Management of early pregnancy complications

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Management of Early Pregnancy Complications:

Common early pregnancy complications include abortion, ectopic pregnancy and vesicular mole besides hyperemesis gravidarum.

Abortion: is defined as expulsion of the products of conception before the period of viability.

Viability : This period varies from country to country and can be from 20 weeks (500 gms) to 28 wks (1000 gms). All abortions are either spontaneous or induced. They can also be classified as early or 1st Trimester abortions and late or 2nd Trimester abortions.

Common causes for spontaneous 1st Trimester abortions. Chromosomal abnormalities; immunological factors; maternal disease; endocrine disorders; abnormalities of the uterus, laparotomy; physical and psychological trauma.

Risk factors include; increasing maternal age, high gravidity and smoking.

Causes of 2nd Trimester abortion:
Incompetent os; systemic and endometrial infections, uterine abnormality, Rh incompatibility etc.

Clinically abortions can be: Threatened, Inevitable, Incomplete, complete, Missed, Septic and Habitual.

Clinical features of spontaneous abortions: In all spontaneous abortions the patients will present with a h/o amenorrhoea and some pain or bleeding PV.

Investigations: USG: is used to confirm pregnancy and viability. Signs that a pregnancy will continue include: a good trophoblastic reaction, a well defined gestation sac in it's normal position, presence of a foetal pole and yolk sac, good cardiac activity, fetal movements, CRL which corresponds to the period of amenorrhoea. Normal placentation and absence of subchorionic clots. Where USG is not available, to prove pregnancy it may be necessary to do a; a) Urine pregnancy test b) Serum Beta HCG. Other investigations include : Hb, Urine Routine and culture, Bloodgroup, VDRL, BL Sugar F/PP, Torch titres, BUN / Creatinine. Management will then depend on the clinical type:

Threatened Abortion: Patient with H/O Amenorrhoea, pain and bleeding PV. PV: Uterine size will correspond to the period of amenorrhoea. Internal OS is closed. USG: Shows a viable pregnancy.

Management: Hospitalize, Bed rest, sedation, folic acid/ haematinics, if luteal phase defect suspected: Inj. Progesterone 100 mgm/day/im.

HCG 2000 I.U.I.M./twice a week till 3 months or Hydroxy progesterone caproate (Proluton depot) 250-500 mgm I.M. / wkly for the 1st half of pregnancy.

Inivitable Abortion : H/o amenorrhoea, severe pain in abdomen and bleeding P.V.

P.V.: Uterine size may correspond or be slightly smaller. Internal OS is open, Cervix may be ballooned.

USG : shows no viable fetus; sac in the lower segment; subchorionic bleed, internal os is open.

Incomplete Abortion: h/o amenorrhea; pain in abdomen, bleeding PV with passage of some clots or products.

P.V. : Uterine size is smaller than period of amenorrhoea. Internal os is open and bleeding may be present.

USG : shows few products or clots in the cavity.

Management of inevitable and incomplete abortion:
Investigations: Hb, Blood grouping and cross matching. Evacuation of the cavity by curretage / suction evacuation and antibiotics.

Complete abortion: h/o amenorrhoea, pain in abdomen and passage of some products or clots after which pain and bleeding decrease.

PV : It is well contracted; may be of normal size; Internal os is closed.

USG : Shows the uterine cavity to be empty.

Management : If no bleeding: Observation/Antibiotics. Missed Abortion: h/o amenorrhoea; regression of signs, symptoms of pregnancy.

PV : Ut. does not correspond to period of amenorrhoea.

USG : Shows no cardiac activity.

Management : Hb/Blood for grouping and crossmatching, Coagulation profile.

1st Trimester: Suction Evacuation
2nd Trimester : Prostaglandins / Extraamniotic instillation of Emcredil.

Septic Abortion: h/o amenorrhoea, pain in abdomen & bleeding PV. There may be h/o some interference or instrumentation done to interrupt pregnancy.

PV: Vagina may be hot/foul discharge present. Uterus may be soft; smaller than period of amenorrhoea, severe tenderness present in fornices. Internal os open and bleeding from os present.

Management: Hb; blood for Grouping and Cross matching, coagulation profile; urine routine and culture, vaginal swab.

Antibiotics/metroidazole, Evacuation of the uterus under antibiotic cover of at least 12 hours.

If patient has peritonitis or severe shock :-
Nil by month, IV blood/fluids, Monitor temperature / pulse/B.P.

