

# Molar Pregnancy

**Question:** Which of the following is not a complication of Hydatidiform mole?

- A. Hypothyroidism
- B. Vaginal bleeding
- C. Pre eclampsia
- D. Ovarian cysts

**Answer:** A

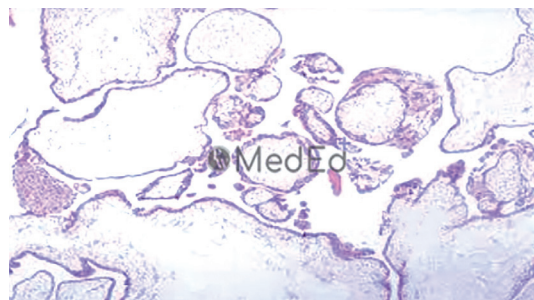
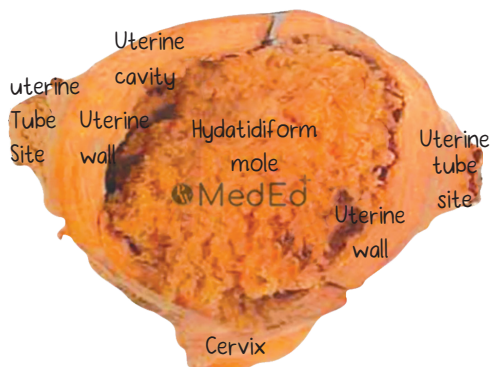
Personal Notes

## GESTATIONAL TROPHOBLASTIC DISEASE

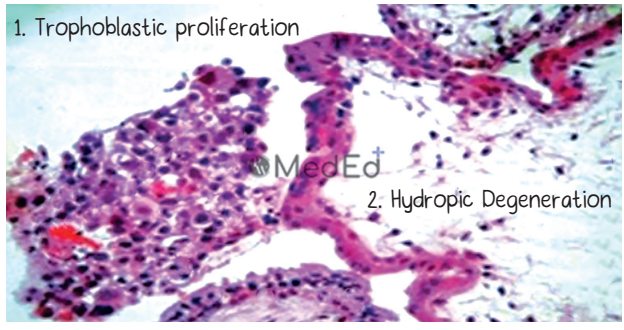
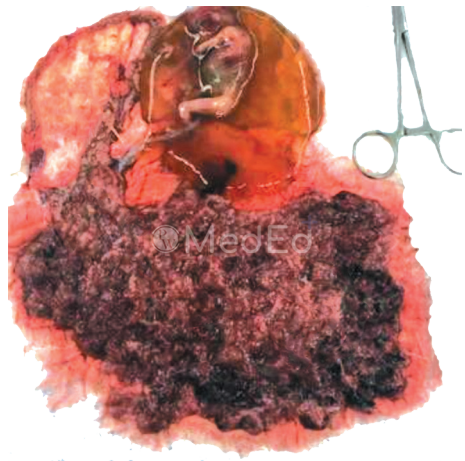
- Caused by abnormal placental tissue (trophoblasts) proliferation.
- Benign condition includes **H. mole** which can be a **complete mole** or a **partial mole**.
- Benign condition is called **GTD**
- Malignant condition is known as **Gestational Trophoblastic Neoplasia (GTN)**.

### How does molar pregnancy form?

Complete Mole	Partial Mole
<ul style="list-style-type: none"> <li>○ <b>Empty</b> ovum fertilized by single normal sperm which undergoes chromosomal duplication to become <b>46 XX</b> (all genetic material is <b>paternally</b> derived). OR,</li> <li>○ There is a <b>dispermic</b> fertilization in an <b>empty ovum</b> which forms <b>46 XX</b> or <b>46 XY</b>.</li> <li>○ Abnormal <b>Trophoblastic</b> growth.</li> <li>○ <b>Hydropic</b> changes in the <b>chorionic villi</b>.</li> <li>○ Grossly, looks like a <b>bunch of grapes</b>.</li> </ul>	<ul style="list-style-type: none"> <li>○ There is <b>dispermic</b> fertilization of the same ovum leading to various <b>karyotypes</b> like <b>69 XXX</b>, <b>69 XYY</b>, <b>69 XXY</b>.</li> <li>○ <b>Fetus</b> (small, dead or alive) or <b>fetal parts + hydropic placenta</b>.</li> <li>○ <b>Scalloping</b> of <b>chorionic villi</b> in partial mole and there will be <b>Trophoblast inclusion</b> bodies.</li> </ul>



