BELIEVE MIDWIFERY SERVICES

TITLE: TWIN PREGNANCY                EFFECTIVE DATE: December 13th, 2015

POLICY STATEMENT:
Nurse-midwives offer all pregnant women the benefit of education and counsel. As a matter of principle, some women will choose to birth with nurse-midwives outside-the-hospital rather than an obstetrician within the hospital. Informed consent is vital. There is a significant increase in perinatal morbidity and mortality in twin pregnancies compared to singletons, primarily due to the increased rate of preterm delivery (SOGC, 2000).

Many aspects of the obstetric management of the twin pregnancy cannot be extrapolated from that of a singleton pregnancy. Little evidence exists to guide clinical care for twin pregnancies and recommendations offered by professional organizations are not made on “best evidence” but rather on “best opinion.”

BLOOD BORNE PATHOGEN EXPOSURE CATEGORY: I (Involves exposure to blood, body fluids, or tissues)

FUNCTION: Care of Clients

POINTS OF EMPHASIS:
The age related karyotypic risk is different for a twin compared to a singleton pregnancy, during pregnancy the clinical assessment of the growth of each fetus is difficult without ultrasound; and finally, the delivery of the second twin demands special attention (SOGC, 2000).

Perinatal Morbidity and Mortality
Much of the increased morbidity and mortality of twin pregnancies is directly related to prematurity, and includes respiratory distress syndrome, intraventricular hemorrhage, and necrotizing enterocolitis. In addition, there is increased incidence of intrauterine growth restriction in one or both fetuses, congenital abnormalities, and complications related to twin to twin transfusion syndrome (SOGC, 2000).

Recommendations for Early Pregnancy Ultrasound and Genetic Counseling
Chorionicity, one of the most important determinants of pregnancy outcome in twin gestation, is best determined in the first trimester. Nuchal translucency can also be measured (SOGC, 2000).

Evidence is promising that nuchal translucency screening is useful for identifying twin pregnancies at high risk of aneuploidy. This requires further prospective investigation (SOGC, 2000).

The detection of fetal anomaly, the incidence of which is three times higher with twin pregnancy, is initially best assessed between 16 and 20 weeks. In the second and third trimesters, fetal growth will be reliably assessed by serial ultrasounds.

Preterm Birth Prevention in Twin Gestation
Between 1991 and 1995 in the United States, the preterm delivery rate in twins was 13.94 percent (<33 weeks) and 50.74 percent (<37 weeks) compared 1.7 and 9.43 percent respectively in singleton pregnancies (SOGC, 2000).

Randomized controlled trials and a meta-analysis of hospital bedrest in twin pregnancies have shown no more reduction in preterm birth or perinatal death. In uncomplicated twin pregnancies, hospital rest may result in increased risk of very perform birth and maternal psychosocial stress. In women with twin pregnancy at right risk for perform birth because of premature cervical change prior to labour, there is no evidence that hospital bedrest will reduce the rate of preterm birth (SOCG, 2000).

Restriction of activity level and the recommendation to stop work is commonly prescribed for women with twin pregnancies as a preterm birth prevention strategy. This prophylactic intervention has only been studied in a few observational trials with historical or geographical controls with conflicting results (SOGC, 2000).
Prophylactic cervical cerclage has not been shown to be effective in preventing preterm birth in twin pregnancy in observational or controlled trials (SOGC, 2000).

Despite the lack of precision, clinical cervical assessment appears to be safe and may be effective in monitoring twin gestations, if transvaginal ultrasound is not available or determined to be too expensive. However, compared to transvaginal sonography, digital examination is more subjective and less reproducible (SOGC, 2000).

Data from prospective longitudinal studies suggests that a positive fetal fibronectin test has a very high negative predictive value for the prediction of preterm birth in asymptomatic patients. The positive predictive value for preterm labor and delivery before 37 weeks is 60 percent for patients in preterm labor, 45 percent in asymptomatic high-risk women, and 30 percent in asymptomatic low-risk women (SOGC, 2000).

No prenatal method has been shown to prevent preterm birth labor and birthing twin pregnancies (SOGC, 2000).

**Fetal Growth Assessment**

There is good evidence that the diagnosis of twin gestation is improved by the routine use of ultrasound. Fetal growth in twin gestation parallels that of singletons until approximately 32-35 weeks. Thereafter, the rate of fetal growth is measurably slightly less, although the clinical significance of this is undetermined. The patterns of twin fetal growth vary by race and gender, with African-American mothers having lower median body weight values. Male twins have heavier median body weight for gestational age than female twins at every gestational age.