Rarely, exploratory laparotomy is required if there is peritonitis & for drainage. Hysterectomy may have to be done occasionally.

Habitual / Recurrent Abortion: The occurance of three or more consecutive spontaneous abortions.

Etiology: Genetic Abnormalities, Müllerian duct developmental abnormalities / Incompetent os, chronic intra-uterine infection, Endocrine disorders, Immunological disorders.

Management : With detailed history, physical examination and a complete set of Laboratory investigations, an abnormality associated with recurrent pregnancy loss can be identified in ½ - 2/3rd of patients.

Reassurance : where normal cytogenetic studies, normal HSG, Negative cervical cultures, normal thyroid function tests and negative coagulation studies for Lupus Anticoagulant.

Cytogentic abnormalitis : Require counselling, 50% chance of normal fetus in next pregnancy.

Balanced Translocations: after CVS or amniocentesis.

Uterine Morphological Abnormalities: Surgical correction if possible.

Incompetent OS: Cerclage at around 14-16 weeks. May be McDonald's or Shirodkar's.

Endocrine disorders: Thyroid and Luteal phase defects corrected.

Autoimmune disorders: Lupus anticoagulant present: Prednisone therapy, low dose Aspirin, subcutaneous heparin.

Alloimmune disorders; Paternal Leukocyte Infusion.

Ectopic Pregnancy

Definition: Ectopic pregnancy is defined as pregnancy in which the fertilised ovum is situated outside the normal uterine cavity.

Common sites : Tubes, abdomen, cervix, ovary & heterotrophic

Risk factors : Tubal infection, I.U.C.D. use, Prior tubal surgery, previous ectopic, DES exposure, infertility, salpingitis isthmica nodosa.

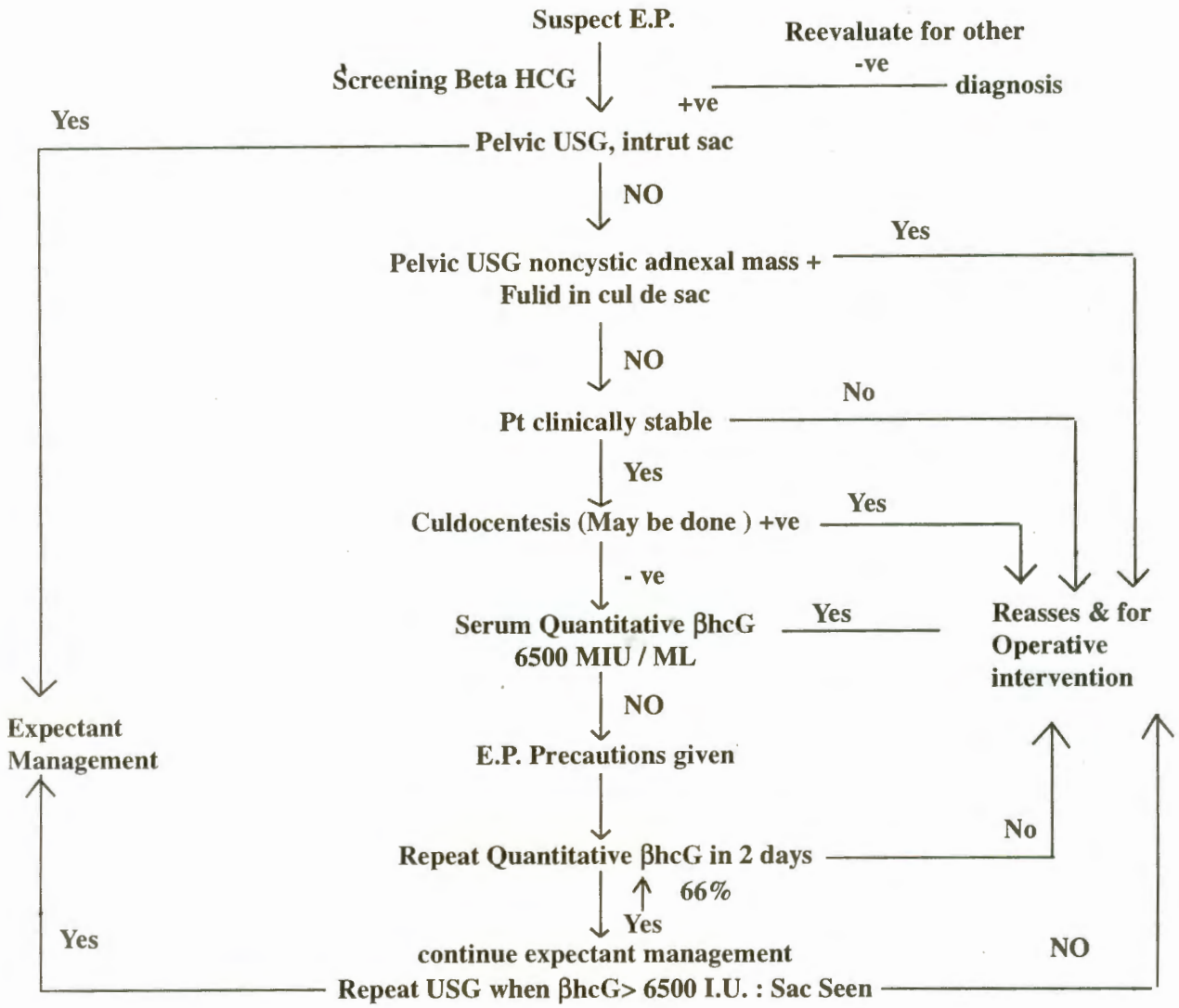
Management : Early diagnosis before the onset of tubal rupture permits consideration of a variety of conservative surgical procedures as well as non surgical medical management of ectopic pregnancy.

