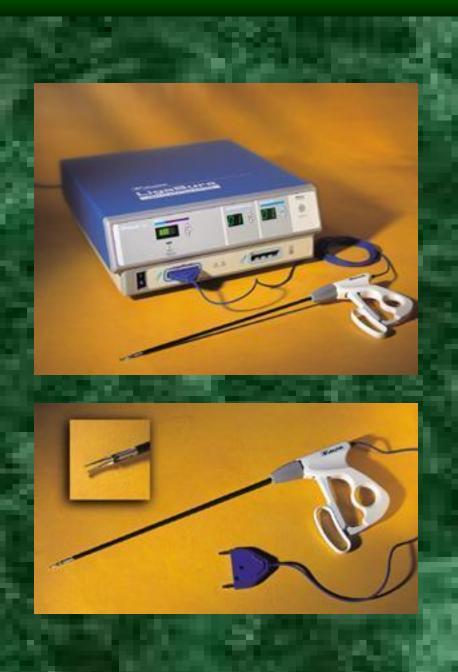
Mechanical techniques are labelled for vessels ≤ 10 mm

Manufacturer's Recommended Range of Vessel Size for Application



- 3 sizes of clips and appliers
- ** 2 sizes of staples

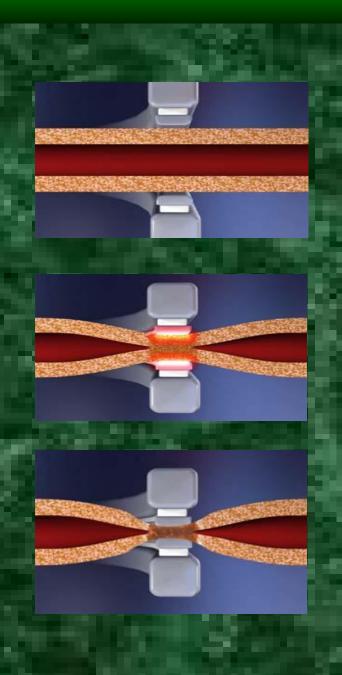




Permanently Seals

vessels 1mm to 7mm in diameter

tissue bundles without dissection and isolation



Applies optimal pressure to vessel/tissue bundle

Energy delivery cycle:

measures initial resistance of
tissue and chooses appropriate
energy settings

delivers pulsed energy with continuous feedback control.

Pulses adapt as the cycle progresses

senses that tissue response is complete and stops the cycle

Hypothesis

LIGASURE - A novel bipolar electrosurgery system can be used safely and effectively in laparoscopic colon surgery



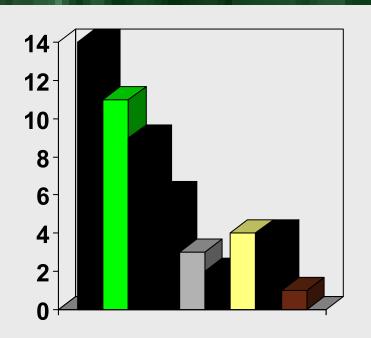


Materials and Methods

- Ligasure used in most laparoscopic colon cases
- 9 month period from Mar 99
- No clips / staples used in vessel ligation
- All mesenteric vessels heat sealed



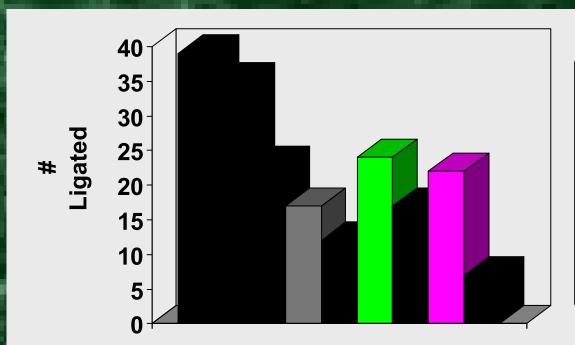
RESULTS: LAPAROSCOPIC PROCEDURES PERFORMED



Laparoscopic Cases total: 54

- **TPC/Pouch**
- Sigmoid resection
- **■** Ileocolic resection
- R. Hemicolectomy
- **L.Hemicolectomy**
- **■** LAR
- □ Subtotal colectomy
- **■** PC/Pouch
- Segmental rsx.

RESULTS: VESSELS LIGATED

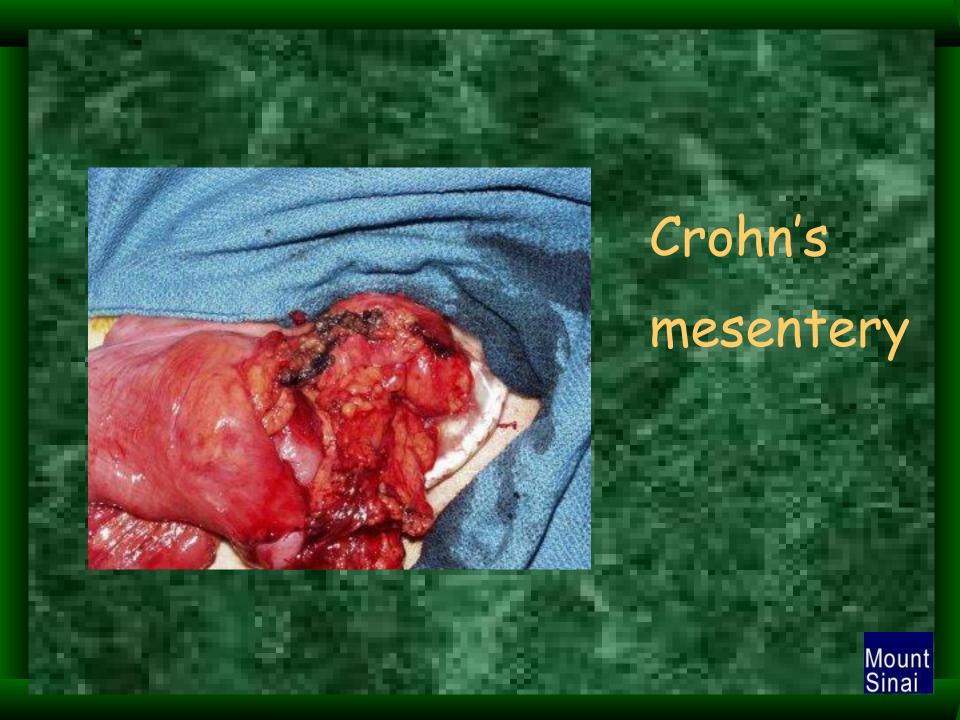


- IMA/IMV
- **■** L.COLIC
- R.BRANCH: MCA
- **MCA/MCV**
- **ILEOCOLIC**
- MARGINAL
- **■** MESORECTUM
- **SIGMOID BRANCHES**
- **CROHN'S MESENTERY**

Vessel Ligated







Conclusions

Ligasure is safe and effective No major intra-operative bleeding No postoperative bleeding

Ligasure may eliminate clips and vascular staples in laparoscopic colon surgery

