Multiple pregnancy

Dr ;zaineb alyasin

Mechanism of twinning

Dizygotic twins (D Z):

arise from fertilization of 2 ova by different sperms resulting in 2 fetuses that will implant separately and each fetus has its own membranes (chorionic diamniotic placentation) .These fetuses may be alike or unlike in sex and will have different genetic constitutions 2/3 of all twins are DZ .

Factors affecting D Z incidence;

1-Induction of ovulation, 10% with clomide and 30% with gonadotrophins.

2-Increase maternal age , due to increase gonadotrophins production.

3-Increases with parity.

4-Heredity usually on maternal side.

Monozygotic twins(MZ):

arise from fertilization of 1 ova by 1 sperm and then splitting occurs in the embryo and several types of MZ occur depending on the time after fertilization when splitting occurs mz twins are usually

of the same sex and will have the same genetic constitutions (identical twins) 1/3 of all twins are MZ .

Monozygotic twins(MZ):

Not affected by heredity.

Not related to induction of ovulation.

Constitutes 1/3 of twins.

If the zygote splits very early (in the first two days after fertilization), each cell may develop separately its own placenta (chorion) and its own sac (amnion). These are called *dichorionic diamniotic twins*.

Most of the time in MZ twins the zygote will split after two days, resulting in a shared placenta, but two separate sacs. These are called *monochorionic diamniotic twins* . In about 1–2% of MZ twinning the splitting occurs late enough to result in both a shared placenta and a shared sac called monochorionic monoamniotic twin.

the zygote may split extremely late, resulting in conjoined twins.(13 days after fertilization). Mortality is highest for conjoined twins due to the many complications resulting from shared organs.(fig1)

