University of Basrah
Al-Zahraa Medical College

Ministry of higher Education
and Scientific Research

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5th year

REPRODUCTIVE BLOCK

Lecture

Duration : 1 hour

Multiple pregnancy

Presented by

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GYNAECOLOGY 20th
EDITION by Ten Teachers

Learning Objectives (LO)

1-Identify types of twines .

2-recognize the causes of twin pregnancy.

3-list maternal and fetal complications.

4-list the management of twin pregnancy.

LO 1
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 (dichorionic diamniotic placentation) .These fetuses may be alike or unlike in sex and will have different genetic constitutions 2/3 of all twins are DZ .

LO 2

Factors affecting Dizygotic 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):

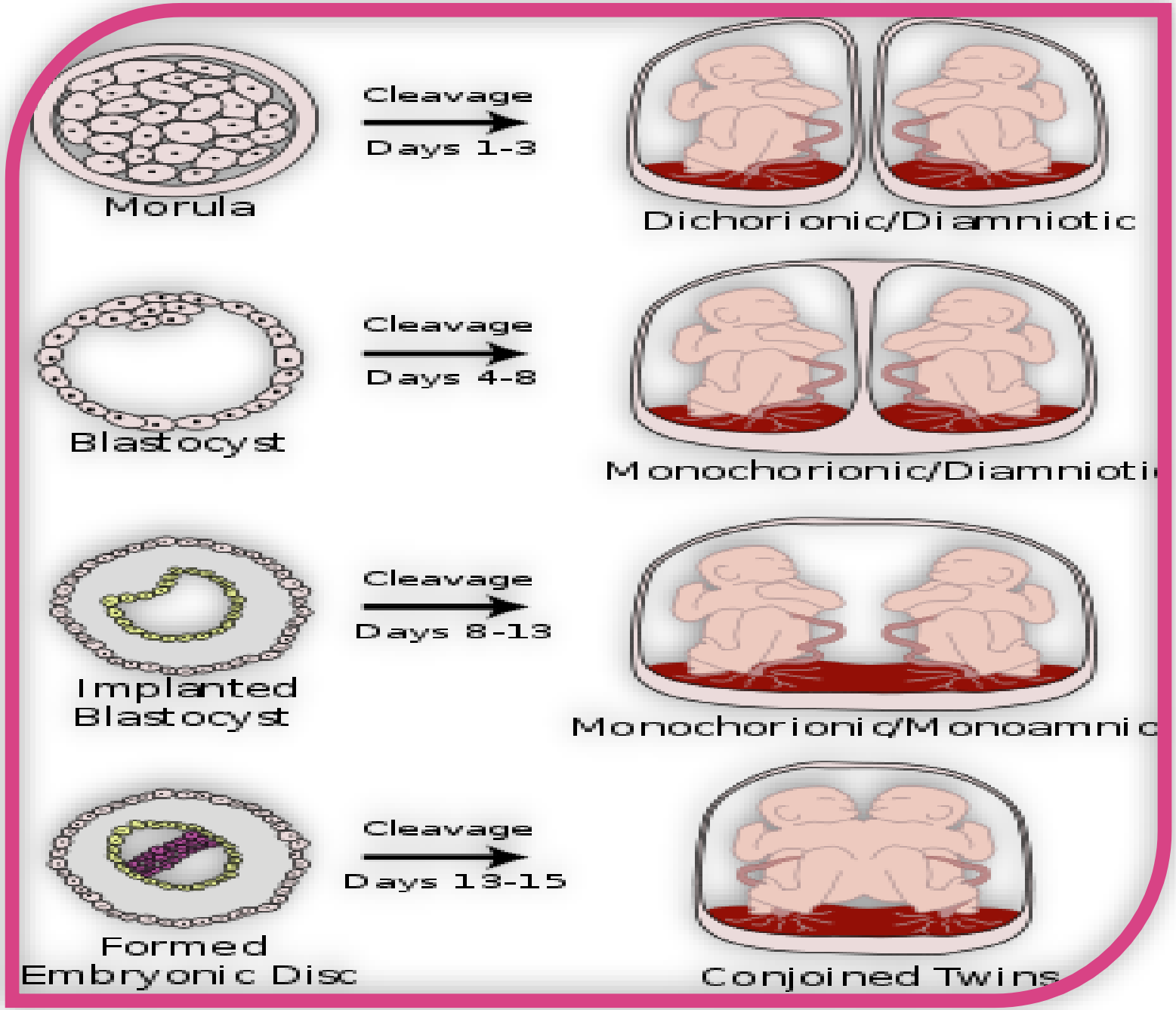
- **A rise from fertilization of 1 ova by 1 sperm and then splitting occurs in the embryo and several types of MZ occur depending on the time after fertilization when splitting occurs MZ twins are usually of the same sex and will have the same genetic constitutions (identical twins) 1/3 of all twins are MZ .**

