THE ROLE OF LAPAROSCOPY IN ENDOMETRIAL CANCER

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DECLARATION OF INTERESTS

None
INTRODUCTION

- 4th commonest female cancer: Breast, Lung, Colorectal
- Commonest gynecological cancer worldwide
- 2nd commonest in SA after Cervical Cancer
- 75% present as stage 1 with excellent prognosis

Changing management
- Aggressive surgical staging
- Pelvic + para-aortic lymphadenectomy
- Increasing role of laparoscopy
INCREASE IN ENDOMETRIAL CANCER LOCALLY LAST 14 YEARS

Combined Clinic Groote Schuur Hospital

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TRADITIONAL MANAGEMENT

- TAH \ BSO \ Pelvic cytology
- Stage 1 (low risk):
  - no further treatment
- Stage 1 (high risk), stage 2, stage 3:
  - Radiotherapy (Whole pelvic or Vault brachytherapy)
  - Chemotherapy
- Stage 4:
  - Palliation
LAPAROSCOPY IN ENDOMETRIAL CANCER

- **Benign Conditions:**
  - Minimally invasive surgery huge benefits
  - Laparoscopically Assisted Vaginal Hysterectomy (LAVH)
  - Total Laparoscopic Hysterectomy (TLH)

- **Endometrial Cancer**
  - Lymphadenectomy
    - Pelvic
    - Para-aortic
  - Omentectomy – certain histological subtypes
WHAT ABOUT LYMPHADENECTOMY?
Role Controversial
Wide range of differing approaches
  - No Lymphadenectomy
  - Lymphadenectomy in high risk only
    - Role of Frozen section / MRI / Ultrasound
  - Routine lymphadenectomy all cases
  - Pelvic vs Para-Aortic
  - Sentinel nodes

No improved survival rates demonstrated with lymphadenectomy

**LYMPHADENECTOMY**

- **NODES:**
  - Obturator ; Internal, External, Common iliac
  - Para–aortic ? To Inferior Mesenteric artery or Renal vessels

- NB to help identify patients high risk for pelvic side wall recurrence

- Avoid **pelvic irradiation** if node negative
  - Expensive
  - Time consuming / QOL
  - Significant morbidity (25% serious SE)

- Therapeutic benefit of debulking : controversial

- **Laparoscopic Lymphadenectomy**
  - Time consuming
  - Steep learning curve
  - Especially para–aortic nodes
ROLE OF SENTINEL NODES

- Sentinel Node biopsy may significantly reduce time and morbidity in laparoscopic lymphadenectomy

- Blue Dye
- Indigo Carmine Green
ESMO-ESGO-ESTRO CONSENSUS GUIDELINES - LYMPHADENECTOMY

- Low Risk Endometrioid (Grade 1 or 2; < 50% invasion)
  - Lymphadenectomy not recommended

- Intermediate Risk (Grade 1 or 2; > 50% or Grade 3; < 50%)
  - Lymphadenectomy not recommended

- High Risk (Grade 3; > 50% invasion)
  - Lymphadenectomy is recommended

- Incompletely operated high risk
  - Lymphadenectomy should be considered to tailor treatment

Colombo et al. Radiotherapy and Oncology 117.559-581. 2015
Endometrial Cancer Patients
- Co morbidities
  - Obesity, age, diabetes, hypertension
  - Increased Surgical complications
- NB to individualise
- Safety Crucial:
  - Patient and pathology
    - Histology, BMI, Previous Surgery
  - Surgeon
    - Skill Level, Experience
- Time and Cost issues
- Consent essential
  - Medico-legal Issues
Adequate surgery performed +/- lymphadenectomy
Conversion from laparoscopy to laparotomy
Intra-operative complications
Post-operative complications
Blood loss / transfusions
Operative time
Hospital stay
Quality of Life (QOL)
Cost Effectiveness
Recurrence and Survival
LITERATURE IS LIKE THE GYNAECOLOGIST’S POST BOX
Laparoscopy vs Laparotomy

- Lower post-operative complications OR 0.34 (0.13-0.89)
- Lower incidence blood transfusion OR 0.14 (0.05 – 0.39)
- Less blood loss: 263 ml
- Longer operative time: 38 min
- Number of harvested nodes: no difference
- Shorter hospital stay: 3.35 days

No difference recurrence or survival

Lin et al: Int J Gynecol Cancer 2008, 18, 1315-1325
LAP2 TRIAL: GOG

- 1996 – 2005
- Multi-centre randomised trial
- Clinical Stage I to IIA uterine cancer
  - All histological subtypes
- 2616 patients randomised
  - Laparoscopy 65% (1696) and Laparotomy 35% (920)
  - Hysterectomy, BSO, Pelvic Cytology
  - Pelvic and para-aortic lymphadenectomy all cases
    - Controversial in low grade, less 50% myometrial invasion
    - Many cases lymphadenectomy were not necessarily indicated

