



# BỆNH VIỆN SẢN NHI QUẢNG NINH

*Nâng tầm hạnh phúc*

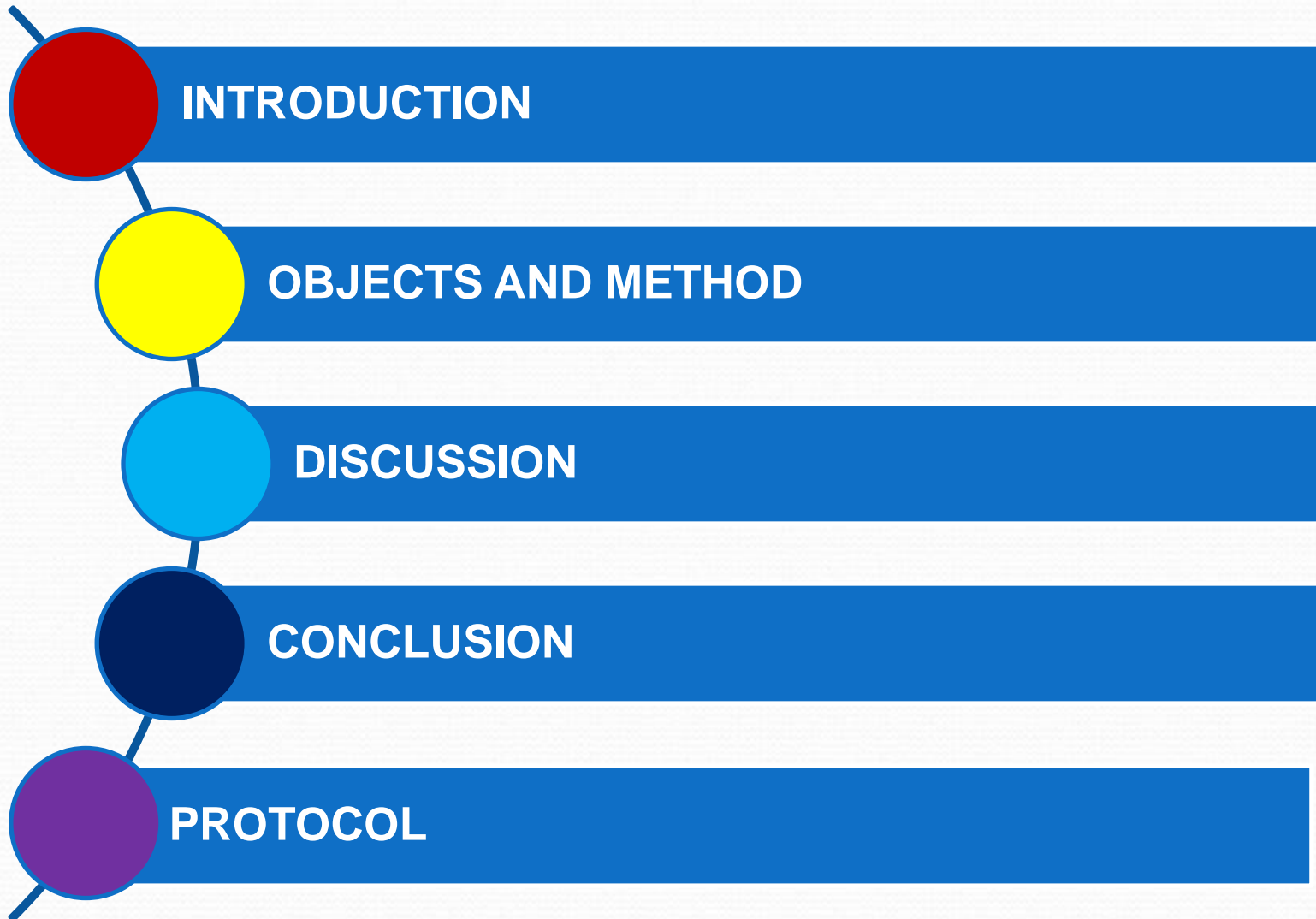


**“EFFECTIVENESS OF COMBINED  
HYSTEROSCOPY AND LAPAROSCOPY  
IN DIAGNOSIS AND TREATMENT OF INFERTILITY IN  
QUANG NINH HOSPITAL OF OBSTETRICS AND  
PEDIATRICS”**

