OPPORTUNISTIC SALPINGECTOMY VS. TUBAL LIGATION IN THE OB PATIENT YES OR NO?

Christine Herde, MD, FACOG
Vice Chair, Department of OB/GYN
CareMount Medical, Mount Kisco, NY
Assistant Director of OB/GYN, Mount Sinai
Health System at CareMount Medical

Where Did We Begin?
The Fallopian Tube: A Neglected Organ

1. OSE – presumption that Ovarian Cancer arised from the ovary or even the ovarian surface epithelium (OSE)
2. Prophylactic Oophorectomy became a treatment option for High Risk Patients.
3. This theory was challenged by: the absence of a clearly defined precursor lesion in the ovary or OSE and the recognition of Primary Peritoneal Cancer predominantly in high risk patients with a history of oophorectomy.

Greene M, Mai P, Cancer Prev Res. 2015; 8 (5) 399-341

The Alphabet Continues:

4. RRSO – Prophylactic Oophorectomy to Risk-Reducing Salpingo-oophorectomy- 1994/1995- BRCA1/BRCA2- tubal malignancy was included in the group of malignancies. The beginning of "The suggestion for a cure".
5. BSOR – Bilateral Salpingectomy with Ovarian Retention – maintain ovarian function in patients not yet ready, decrease long term risks of premature menopause.

Greene M, Mai P, Cancer Prev Res. 2015; 8(5) 339-341

Review of the Risks:

1. Minimal additional Surgical Time
2. No excess re-hospitalization
3. No excess blood transfusion
4. Increase in the proportion of hysterectomies being performed laparoscopically.
5. Cost benefit analysis – cost effective
6. Estimated decrease in ovarian CA risk by 38% if done with hysterectomy.
7. Estimated decrease in ovarian CA risk by 29% if done in place of tubal ligation.

Kwon JS, McAlpine JN, Hanley GE, et al. Obstet Gynecol. 2015; 125:338–45.

"Opportunistic Salpingectomy (OBS) should be considered for all women undergoing these surgical procedures"

- Debated in the literature however;
- Rates of BS increased among women undergoing hysterectomy as well as those undergoing interval tubal ligation

Lets clarify the ACOG Committee Opinion- January 2015

- Randomized controlled trials are needed to support the validity of this approach to reduce the incidence of ovarian cancer.
- The approach to hysterectomy or sterilization should not be influenced by the theoretical benefit of salpingectomy
- Focuses on hysterectomy and laparoscopic sterilization procedures

"THE OBSTETRICAL PATIENT"

Should we consider salpingectomy at the time of Cesarean Section or postpartum tubal ligation.

The Gravid Uterus Changes in Vasculature

-The diameter of the main uterine artery doubles in size.

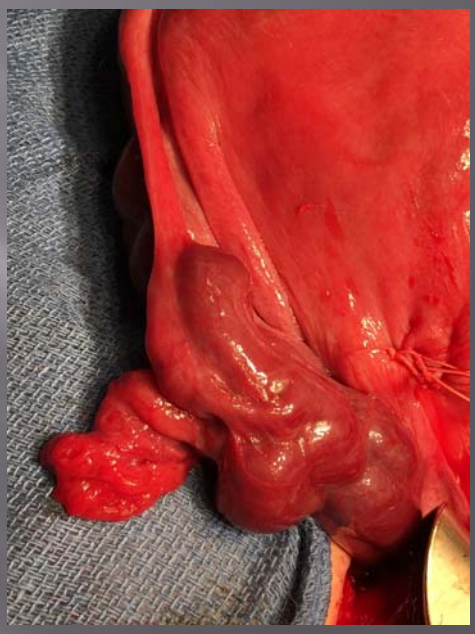
-Change in the uterine vascular resistance.

-Smaller arcuate and radial arteries remodel in a similar pattern with enlargements in lumenal caliber from 25 to 220%.

-Smaller arcuate and radial arteries have either no change or an increase in wall thickness.

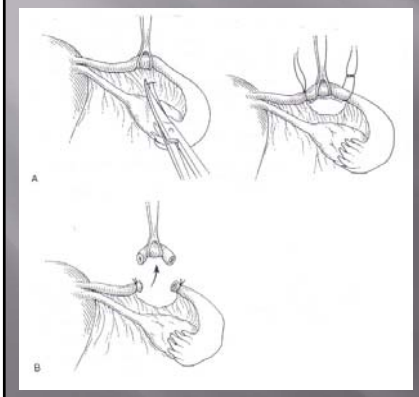
-Veins also enlarge substantially

Palmer SK, Zamudio S, Coffin C, Parker S, Stamm E, Moore LG. Quantitative estimation of human uterine artery blood flow and pelvic blood flow redistribution in pregnancy. Obstet Gynecol 80: 1000–1006, 1992.

