THE ROLE OF ROUTINE GROIN ULTRASOUNDS IN THE MANAGEMENT OF INGUINAL HERNIAS

Gabriel Marcil MD, Jennifer Schendel MD, Ryan Tong MD, Neal Church MD, Artan Reso MD, Phillip Mitchell, Chad G. Ball MD Msc, Richdeep S. Gill MD PhD, Estifanos Debru MD
Division of General Surgery

INTRODUCTION

Commonly, groin ultrasound scans (US) have been used as an adjunct to inguinal hernia diagnoses. However, there is limited evidence as to whether this affects surgical management.

OBJECTIVE

- Examining whether groin US affects surgical management of inguinal hernias.
- Estimating the frequency of groin US ordered prior to general surgery consultation.

METHODS

Retrospective chart review

2014-2015

Inclusion criteria
- Age over 18 years old
- Referral for inguinal hernia management
- 4 General surgeons

Database
- *Rate of pre consultation US*
- *Palpable hernia*
- *US positive for hernia*
- *Surgical decision making*

RESULTS

Patients' characteristics



- 400 Patients, 476 Groins
- Mean age 53.5 years
- Mean BMI 31.3 kg/m2
- Male sex 88.5%
- 336/476 (70.6%) Pre consultation US

Comparing Clinical Examination Findings and Groin Ultrasound Results on Surgical Decision Making

	Result
Total number of inguinal hernia repairs (S+)	315/476 (66.2%)
Clinically detectable hernia leading to surgery (CE+ S+)	310/364 (85.2%)
Hernia detected by routine US leading to surgery (independent of clinical exam findings) (CE +/-, US+, S+)	202/310 (65.16%)
Clinical examination significantly affecting surgical decision making (CE +/-, S+/-)	390/476 (81.9%)
Positive ultrasound finding leading to surgery in the absence of positive clinical examination (CE-, US+, S+)	5/103 (4.85%)
Routinely ordered US significantly affecting surgical decision making (US+, S+)	5/336 (1.49%)

* *CE = Clinical Examination, US= Groin Ultrasound. S= Surgery*

RESULTS CONTINUED

Sub-analysis of patients who had a negative clinical exam, a positive groin US and underwent inguinal hernia repair
- 5/400 patients (1.25%)
- 2 patients had a very small indirect hernia
- 3 patients had no inguinal hernia
- Baseline characteristics of these patients were not statistically different

CONCLUSION

- **Groin US ordered before inguinal hernia consultations are frequent**
- **US infrequently affect the decision to treat surgically.**
- **Findings on CE play a larger role in surgical decision-making than US result**
- **There is a cost associated with unnecessary routine groin US**
- **Groin US should not be ordered routinely prior to general surgery consultation**