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# CONTENT

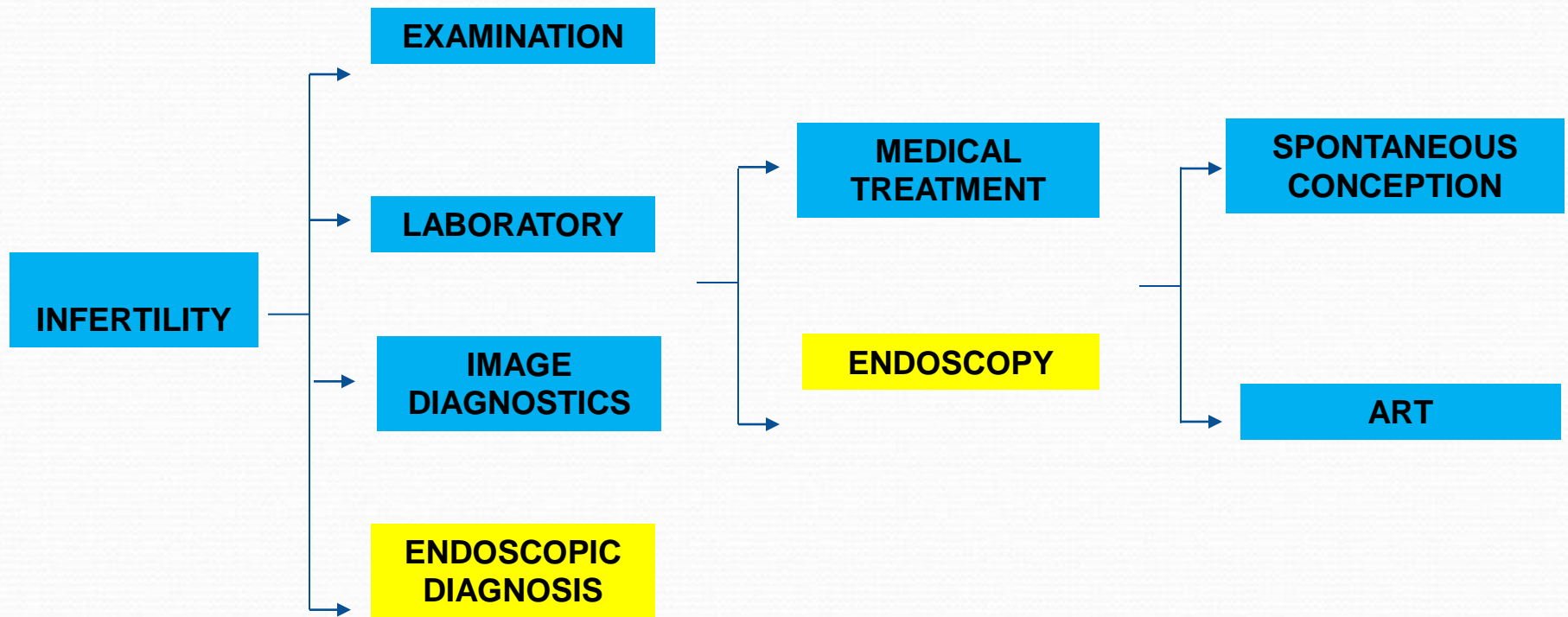




# INTRODUCTION

- Infertility: failed to conceive after 12 months of regular sexual intercourse without the use of contraception
- Range from 8% to 15%
- Male infertility 40%, female infertility 40%, 20% no cause is found
- Primary and secondary infertility

# ALGORITHM IN DIAGNOSIS AND TREATMENT OF INFERTILITY



# INTRODUCTION

## Hysteroscopy

- Polyps and adhesions, anomalies of uterin cavity

## Laparoscopy

- Investigations, diagnosis of pelvic diseases
- Fibroids, uterine malformation
- Ovarian tumor
- Fallopian tube: hydrosalpinx, pyosalpinx, salpingitis, obstruction...
- Endometriosis

# PURPOSE

To evaluate the effectiveness of combined hysteroscopy and laparoscopy in diagnosis and treatment of infertility in Quang Ninh Hospital of Obstetrics and Pediatrics