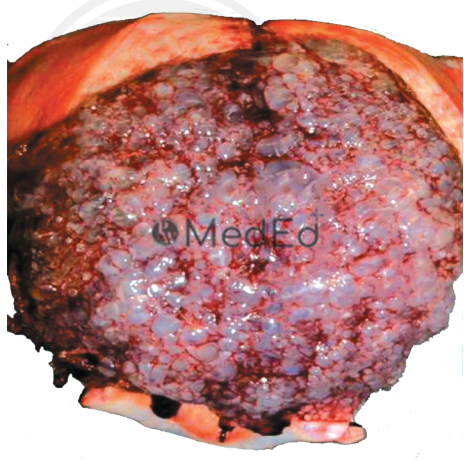
Complete Mole



Partial Mole

**Risk Factors:**

- o Extremes of age – Teenage or > 40 years pregnancy.
- o History of previous mole.
- o Dietary - lack of carotene or animal products in diet.
- o Partial mole is associated with OCP's.



Grape like Vesicles

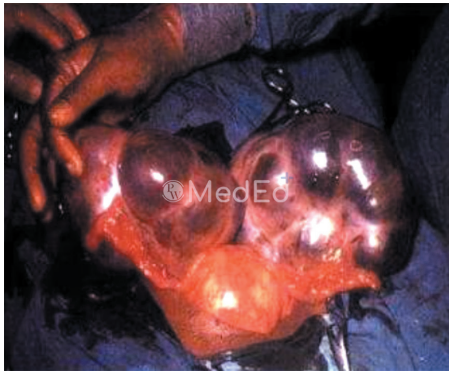
- o Complete mole is more dangerous than partial mole as complete mole has 4% chances to convert into a GTN, whereas partial have only 0.5% risk.
- o Complete moles have more antenatal complications.

**Clinical Features:**

- o Vaginal bleeding with passage of grape like vesicles
- o Beta HCG levels are very high as compared to normal pregnancy (complete mole > partial).
- o Beta HCG stimulates theca cells in the ovary and there is hypertrophy of these cells to form very huge theca lutein cyst.
- o These cysts undergo rupture or torsion
- o Uterus much larger than the period of gestation

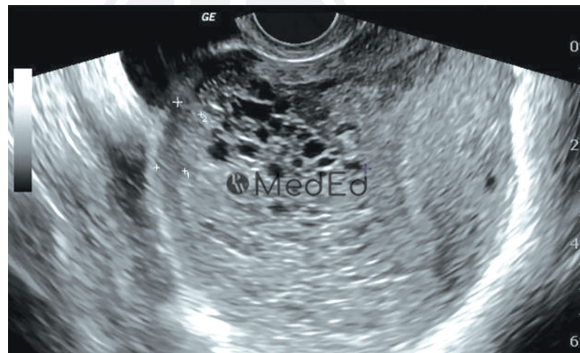
- Hyperemesis gravidarum
- Increased TSH due to high beta hcg — Increased T3 & T4 and may have a thyroid storm.
- Pre Eclampsia (severe and early onset)

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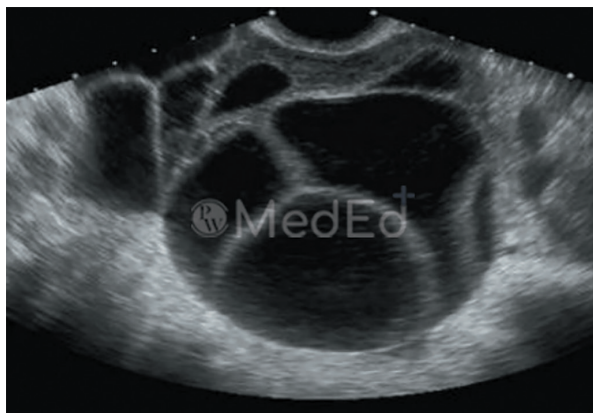


### Diagnosis and Workup:

- Diagnosis can be done by USG.
- Check blood group, CBC, LFT, KFT for evacuation if detected on USG.
- Thyroid profile
- Chest X-ray as trophoblasts can embolize to the lungs
- Beta - HCG