Presentation: Variable, depending on whether it is unruptured, ruptured or chronic.

Common Symptoms : Amenorhoea may be present, Abscence of clinical signs and symptoms, Abdominal pain, nausea, vomiting, feeling of faintness/shock, Irregular vaginal bleeding, passage of decidual cast.

Signs : Adnexal or cervical movement tenderness, BP↓ marked abdominal tenderness, Rigid abdomen if severe peritoneal bleeding.

DIAGNOSIS OF ECTOPIC PREGNANCY (EP)



Common pitfalls in diagnosis:

- failure, to maintain appropriate index of suspicion for E.P.
- Incorrectly establishing the L.M.P.
- Failure to consider E.P. when h/o tubal sterilization, recent interruption of pregnancy or curettage is present.
- Misinterpretation of screening pregnancy test.
- Overreliance on USG findings.
- Assuming that overt abdominal findings are always present.

Management of E.P.:

Surgical
- Conventional Laparotomy
- Laparoscopy

Medical Management

Conservative Management

Laparotomy : Exploratory Laparotomy with partial or complete salpingectomy was the gold standard for treatment. Salpingostomy was possible when future childbearing was required.

Indications for laparotomy : Unstable patient, Massive haemoperitoneum, Abdominal pregnancy, Cornual ectopic.

Laparoscopy : Conservative management by laparoscopy is soon fast replacing laparotomy.

Linear Salpingostomy: partial or complete salpingectomy; Salpingooopherectomy are all possible through a laparoscope with much decreased morbidity and faster recovery for the patient.

Indiations for Laparoscopy : Stable patient, experienced surgeon, Best for ampullary ectopic, conception size (5 cms), preferably unruptured.

Medical management : Methotrexate or RU 486
Ideally reserved for non laparoscopically diagnosed E.P. or persistant E.P.

Methotrexate may be used IM, oral, or direct tubal injection, Methotrexate 50 mgm IM or 15 mgm in the sac can be used.

Indications: Stable patient, normal laboratory tests, E.P. diameter < 3cms. No foetal heart activity, βhCG titres< 10 lu/ml.

Expectant Management : Expectant nonoperative management of E.P. may result in spontaneous resolution in upto 60% of cases where βhCG values are very low <21 IU/ml. Close observation is required.

Indication: Appropriate in reliable, well monitored, asymptomatic women, low and decling hCG values.

Vesicular Mole / Gestational Trophoblstic Disease.

Definition : A vesicular mole or molar pregnancy is an abnormal pregnancy with hydropic degeneration of chorionic villi with vascular agensis of chorionic blood vessels and variable degree of hyperplasia in the chorionic epithelium.

Gestational Trophoblastic Disease includes:

Vesicular Mole / Hydatidiform mole which may be

a. Complete hydatidiform mole
b. Partial Hydatidiform mole
c. Invasive mole are moles whose tissues invade the myometrium but have no evidence of extrauterine metastasis.

Gestational trophoblastic neoplasia includes : Chorio carcinoma: Malignant neoplasm derived from trophoblast which contains all elements of the trophoblast except chorionic villi.