# **OBJECTS AND METHOD**



# OBJECTS

- Prospective cohort Study
- All infertile patients with indication for hysterolaparoscopy at Quang Ninh Hospital of Obstetrics and Pediatrics
- Follow-up care after surgery until 11/2016

# METHOD

- Step 1: Medical records. All patients participating in the research had Hysterosalpingography before and after surgery
- Step 2: Surgery
- Step 3: Follow up care after surgery

# RESULTS

- 90 patients
- Primary infertility accounts for 59.2%.
- Secondary infertility accounts for 40.8%.
- Mean age (all) 34.7; primary infertility group: 32.8; secondary infertility group 35.9

# RESULTS

*Table 1. Distribution of patients based on previous abortions*

| <b>Number of abortions</b> | <b>0</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>Total</b> |
|----------------------------|----------|----------|----------|----------|--------------|
| <b>n</b>                   | 1        | 71       | 15       | 3        | 90           |
| <b>%</b>                   | 1.1      | 78.9     | 16.7     | 3.3      | 100          |



# RESULTS

*Table 2: Comparision of HSG and endoscopy*

|              | Endo. fits HSG | Endo. not fits HSG | Total |
|--------------|----------------|--------------------|-------|
| Normal HSG   | 16             | 4                  | 20    |
| Abnormal HSG | 58             | 12                 | 70    |
| Total        | 74             | 16                 | 90    |

HSG had lower specificity than Endoscopy

82% similar results between 2 methods

# RESULTS

*Table 3: Pathology that causes infertility*

| <b>Pathology</b>                | <b>n</b> | <b>%</b> |
|---------------------------------|----------|----------|
| <b>Fallopian tube pathology</b> | 65       | 72.2     |
| <b>Endometrial polyps</b>       | 10       | 11.1     |
| <b>Fibroids</b>                 | 5        | 5.6      |
| <b>Endometriosis</b>            | 10       | 11.1     |
| <b>Adhesion</b>                 | 20       | 22.2     |

# RESULTS

*Table 4. Effectiveness of laparoscopy*

| Before surgery                   |    | After surgery                |                           |                            |
|----------------------------------|----|------------------------------|---------------------------|----------------------------|
|                                  |    | 2 obstructed fallopian tubes | 1 passable fallopian tube | 2 passable fallopian tubes |
| Obstruction of 1 fallopian tube  | 16 | 0                            | 5                         | 11                         |
| Obstruction of 2 fallopian tubes | 49 | 6                            | 18                        | 25                         |
| Total                            | 65 | 6                            | 23                        | 36                         |