LAP2 TRIAL: GOG

- Conversion rate from laparoscopy to open: 25.8%
- Conversion significantly increased with BMI and Age

Reasons for conversion:
- Poor Exposure 57%
- Metastatic Cancer 16%
- Bleeding 11%
- Other 16%

CONVERSION RATE VS BMI

Laparoscopy vs Laparotomy

- Fewer postoperative complications: 14% v 21%
- Intraoperative complications: No difference
- Longer operative time: 204 v 130 minutes
- Hospitalization greater 2 days: 52% v 94%
- Full lymphadenectomy not completed: 8% v 4%
- Median number of nodes:
  - Pelvic: 17 v 18
  - Para-aortic: 7 v 7
- Overall detection of advanced stage: No difference

LAP2 TRIAL: GOG
First 802 patients eligible
1,3,6 weeks and 6 months post surgery
Laparoscopy:
- 6 week period: Statistically significant:
  - Better physical functioning
  - Better body image
  - Less pain
  - Earlier return to normal activities
  - Earlier return to work
- 6 months
  - No statistically significant differences

LAP2 TRIAL: RECURRENCE AND SURVIVAL

- Median follow up of 59 months for 2181 patients still alive
  - Remember 65% randomised laparoscopy, 35% laparotomy
- Recurrences 309:
  - Laparoscopy 201; laparotomy 99
- Deaths 350
  - Laparoscopy 229; Laparotomy 121
- Hazard ratio:
  - Laparoscopy vs Laparotomy: 1.14
  - Falling short of definition of non-inferiority

LAP2 TRIAL: RECURRENCE AND SURVIVAL

- Recurrence rates much lower than anticipated

- 3 year recurrence
  - Laparoscopy 11.4% v Laparotomy 10.2%

- 5 year overall survival
  - Almost identical 89.8%

LACE trial: 361 pts randomised TLH v TAH early stage
QOL favoured TLH v TAH
Cost Effectiveness Analysis:
- Modelled cohort of 1000 patients for 5 years
- Theatre time, equipment, consumables
- Surgeon, anaesthetist, staff
- Hospital stay
- Consultations: GP’s, emergency unit, Occupational therapists etc
Conclusions: Laparoscopy:
- 100% probability of cost saving to health services
- 86.8% probability increase health benefits
  - QOL benefits are small for average individual

Janda et al. Lancet Oncol. 11(8): 772-80, 2010
Minimally invasive surgery is recommended in surgical management of low and intermediate risk endometrial cancer.

Minimally invasive surgery can be considered in management of high risk endometrial cancer.

Vaginal Hysterectomy + BSO can be considered in patients unfit for recommended surgery and select low risk endometrial cancer.

In medically unfit patients, RT or hormone treatment can be considered.
MRI IN GYNAECOLOGICAL ONCOLOGY

- MRI may be useful to assess myometrial invasion, extra uterine disease

- Only useful units where surgical decision making (LN) depends on selection of Low / Intermediate from High risk

- Specialist ultrasound or intra-operative frozen section may also be used

- **Endometrium**
  - Accuracy in staging 82-92%
  - May assist us in choosing patients for laparoscopy

- **Laparoscopy vs Laparotomy**
  - Suspected advanced disease or high grade lesions eg. UPSC
  - Obese / Age or medical comorbidities
  - Low/Intermediate Risk: Grade 1 < 50% invasion
    - TLH or Vaginal Hysterectomy

Randomised Controlled Trial 2010 – 2013
101 patients: Hysterectomy/BSO/Pelvic LN

**Robotic vs Laparoscopy**
- Operation time: 139 vs 170 min (P<.001)
- Conversion rate: 0 vs 5
- Number of nodes: No difference
- Bleeding: No difference
- Hospital Stay: No difference
- Intraoperative complications: 4 vs 0
- Major Postoperative complications: 5 vs 11 (P=.111)

**Conclusion:**
- Robotic surgery faster than Laparoscopy with similar surgical outcomes

CONCLUSIONS

- Laparoscopy steep learning curve
- Populations and pathology different:
  - State service in SA more advanced stages, more high risk types eg. Carcinosarcoma
- Patient Selection crucial: Individualise
  - Obese and elderly – high conversion rates
  - Vaginal Hysterectomy may be option
  - LAVH
  - TLH
  - Lymphadenectomy:
    - MRI / Ultrasound / Frozen Section
    - Pelvic
    - Para-aortic
Laparoscopy in Endometrial Cancer
- Safe and Effective
- Longer operative time
- Similar intraoperative complications
- Reduced postoperative morbidity
- Reduced hospital stay
- Short term improvements QOL
- Cost effective
- No significant difference recurrence or overall survival
SOUTH AFRICAN SOCIETY GYNAE ONCOLOGY
CONGRESS: 31 AUG-2 SEP 2018

Spier Wine Estate. Stellenbosch, Western Cape