Placental site tumor : is a malignant neoplasm arising from the intermediate trophoblast.

Nongestational choriocarcinoma: arises from germ cells in the absence of pregnancy. Commonly in ovary.

Gestational Trophoblastic Neoplasia may be Non Metastatic: No identifiable disease outside uterus seen on imaging studies. Metastatic: which is further divided into A) Low risk metastatic G.T.N. or good prognosis G.T.N. b) High risk metastatic G.T.N. or poor prognosis G.T.N.

Diagnosis: Unique feature: Capable of producing βhCG specific to developing trophoblast. This tumour marker is used for diagnosis and is the basis for monitoring.

Symptoms: H/O amenorrhoea, bleeding PV; absence of foetal movements, hyperemesis; symptoms/suggestive of thyrotoxicosis and PIH in 1st trimester.

Signs : PV uterus enlarged, feels doughy.
Absent foetal parts / Absent foetal heart sounds.
Vesicles may be seen on finger after PV.
Bilateral theca lutein cysts may be palpable.
Investigations: Serum βeta hCG

USG: Multiple intrauterine echo "Snow storm appearance"
Amniography : honeycomb appearance.
Other investigations as: Hb; coagulation studies; liver and renal profile when required. X-ray chest, C.T. of brain and liver if needed.

Management: Before initiating any therapy diagnosis must be confirmed:

Risk status must be evaluated.
For best outcome, patients with gestational trophoblastic neoplasia should be treated at regionalized or special centres for treating metastatic disease.

If diagnosed vesicular mole: Young patient not completed child bearing and no evidence of metastasis.

Hospitalize
Evacuation : Suction evacuation, pitocin drip may be used, Curettage to complete evacuation.

Hysterectomy : If patient >35 years who does not want further child bearing, Routine use of recurettage after suction not recommended. Symptoms of pulmonary insufficiency occur in 10% of women. These may be at the time of evacuation or upto 12 hrs.

Risk status assessment in Metastatic G.T.N.

Metastatic Trophoblastic Neoplasia

National cancer Institute Prognostic Criteria

	Good	Poor
βhCG (serum)	< 40,000 m.i.u./ml	> 40,000 m.i.u. /ml
hCG (urine)	< 1,00,000 m.i.u./ml	>1,00,000 m.i.u. /ml
Antecedant pregnancy	< 4 months	> 4 months
Prior chemotherapy	No	Yes
Metastasis	Lung; Vagina	Brain/Liver

Bagshawe : divided risk groups into low, medium and high risk groups by screening prognostic factors which included; age, parity; antecedent pregnancy interval; βhCG titres; ABO blood group; metastasis; lymphocytic infiltration; immune status and prior chemotherapy.

For non metastatic disease:
If abnormal BhCG regression curves.
If abnormal bleeding during follow up.