Snowstorm appearance



Theca lutein cysts

### Management:

- Suction and Evacuation done using a Karman's cannula and the cannula is chosen according to the POG.
- Preferable to avoid prostaglandins as it can cause pulmonary embolism.
- Oxytocin can be used
- Discharge and ask for follow up
- Monitor Beta-HCG level every 1-2 weeks till it becomes normal.
- Once reached at normal levels then check Beta-HCG another two times and after that monthly for six months.
- Advise her to avoid pregnancy during the monitoring period so that it does not interfere with Beta-HCG levels.
- OCP's & barrier methods are advisable for contraception and IUD is not advised.

### Risk Factors for Progress to GTN:

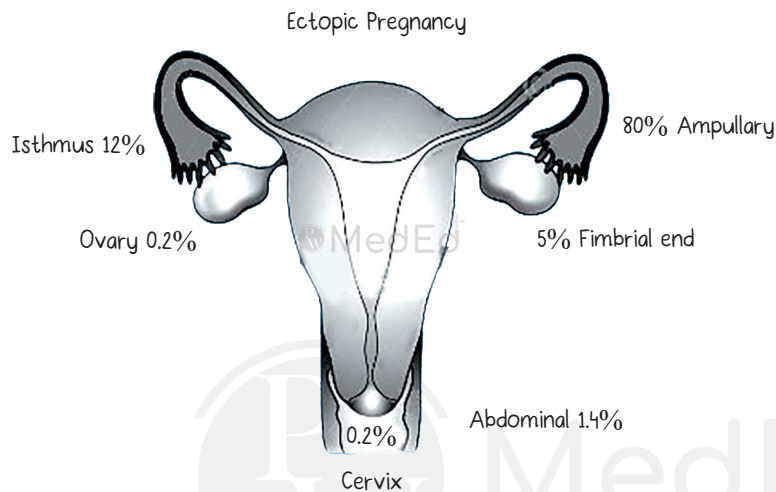
- Age >40 years
- Theca lutein cysts >6 cm
- Uterine size is very large
- Beta-HCG >1 lakh
- Hysterectomy can be done for women who have completed their family but this does not totally eliminate the risk of GTN, so ask her to follow up for Beta-HCG levels.

Personal Notes

# Abnormal implantation: Ectopic pregnancy

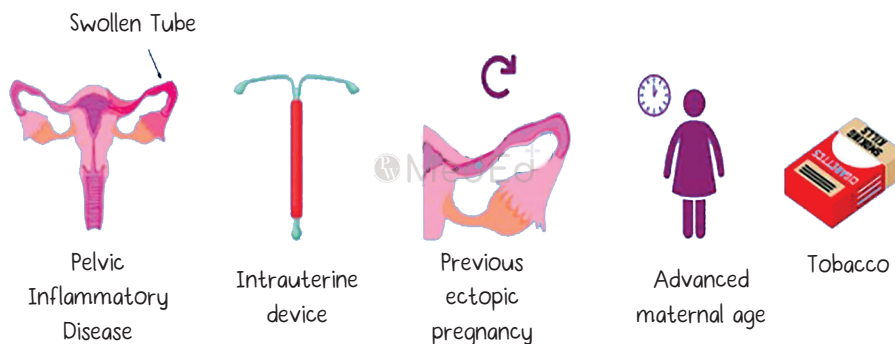
## ECTOPIC PREGNANCY

- Pregnancy which is present in sites **other than the uterus** like fallopian tube, ovary, abdominal or cervix.



- Most common - **tubal ectopic** pregnancy
- Fallopian tube parts - cornua, isthmus, ampulla and fimbria
- Most common part of the tube affected - **ampulla** followed by **isthmus**
- Isthmic ectopics - rupture at **6-7 weeks**
- Ampullary pregnancies - rupture at **8-9 weeks**
- Cornual pregnancy - ruptures at **10-12 weeks**
- Abdominal pregnancies - **last to be diagnosed**

## Risk Factors of Ectopic Pregnancy:



- **Previous ectopic** pregnancy - **biggest risk factor**
- Most common cause - **infection or pelvic inflammatory disease** - Chlamydia or genital tuberculosis.