After procedure 59 out of 65 patients had at least 1 tube passable

# RESULTS

Effectiveness of Adhesiolysis: 100%





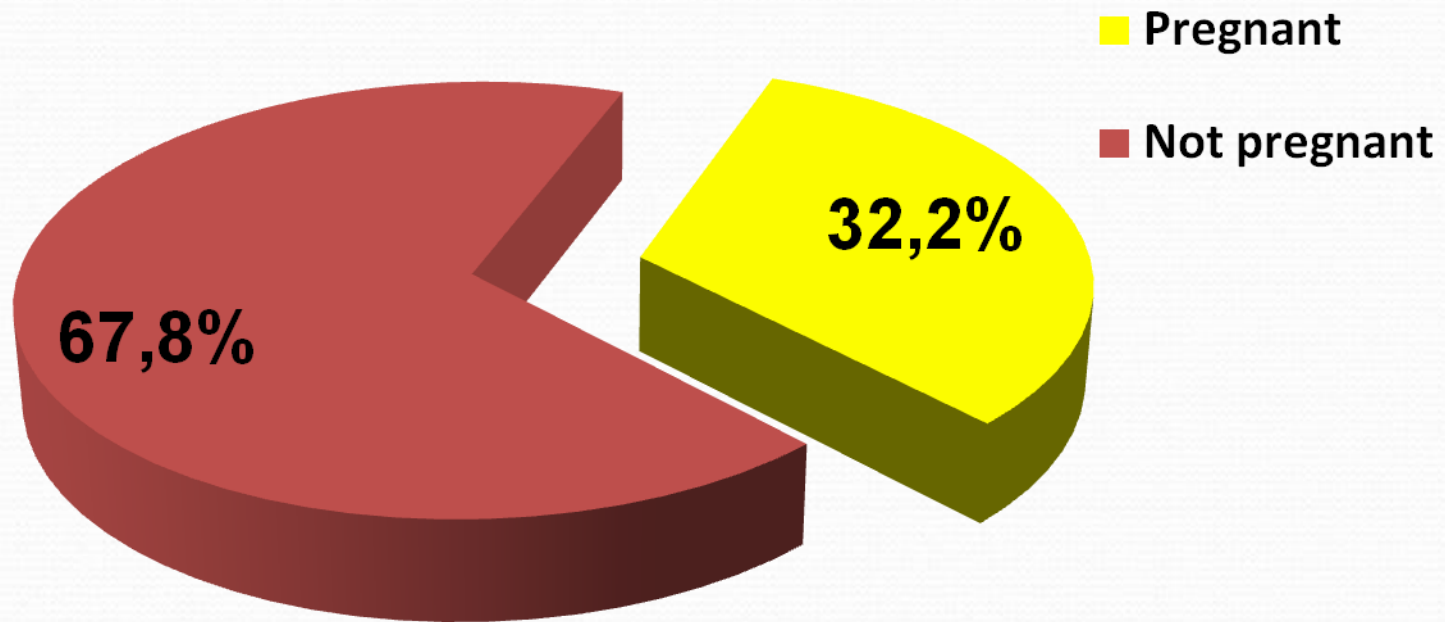
# RESULTS

*Table 5. Mean duration of hospitalization*

| Duration | < 5 days | 5-7 days | > 7 days |
|----------|----------|----------|----------|
| n        | 83       | 7        | 0        |
| %        | 92,2     | 7,8      | 0        |

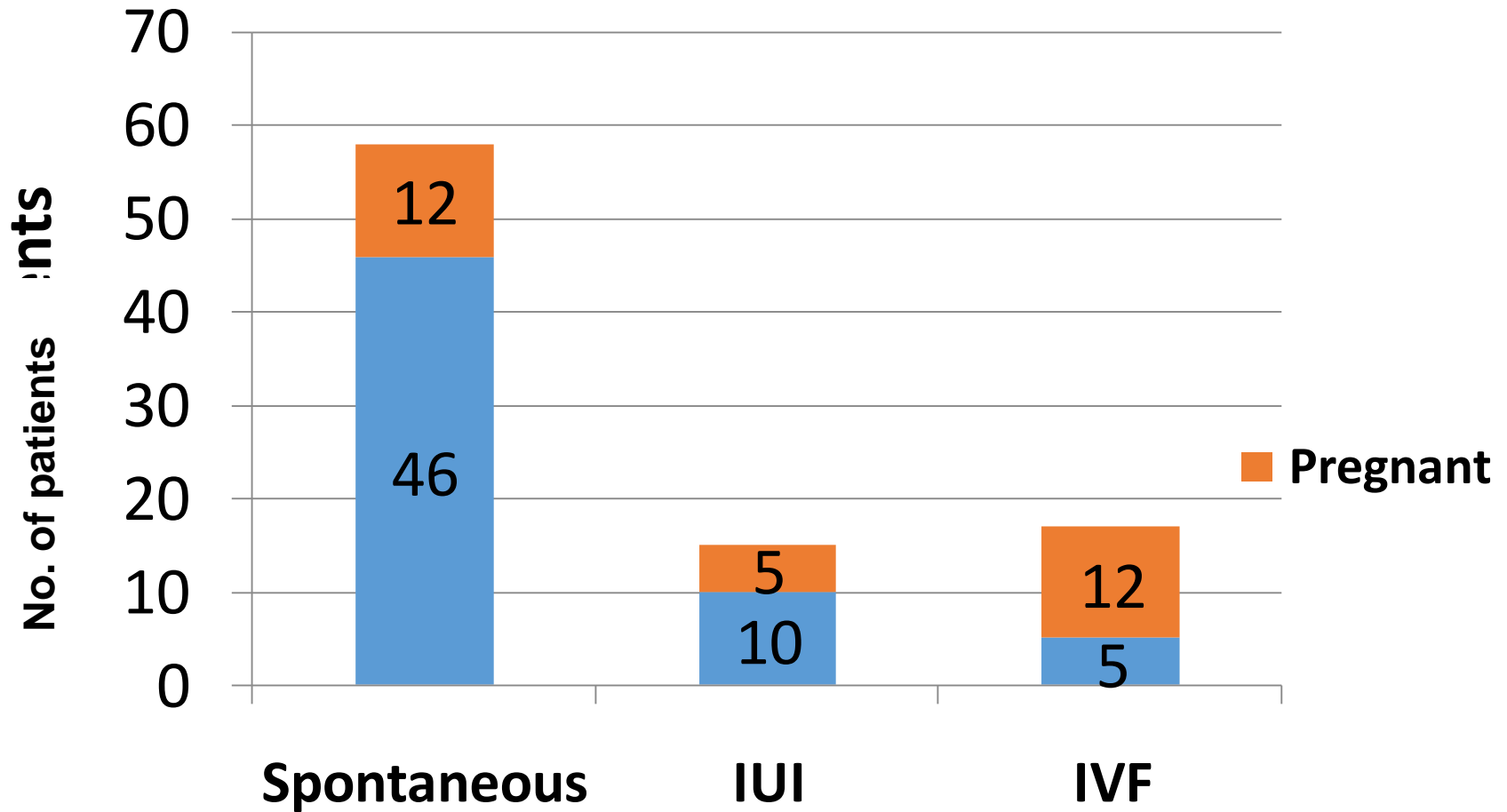
*Advantage: short treatment duration, quick recovery*