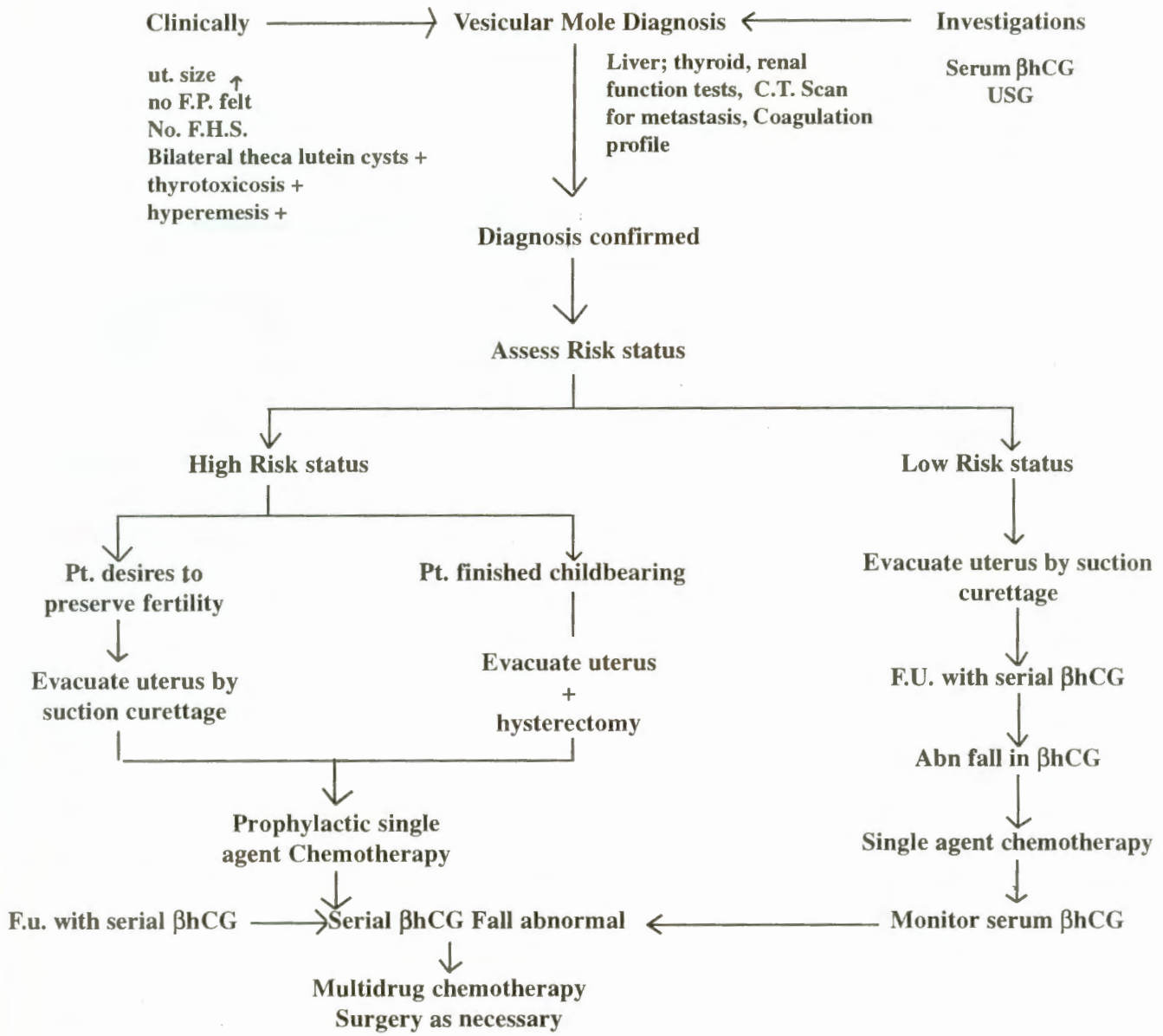
Single agent drug therapy: Agents used.
Methotrexate .4mgm/kg I.M; IV or oral for 5 days.
Actinomycin D

VP 16-213 (etoposide)

Surgery or multidrug therapy: If patients fails to respond to single drug therapy.

Good prognosis metastatic disease : Single drug chemotherapy.

Poor prognosis metastatic disease : Multiagent chemotherapy, MAC methotrexate, actinomycin D & Chlorambucil or cyclophosphamide.



VPD : Viniblastine; cisplatinum; bleomycin and several others.

Follow up in a case of Gestational Trophoblastic Neoplasia.

Quantitative βhCG determination weekly / 1 month
Quantitative βhCG determination monthly / 6 months.
X-ray chest on initial presentation / After 1 month.
Repeat if abnormal βhCG.
Physical examination monthly / 6 month

Contraception : For 1 year, Barrier contraceptives, oral contraceptives may also be given.

Hyperemesis Gravidarum *:* is a syndrome of nausea and vomitting of great intensity occuring during pregnancy and commonly requiring hospitalization.

Etiology: associated with multiple gestation; hydatidiform mole and emotional factors.

Intercurrent problems: hyperthyroidism; G.I. disorders; hepatitis; pyelonephritis; pancreatitis; diabetic ketoacidosis.

Diagnosis: detailed history and physical examination, Proper dietary history, Determine emotional supports, Assess social background, Evaluate stress, Assess patient for dehydration & ketonuria.

Management: If vomiting mild to moderate : Ambulatory management, Laboratory investigations to diagnose any cause or intercurrent problem, Reassurance, Dietary Modifications, frequent feeds, bland dry nonfatty foods, Relaxation techniques recommended.

Antiemetics: Doxylamine succinate; meclizine; promethazine or prochloropromazine may be used.
Hospitalize: If dehydration or ketosis with outpatient therapy or severe hyperemesis.
Monitor: Renal and Liver function test; serum electrolytes; Acid base Balance.

Counselling and Psychiatric care:

I.V. fluids glucose and electrolytes : with severe vomitting: Gradual oral intake once condition stabilizes, Hyperalimentation may be required. Termination of pregnancy, if unremitting vomitting despite treatment.