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- Advanced maternal age
- Decreased motility of cilia due to **tobacco smoking**
- **Intrauterine device** - decreases the incidence of ectopic but in the presence of IUD pregnancy will be ectopic because makes endometrium unfit for implantation Types of IUD:
  - ▶ **LNG -IUD** - has **progesterone**, which decreases ciliary motility
  - ▶ **Cu- IUD**

**Clinical Features- Triad**

- Abdominal pain
- Vaginal bleeding/ spotting
- Amenorrhea:
  - ▶ History of LMP, very important
  - ▶ UPT - light positive

**DIAGNOSIS**

- Ultrasound findings:

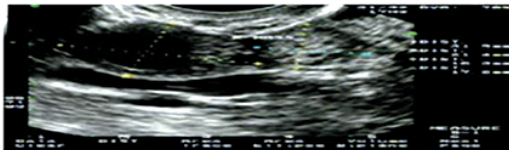


Fig.1: Inhomogeneous mass in the fallopian tube or Blob sign

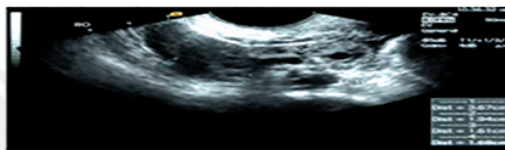


Fig.2: Empty gestational sac in the Fallopian tube or Bagel sign

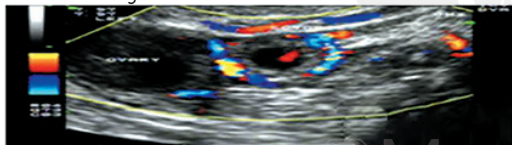


Fig.3: Gestational sac with an embryonic pole and positive cardiac activity

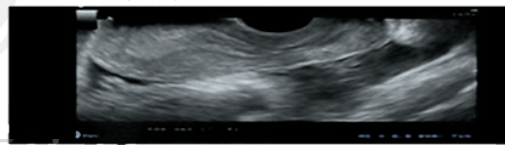


Fig.4: Blood noted on TVS in the pouch of Douglas.

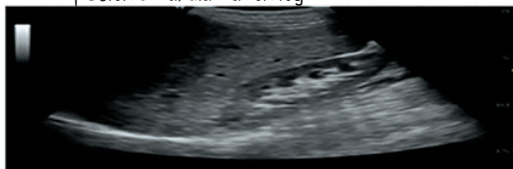


Fig.5a: Morison's pouch without blood present

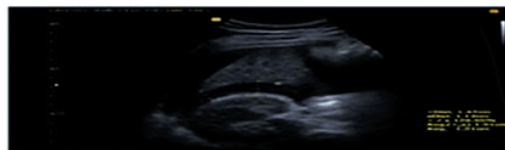


Fig.5b: Morison's pouch with blood present

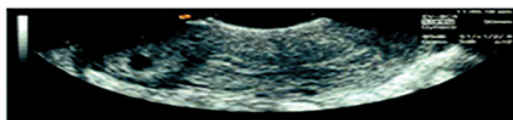


Fig.6: Interstitial pregnancy. The gestational sac is located 1cm lateral to the endometrium in a woman with a sub-septate uterus.

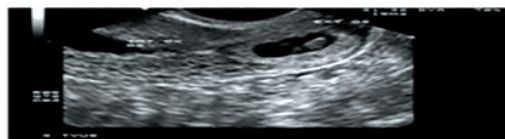


Fig.7: Cervical pregnancy, The gestational sac is located below the level of the cervical internal os. Absence of the Sliding sign. Clinches the ultrasound diagnosis

- Decidual reaction present
- **Endometrial thickness increased** in the uterus
- No hypoechoic area in the uterus or no gestational sac.
- Usually tubes are not visible, but in ectopic **adnexal mass with or without embryo** seen - **ring of fire** appearance.