- **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 twins .
- 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 .


Morula
Cleavage
Days 1-3
Dichorionic/Diamniotic
Blastocyst
Cleavage
Days 4-8
Monochorionic/Diamnioti
Implanted
Blastocyst
Cleavage
Days 8-13
Monochorionic/Monoamnic
Formed
Embryonic Disc
Cleavage
Days 13-15
Conjoined Twins

INCIDANCE

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 .

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 .

LO 3

COMPLICATIONS :

MATERNAL:

1- hyperemesis 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

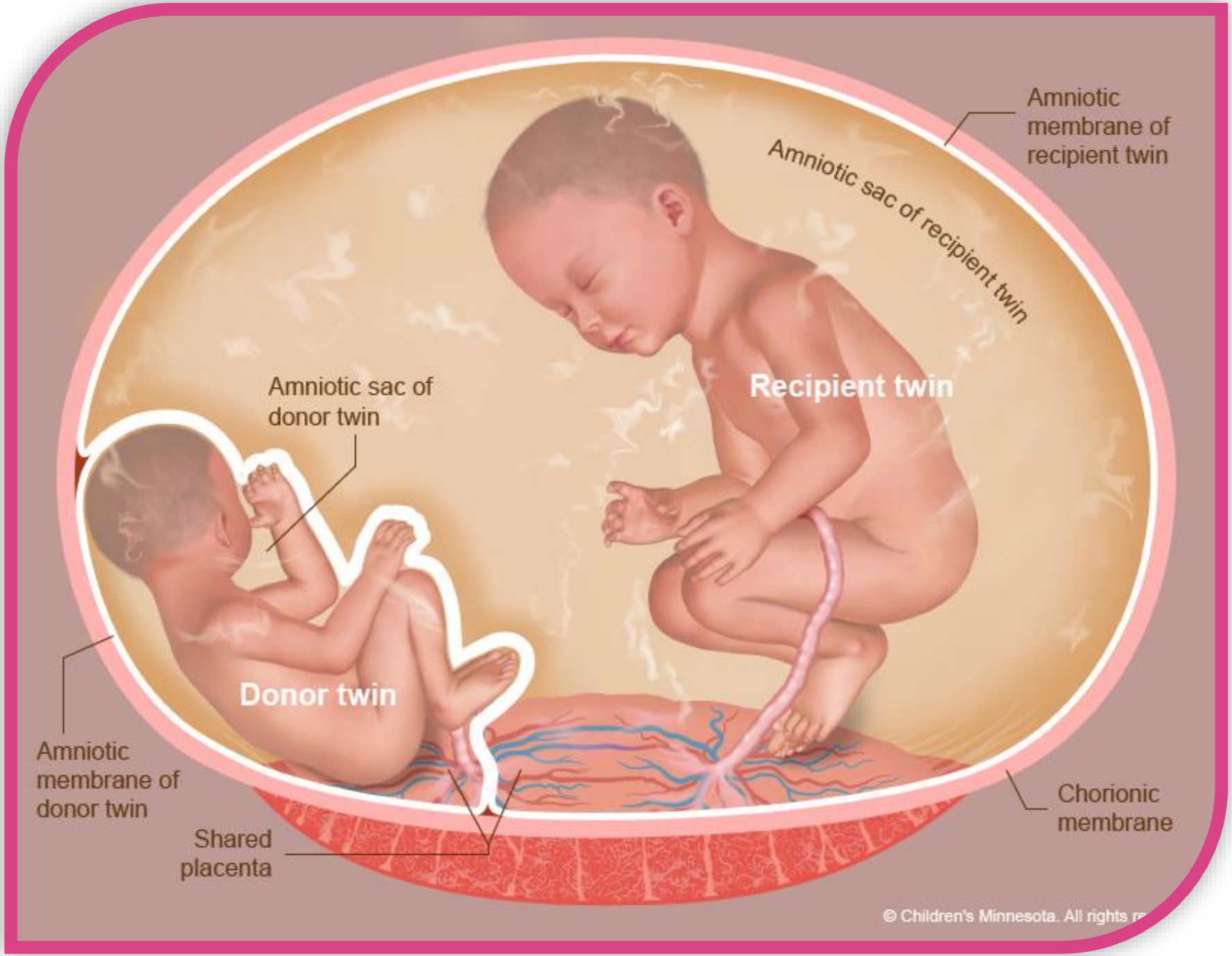
FETAL COMPLICATIONS:

1- prematurity.
2- IUGR .
3-increase risk of cong . Anomalies.
4-increase risk of perinatal morbidity and mortality.
5-Umbilical cord prolapse

Specific Complications in Monochorionic Twins

TWIN-TWIN transfusion.

-Results from vascular anastomosis 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 hydraminose.
-When TTTS is confirmed, management options include: expectant management; amnioreduction; septostomy; selective feticide, fetoscopic laser ablation of vascular anastomoses.
-If not treated death occurs in 80-100% of cases.


Amniotic membrane of recipient twin
Amniotic sac of recipient twin
Amniotic sac of donor twin
Recipient twin
Donor twin
Amniotic membrane of donor twin
Shared placenta
Chorionic membrane
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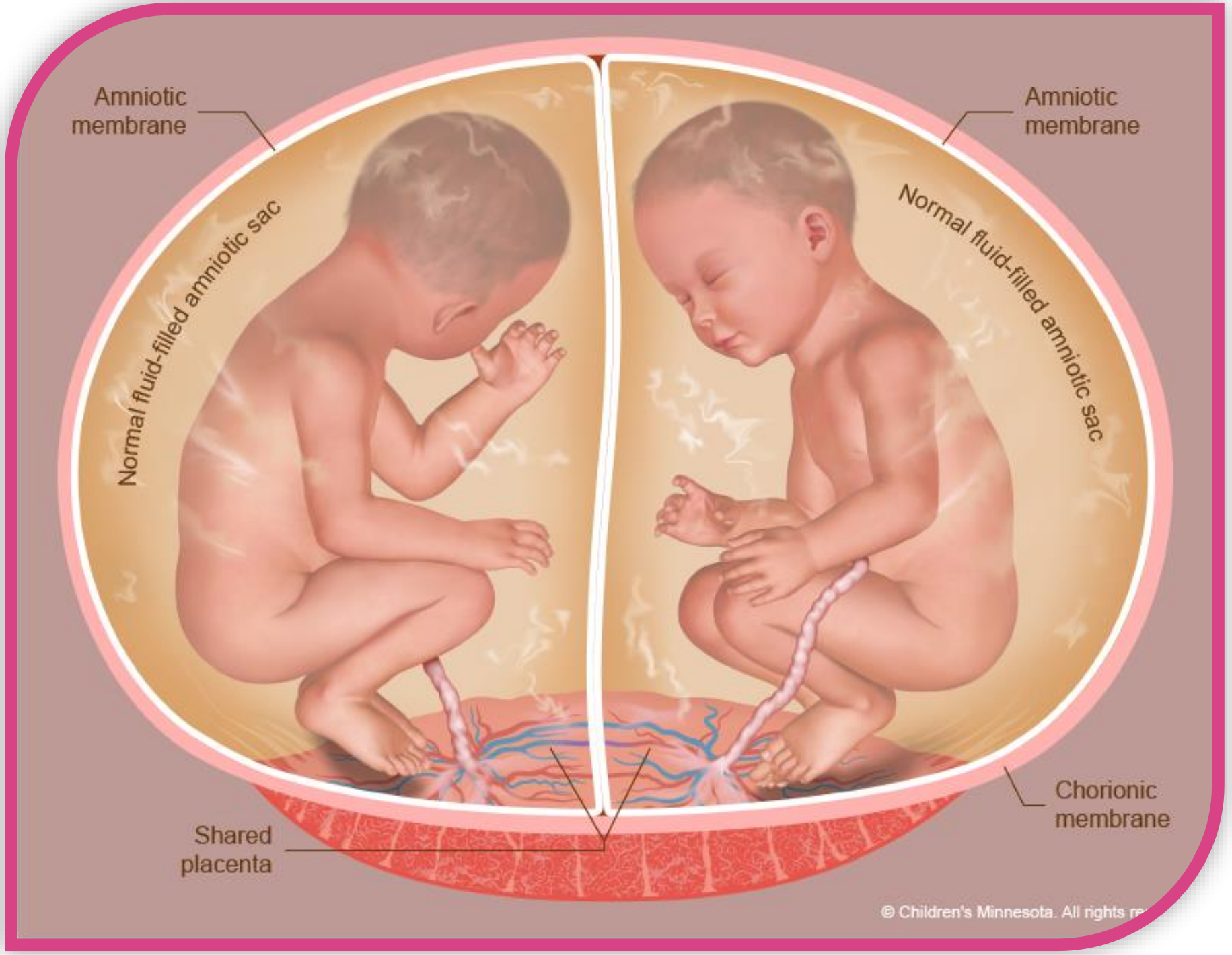
Amniotic membrane
Amniotic membrane
Normal fluid-filled amniotic sac
Normal fluid-filled amniotic sac
Shared placenta
Chorionic membrane
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TAPS

TAPS is a rarer chronic form of TTTS in which a large inter-twin haemoglobin difference occurs but the oligohydramnios polyhydramnios sequence that is observed with TITS is not seen. It is thought to occur from residual small (<1 mm) unidirectional AV anastomoses without accompanying AA anastomoses. The small residual anastomoses lead to the gradual development of anemia in one twin and polycythemia in the other twin.

Other Complications in Monochorionic Twins

-Congenital malformation. Twice that of singleton.

-Umbilical cord anomalies. In 3 – 4 %.

-Conjoined twins. Rare 1:70000 delivaries.

LO 4

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

- **Vaginal delivary inVertex- Vertex (50%)**
- **Mode of delivery has traditionally been decided on the presentation of the first twine(cephalic in 70%and breech in 30%)and growth and fetal well being.**
- **Malpresentation of the 1st twine indicate caesarean section.**
- **The presentation of the second twin is of little relevance until after the birth of the first. Mothers with previous cesarean 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 (obst,anasth,and pead) ,early in labour iv line should be inserted and blood prepared .**

- **Oxytocin is used as indicated in singlton pregnancy ,fetal heart monitoring of both fetuses should be done 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 don 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 30m .**

HIGH MULTIPLE PREGNANCIES

- **TRIPLETS.**
- **QUDRUPLETS.**
- **QUINTUPLETS.**
- **SEXTUPLETS.**
- **All complications (maternal & fetal)are increased .**
- **All mothers should be seen frequently.**
- **All should be delivered by c/s.**


THANK
YOU