Non-conventional approach to twin pregnancies complicated by extremely preterm premature rupture of membranes

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March 2007 – Barcelona, Spain
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1st Case
✓ A 25 year-old nulliparous gravida was admitted at 16 weeks’ bichorionic twin gestation due to extremely preterm premature rupture of membranes (EPPROM)

✓ The pregnancy achieved by induction of ovulation and intrauterine insemination

✓ On admission, vital signs and physical examination were normal
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✓ Speculum examination revealed mild bloody fluid in the vagina with no significant cervical dilatation

✓ Abdominal sonography confirmed two live fetuses and severe oligohydramnios in the precervical sac

✓ Cervical length by transvaginal sonography was 3.7 cm without signs of funneling
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Initial management:

1. Bed rest
2. Follow up of vital signs and CBC
3. Prophylactic antibiotics
The common managements in most centers of cases of multiple pregnancies with preterm premature rupture of membranes before 22 weeks’ gestation are termination of pregnancy or expectant management.
“Selective feticide in twin pregnancies with very early preterm premature rupture of membranes”


- **n = 12 multiple pregnancies**

- **9 multichorionic multiple pregnancies were managed expectantly**

- **The mean PPROM → delivery time interval was 6.2 weeks**

- **The take-home baby rate was 16%**
Selective feticide in twin pregnancies with very early preterm premature rupture of membranes


- In 3 twin pregnancies selective feticide with potassium chloride was performed in the absence of chorioamnionitis

- The overall PPROM → delivery time was 15 weeks

- No neonatal losses were encountered and the take-home baby rate was 66%
One week after hospitalization without signs of chorioamnionitis or bleeding, the couple was advised about the possibility of selective fetocide of the twin with rupture of membranes with the intention to preserve the normal co-twin.
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✓ Selective fetocide was performed by an intracardiac potassium chloride injection to the precervical fetus with rupture of membranes

✓ The amniotic fluid leakage stopped shortly after the procedure and the dead fetus was expelled 3 days later

✓ At 19 weeks’ gestation, after clinical and laboratory signs of chorioamnionitis were ruled out, cervical cerclage was performed due to cervical shortening (cervical length 2.6 cm)
The patient was discharged 3 days later and the rest of the pregnancy was uneventful

Steroids for fetal lung maturation were given at 24 week’s gestation

At 36 weeks’ gestation the cervical cerclage was removed because of onset of labor and a healthy newborn was delivered by CS weighing 2,500 g.
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2nd Case
✓ A 37 year-old woman was admitted at 19 weeks’ bichorionic twin gestation due to vaginal bloody discharge 4 days after amniocentesis

✓ The pregnancy was achieved after treatment for infertility
✓ On admission, vital signs and physical examination were normal

✓ Speculum and vaginal examination revealed mild bloody discharge with no cervical changes

✓ Two live fetuses and normal amniotic fluid index in each gestational sac were observed on transabdominal sonography
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✓ During her hospitalization amniotic fluid leakage and severe oligohydramnios of the upper sac were diagnosed.

✓ With no signs of chorioamnionitis, selective fetocide was performed to the upper fetus with rupture of membranes.

✓ Two weeks after the procedure (22 weeks’ gestation) very mild bloody fluid vaginal discharge continued, and the patient was discharged from the hospital.
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- The rest of the pregnancy was uneventful and the patient was followed up for signs of infection and coagulation blood test abnormalities.

- Steroids for fetal lung maturation were given at 24 week’s gestation.
✓ At 36 weeks’ gestation the patient was admitted due to premature rupture of membranes with no signs of chorioamnionitis

✓ The labor was induced by oxytocin administration and a healthy 2,500 g. newborn was delivered

✓ After the expulsion of the placenta, the second dead twin and his placenta were expelled spontaneously
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*Suggested Protocol of Management*
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- **Confirmation of PPROM with alive fetuses and bichorionicity**

- **Rule out infection by clinical signs and laboratory tests**

- **Give prophylactic antibiotics**

- **Wait at least 3 days to observe for a concealed infection to emerge**
Perform fetocide

Wait at least 3 days to observe for contractions or expulsion of the dead fetus

If the expulsion of the dead fetus occur, after contraction cease, perform a cervical cerclage
Discharge and follow up in the high risk pregnancy clinic

If the dead fetus was not expelled, follow up for signs of infection and coagulation blood test abnormalities

At 24 week’s gestation consider steroids for lung maturation
Conclusions:

- Expectant management of extremely preterm premature rupture of membranes in twin pregnancies results in an extremely high fetal and neonatal morbidity and mortality of both twins.

- Selective fetocide of the twin with early midtrimester rupture of membranes may improve the unfavorable pregnancy outcome of the remaining fetus.
Conclusions:

- In 6 cases reported, selective fetocide permitted the delivery of a healthy newborn in 5 of them.

- The efficacy and safety of the suggested protocol should be assessed by prospective multicentric study.
Thank You!

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