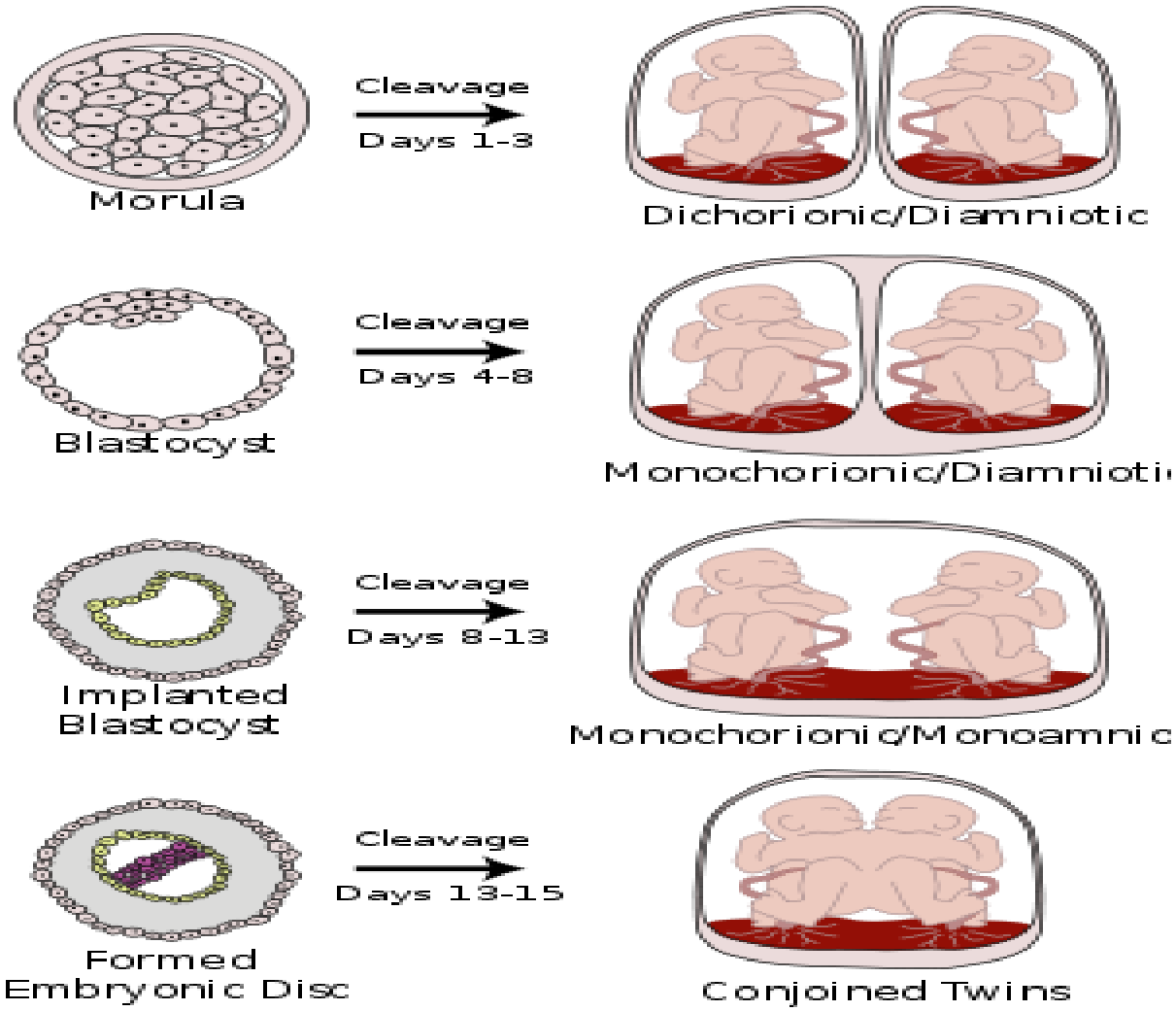

Figure 1

INCIDANCE of multiple pregnancy;

the incidence depend on :

1- race its higher in black race .

2- DZ twins increase incidence with age and parity .

3- the incidence increase with use of ovulation induction drugs .
Determination of zygosity Very important as most of the complications occur in monochorionic monozygotic twins.
Different sex indicates dizygotic twins.

Separate placentas indicates dizygotic twins

DIAGNOSIS:

1- HISTORY :

***-maternal feeling of larger than normal abdomen and sensation of excessive fetal movement .**

***- family history of twining .**

***- the use of ovulation drugs .**

2- EXAMINATION :

***excessive weigh gain.**

***on palpation the uterus is larger than date and multiple fetal parts are felt and 2 fetal hearts are detected .**

Diagnosis is confirmed by ultrasound .

COMPLICATIONS :

MATERNAL:

1- hyperemsis gravidarum.

2- increase risk of aneamia.

3-increase risk of abortion .

4-increase risk of hypertension and preclampsia.

5-Preterm labour and preterm rupture of membranes.

6- APH.

7- polyhydramnios .

8-increase risk of operative delivery and c/s.

9-increase risk of PPH

FETAL COMPLICATIONS:

1- prematurity.
2- intra growth restriction .
3-increase risk of congenital anomalies.
4-increase risk of perinatal morbidity and mortality.
5-Umbilical cord prolapse.

Specific Complications in Monochorionic Twins;

TWIN-TWIN transfusion.

Results from vascular anastemosis between twins vessels at the placenta. Usually arterio (donor) venous (recipient). Occurs in 10% of monochorionic

twins.

Chronic shunt occurs ,the donor bleeds into the recipient so one is pale with oligohydraminose while the other is polycythemic with poly hydraminose. If not treated death occurs in 80-100% of cases.

Other Complications in Monochorionic Twins;

Congenital malformation twice that of singleton.

Umbilical cord anomalies. In 3 – 4 %.

Conjoined twins. Rare 1:70000

ANTEPARTUM MANEGMENT;

the mother should be seen more frequently than mothers of singleton usually every 2 weeks from 20-30 weeks then weakly after.

Each visit she should be examined for signs of preterm labour and edema and Bp checked also urine for albumin is done and Hb% and the mother should be supplied with iron and folic acid

The mother should have adequate rest.

The mother should have serial u/s to detect any fetal abnormalities.

Method Of Delivary;

Mode of dlivery has tradetionaly been decided on the presentation of the first twine(cephalic in 70%andbreech in 30%)and

growth and fetalwellbeing.

Malpresentation of the 1st twine indicate ceasarean section.

The presentation of the second twin is of little relevance until after the birth of the first.Mothers with previous ceasarean section best delivered by repeat cesarean because of greater risk of scar dehiscence or rupture.

INTRAPARTUM MANGEMENT

labour should be conducted in a well equipped hospital under supervision of expert tem (obstetrician,anasthetic,and pediatricion) ,early in labour intravenous line should be inserted and blood prepared .
Oxytocin is used as indicated in singlton pregnancy fetal heart monitoring of both fetuses should be done

using continuous cardiotocography of both twins

after delivery of the first twin examination should be done for lie and presentation of the second twin if transverse or oblique correction should be done by external version if failed internal version and delivery of the baby by breech extraction .
The time between delivery of the 1st and second twin should not exceed 30 minutes .

HIGH MULTIPLE PREGNANCIES;

TRIPLETS.

QUDRUPLETS.

QUINTUPLETS.

SEXTUPLETS.

All complications (maternal & fetal) are increased .

All mothers should be seen frequently.

All should be delivered by ceasarean section

REFERENCES;

1-DEWHUREST TEXTBOOK OF GYNAECOLOGY AND OBSTETRIC.