# RESULTS



*Chart 2. Pregnancy rate after treatment*

# RESULTS



*Chart 3. Cumulative pregnancy rate*

# DISCUSSION

## Fallopian tubes obstruction through laparoscopy.

- Fallopian tubes obstruction accounts for 72.2%.  
16 cases have 1 blocked fallopian tube, 49 cases have 2 blocked fallopian tubes.
- Nguyen Viet Tien, 2010: (54,3%).
- Pham Nhu Thao, 2003: (58,6 %).



1. Nguyễn Việt Tiến (2013), *Các quy trình chẩn đoán và điều trị vô sinh*, Nhà xuất bản Y học.

2. Phạm Như Thảo (2004), *Tìm hiểu một số đặc điểm, yếu tố liên quan và những biện pháp điều trị vô sinh tại BVPSƯ năm 2003*, Đại học y Hà Nội.



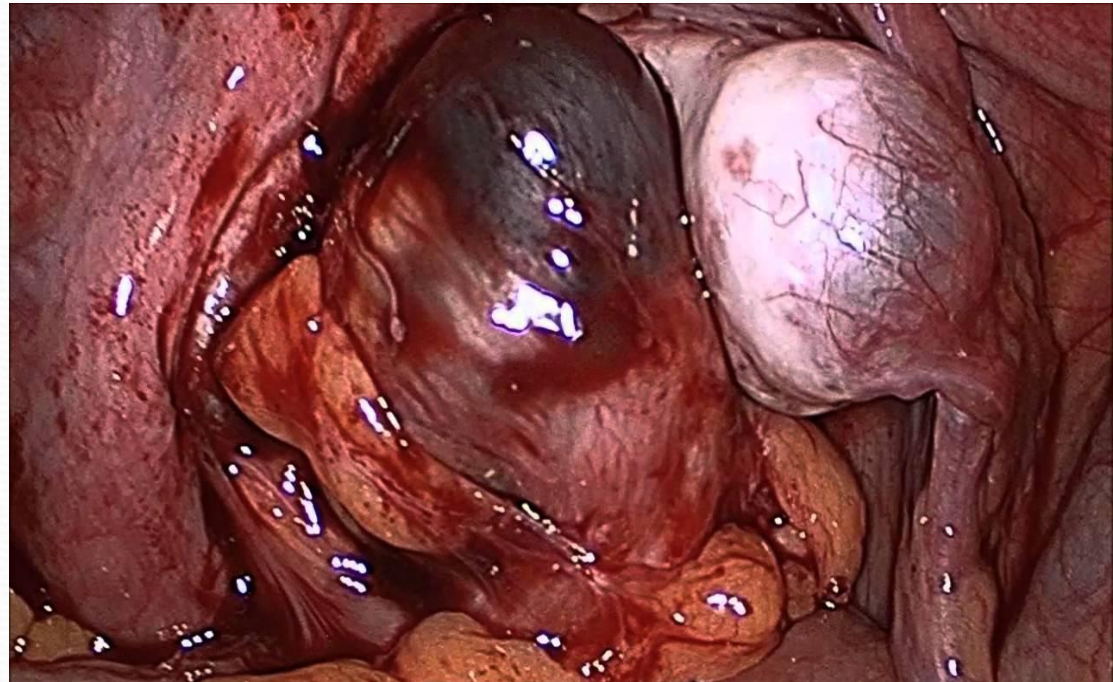
# DISCUSSION

## *Uterus pathology*

- 5 patients with fibroids, accounting for 5.6%.
- All myomectomy is performed via hysteroscopy, there is no open surgery.