- Blood in the peritoneal cavity due to rupture:
  - ▶ Hypoechoogenicity behind the uterus - free fluid in the pouch of Douglas
  - ▶ Hemoperitoneum - free fluid in Morrison's pouch (space between liver and right kidney)
- Patient with UPT + , increased endometrial thickness , normal adnexa:
  - ▶ Differentials: USG done very early OR, Ectopic pregnancy
  - ▶ In such cases to rule out ectopic pregnancy serial measurement of  $\beta$  - hCG is done till the time we reach a value at which a gestational sac should be present. This value is called discriminatory value It is 3510 IU/ml Gestational sac is seen at this level.
  - ▶ In intrauterine G-sac is not seen at this level - ectopic pregnancy
  - ▶ If mass is present in the tube - tubal, if not seen - PUL. (pregnancy of unknown location)
  - ▶ The  $\beta$  - hCG is measured every 48 hours till it reaches 3510 IU/ml
  - ▶ Note: old method -  $\beta$  - hCG doubles in 48 hours in intrauterine pregnancy (IUP) or increases by 66% in IUP.
  - ▶ Current opinion -  $\beta$  - hCG should rise at least by 35%

### Treatment:

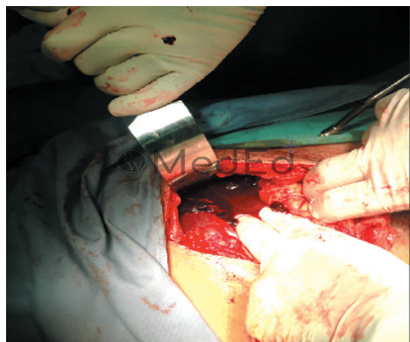
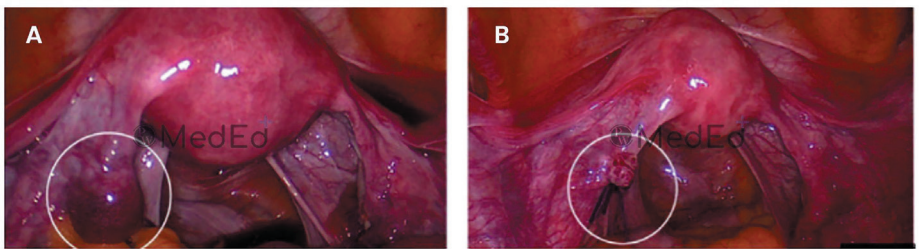
- Expectant management:
  - ▶ Wait and watch criteria:
    - $\beta$  - hCG <1500 IU/ml
    - G- sac is small <3 cm
    - Falling  $\beta$  - hCG values
  - ▶ If the patient becomes hemodynamic unstable or  $\beta$  - hCG is rising - abandon expectant management.
- Medical management:
  - ▶ Prerequisites:
    - Unruptured ectopic
    - Hemodynamically stable patient
    - G-sac < 4 cm/< 3.5 cm with cardiac activity
    - $\beta$  - hCG > 5000 IU/ml
    - No contraindication to use methotrexate
    - Patient is willing to follow up

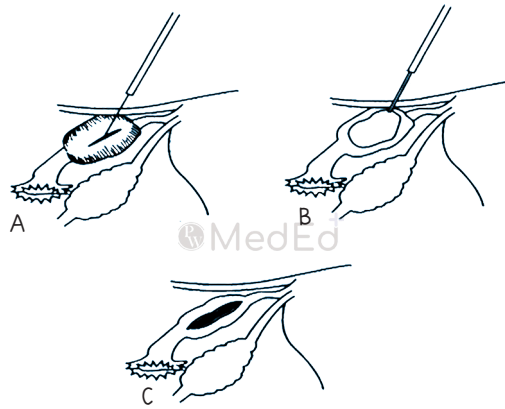
### Note:

contraindication to use methotrexate - anemia, leucopenia, thrombocytopenia, active peptic ulcer disease, pulmonary/liver/kidney disease or hypersensitivity to methotrexate.

- ▶ Single dose regimen of Methotrexate is given IM, 50 mg/m<sup>2</sup> - day 1.
- ▶ Day 4 -  $\beta$  - hCG is measured
- ▶ Day 7 -  $\beta$  - hCG is measured