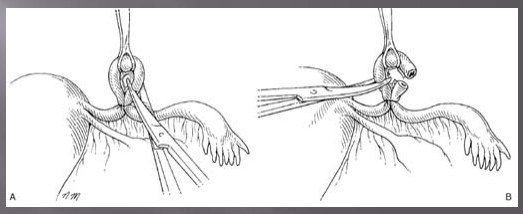


Tubal at the time of C/S: Parkland vs. Pomeroy

Parkland Method



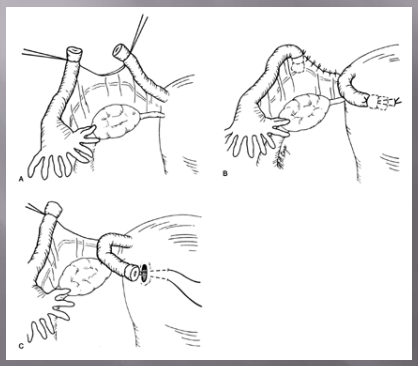
Pomeroy Method



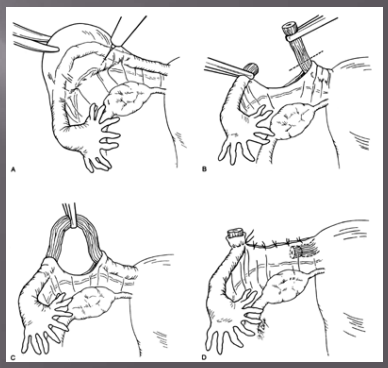
Irving vs. Uchida method

More extensive dissection
More operative time
Increased risk of bleeding

Irving Method



Uchida Method



Complete vs. Partial Salpingectomy

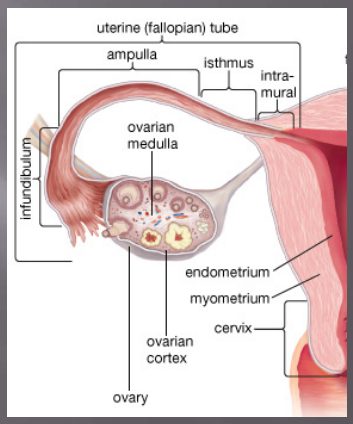
Partial Salpingectomy:

Removal of the distal 1/3:

Fimbria

Infundibulum

Portion of Ampulla



Scope of the Recommendation:

- US Birth Rates and Population Growth Estimates 4 Million Births in the US
- 8 to 9% of all US Live Births will result in Postpartum Tubal Sterilization
- Anticipated to be more than 50% of all sterilizations
- Estimated Tubal Ligation C/S and postpartum: 320,000 annually.

Benefits of Bilateral Salpingectomy

- Permanent sterilization with likely decrease in failure rate
- Decrease risk of ectopic pregnancy if failure
- Decrease in post ablation tubal sterilization syndrome
- Primary prevention of epithelial carcinoma of the fallopian tube, ovary or peritoneum.

Risks of Bilateral Salpingectomy

- Permanent – No option for reversal
- No study has compared the contraceptive efficacy or risk of complications with complete or partial salpingectomy for PP sterilization
  - Blood loss/hemorrhage
  - Cautery complication

Informed Consent of the Patient

- Legal and Ethical Responsibility to provide adequate information
- Bring the patient into the Medical Decision Making Process
- Must disclose "Material Facts" relevant to the decision making process
- Must answer "truthfully"
- Documentation is Key

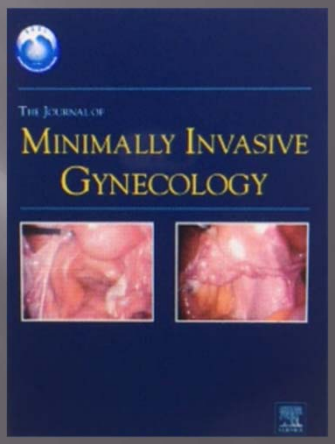
Berg JW, Appelbaum PS, Lidz CW, et al. Oxford University Press, New York 2001.

Introduced in 2010

- No data regarding long term impact.
- At least 10 years to see if it creates a definite decrease risk in Cancer.

What is new? Where are we going?

Three to five years later: long-term effects of prophylactic bilateral salpingectomy on ovarian function



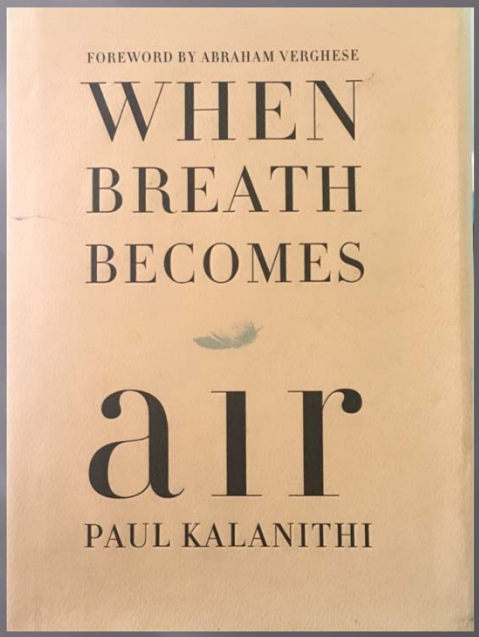
What is new? Where are we going?

- Preliminary Data on PBS (Prophylactic Bilateral Salpingectomy)
- Observational Study for Premature Surgical Menopause
- 79 patient from 9/2010 – 9/2012
- 71/79 patients with follow up

Venturella R, Lico D, Borelli M, Imbrogno MG, Cevenini G, Zupi E, Zullo F, Morelli M, Three to five years later: long-term effects of prophylactic bilateral salpingectomy on ovarian function, *The Journal of Minimally Invasive Gynecology (2016), doi: 10.1016/j.jmig.2016.08.833.*

Results:

The addition of PBS to TLH in the late reproductive years does not modify the ovarian age of treated women up to 3 to 5 years after surgery



"Even if you are perfect, the world isn't. The secret is to know that the deck is stacked, that you will lose, that your hands or judgment will slip, and yet still struggle to win for your patients. You can't ever reach perfection, but you can believe in an asymptote toward which you are ceaselessly striving."

-Paul Kalanithi, MD

Thank You