## *Endometriosis*

- Endometriosis accounts for 11.1%



# DISCUSSION

## Endometrial polyps and adhesion

- Abnormal HSG 33%.
- Endometrial polyps: 11.1%, lower than Moravek (15.3%) and higher than Dreisler (7.8%).
- Most cases primary infertility found among patients with uterine adhesion, history of abortions, curettage





# DISCUSSION

## Value of HSG and hysteroscopy

- HSG has a sensitivity of 93.5%, specificity of 57.1%.
- False negative - false positive rates: 20% - 17.1% (LaSala: 26% - 10%, Otubus: 30.4% - 25%, Hourvitz: 12% - 19%).
- HSG in agreement with hysterolaparoscopy in 82% (Kaya Vaid: 66,3%)

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2. Otubu J.A., Sagay A.S., and Dauda S. (1990). Hysterosalpingogram, laparoscopy and hysteroscopy in the assessment of the infertile Nigerian female. *East Afr Med J*, **67**(5), 370-372.

3. Hourvitz A., Lédée N., Gervaise A., et al. (2002). Should diagnostic hysteroscopy be a routine procedure during diagnostic laparoscopy in women with normal hysterosalpingography?. *Reprod Biomed Online*, **4**(3), 256-260.

4. Vaid K., Mehra S., Verma M., et al. (2014). Pan Endoscopic Approach "Hysterolaparoscopy" as an Initial Procedure in Selected Infertile Women. *J Clin Diagn Res JCDR*, **8**(2), 95-98.

# DISCUSSION

## Cumulative pregnancy rate after surgery

- Till the end of November 2016, the average postoperative follow-up time for all patients is 10.2 months.
- Cumulative pregnancy rate is 32.2%, 12 patients get pregnant spontaneously, 5 patients get pregnant after IUI and 12 patients get pregnant after IVF.



# CONCLUSION

- The most common cause of infertility is fallopian pathology, accounting for 72.2%, followed by endometrial adhesion with 22.2%.
- 18% of patients with HSG are not homologous with hysteroscopy.
- After surgery, all patients with endometrial adhesion have completely recovery and 68% patients has at least 1 passagable fallopian tube, the cumulative pregnancy is 32% and no complication has been recorded

# PROTOCOL

## STEP 1. PREPARATION

- Doctor: Obstetrician
- Equipment: required equipment for hysterolaparoscopy
- Medical record as formed
- Place: Operating room
- Patients
  - Take general and specialist health check.
  - Be consulted about surgery risks and complications
  - Take HSG to identify lesions
  - Take misoprostol for cervical ripening

# PROTOCOL

## STEP 2: SURGERY

### ➤ 2.1. *Hysteroscopy*

- Spinal anesthesia or general anesthesia
- Sterilization
- Put vaginal valve, clamp the cervix.
- Measure the uterine and dilate the cervix.
- Set up hysteroscopic machine.
- Pump sorbitol 3% into uterine cavity.
- Evaluate and treatment the pathology

# PROTOCOL

## STEP 2: SURGERY

### ➤ 2.2. *Laparoscopy*

- Set up trocar and pump CO<sub>2</sub>
- Put in camera for checking abdominal cavity
- Remove adhesion, open hydrosalpix and reconstruction fimbria.....
- Pump methylene green.
- Clean abdomen



# PROTOCOL

## **Step 3. Follow-up after surgery**

- Put intrauterine contraceptive device and use artificial menstration in patient with uterine pathology
- Perform ultrasound and HSG after 1 month to evaluate the results.
- Consult patients to take IUI or IVF or natural cycles

## **Step 4. Deal with complications**

- Bleeding
- Uterine perforation
- Circulatory overload due to pumping fluid into uterine.
- Infection









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**THANK YOU**