- ▶ Between day 4 and day 7 - fall of  $\beta$  - hCG by 15%
- ▶ Between day 1 and day 4  $\beta$  - hCG may rise
- ▶ If there is no fall by 15% - methotrexate is repeated on day 7 and it is considered as day 1 Like this a total of 4 injections can be given.
- ▶ Advice to patient on discharge:
  - Follow up of patients till  $\beta$  - hCG reaches pre-pregnancy levels
  - Report to emergency in case of pain abdomen, bleeding or syncopal attack
  - Avoid heavy exercise
  - Avoid pregnancy for 3 months and use any contraception except progesterone only pills and condoms
  - Do not take multivitamins as they may contain folic acid which can interfere with the action of methotrexate.
- Surgical management:
  - ▶ Indications:
    - $\beta$  - hCG >5000 IU/ml
    - G-sac > 4 cm or > 3.5 cm if cardiac activity is present
    - Ruptured ectopic
    - Patient hemodynamically unstable
    - If there are contraindications to methotrexate
    - Failure of medical management
  - ▶ Unilateral salpingectomy - laparoscopic/laparotomy:
    - Hemodynamically unstable patient - laparotomy
    - Hemodynamically stable patient - laparoscopy
    - Pneumoperitoneum - puts a pressure on IVC - decreases venous return to heart.
  - ▶ Old method - salpingostomy - leads to recurrence - not commonly practiced - only done when another tube has already been removed and the patient is unwilling for salpingectomy.





Linear salpingostomy. A linear incision is performed on the anti-mesenteric border of the fallopian tube and the products of conception are removed. The evacuated tube is left to heal.

**Question:** Women present to you with 6 weeks of amenorrhea complaining of bleeding PV and slight abdominal pain. Urine pregnancy test is slightly positive and hcg shows 2800 IU/ml. A mass is seen on the left adnexa measuring 3 x 25 cm. She is hemodynamically stable. How will you manage this patient?

- A. Oral methotrexate
- B. Serial methotrexate + leucovorin rescue
- C. Single dose methotrexate injection
- D. Salpingectomy

**Answer:** C Single dose methotrexate injection

### Explanation

- Single dose methotrexate indication - hcg - 2800 IU/ml, size - <4 cm.
- **Multidose methotrexate regimen is not followed** and it is always given **IM not oral**. If the size is bigger or hcg values > 500 IU/ml - **surgical management**. Depending on hemodynamic stability of patient laparotomy or laparoscopy.

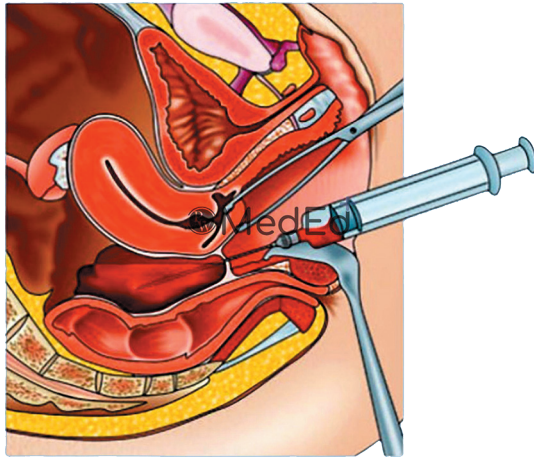
### ABDOMINAL PAIN IN ECTOPIC

- Initially when the **tube is stretching** - nerves around it cause **localized pain**.
- When it **ruptures** - **relief of pain**
- When **blood fills the abdominal cavity** - irritates peritoneum - **generalized pain** - acute pain - guarding, rigidity.

### WHAT IF WE DON'T HAVE BETA HCG/UPT?

- If a patient presents with triad of ectopic - **amenorrhea, abdominal pain, bleeding** and pulse rate - **140/min**, BP - **90/50 mm/hg**. On examination - guarding and rigidity of abdomen and if beta hcg or UPT is not available then do culdocentesis.
- **Culdocentesis** - to rule out other causes of shock
  - ▶ A **speculum** is inserted to lift the posterior lip to visualize the posterior fornix.

- ▶ Aspirate from the **pouch of Douglas** using a syringe
- ▶ If **blood is present** in the syringe - **ruptured ectopic pregnancy**
- ▶ If the blood is allowed to settle - blood from ruptured ectopic pregnancy **will not clot** - peritoneum on irritation releases proteins that defibrinate the blood.



### Criteria for other ectopic pregnancies:

1. Studdiford criteria: Abdominal pregnancies
2. Spiegelberg criteria: Ovarian pregnancies
3. Rubin's Criteria/Palmer's criteria: Cervical pregnancies

Personal Notes