Patterns of growth are more significant than absolute measurements. Both must be interpreted in the light of the clinical history, together with all the genetic and environmental factors that may affect fetal growth (SOGC, 2000). Discordant growth concerns lies primarily in its relationship to twin twin transfusion and to intra-uterine growth restriction (IUGR) of the smaller twin. True discordance is an indicator for an increased risk of IUGR, morbidity, and mortality for the smaller twin. A risk for aneuploidy, anomaly or viral syndrome affecting only one fetus must also be considered when discordant growth is identified.

Discordance has been based on the following:
- an abdominal circumference (AC) difference of 20mm (sensitivity of 80%, specificity 85%, positive predictive value (PPV) 62%)
- estimated fetal eight (EFW) based on bi-parietal diameter (BPD) and AC or AC and femur length (FL) > 20 percent (sensitivity 25-55%)

Monoamniotic Pregnancy should be considered with these markers:
- single monochorionic placenta,
- polyhydramnios/oligohydramnios sequence, and
- same sex fetuses

This does not imply that all pregnancies characterized by these features are affected by TTTS - further investigations may be required - but these features should prompt referral to a territory care unit.

Evidence of decompensation in fetal health includes:
- chronically distended bladder of recipient twin;
- growth discordance (>25%); and
- evidence of cardiac dysfunction (non-immune hydrops).

These should prompt urgent referral to tertiary care perinatal centre.

**PROCEDURE:**

*Screening & Diagnostics*
1. Every effort should be made to determine chronicity at the time of twin diagnosis. The optimal time to determine chronicity is 10-14 weeks. However, without ultrasound, up to 40% of twin pregnancies will not be diagnosed until 26 weeks. Twenty percent will not be recognized until term.

2. Invasive diagnostic testing may be offered in twins on the basis of late maternal age. When counseling women about their risk of chromosome abnormalities, the chronicity should be taken into consideration. In monochorionic twins, the age-related risk for the fetuses is the same (all are monozygotic) and is equivalent to the risk in a singleton pregnancy. In dichorionic twins, the risk is essentially double the age-related risk (about 2/3 will be dizygotic). Although accurate determination of chronicity by ultrasound is possible, it will not always be feasible.

3. Women thirty-two-years and older, carrying twin pregnancies should be offered a referral for counseling to a center for the consideration of invasive testing. The risk of amniocentesis in twin gestation is uncertain and issues such as discordant anomalies that may arise need to be considered. Such counseling is complicated and is best carried in a specialized genetic center, or center specializing in the management of multiple gestation.

4. Biochemical screening for aneuploidy is not recommended in twins.

5. Umbilical artery doppler should not be routinely offered in uncomplicated twin pregnancies.

6. Maternal serum alpha fetoprotein (MS-AFP) is useful for detection of open neural tube and other birth defects and therefore, should be offered to pregnant women.

7. There is good evidence that the diagnosis of twin gestation is improved by routine use of ultrasound. There is consensus that serial ultrasonographic evaluation every three to four weeks is indicated in twin gestations.

8. Prevention of Preterm Birth

   8. There is insufficient evidence to support prophylactic activity restriction or work leave in multiple gestation.

   9. In the presence of incompetent cervix or other specific circumstances, cerclage may be indicated, but as a routine for prevention of preterm birth, it is not recommended.

10. Oral or intravenous tocolytic therapy in multiple gestation has failed to show benefit in most randomized controlled trials.

11. Cervical assessments might be safe and effective in monitoring twin gestations, if transvaginal ultrasounds are not available or determined to be too expensive. However, compared to transvaginal sonography, digital examination is more subjective and less reproducible.

Labor Management and the Delivery in Twin Gestation

12. Indications for elective Cesarean section in twin gestations are mono amniotic twins because of the risk of entrapment, conjoined twins, or indications as for singleton pregnancies.

13. Reviewing antenatal risk factors should be reviewed at the onset of labor. Intrapartum should be assessed on an ongoing basis and changes attended to appropriately.

14. The diagnosis of twins is usually antenatally. Therefore, arrangements for delivery and/or transfer should be set in place. This may include antenatal consultation with Maternal Fetal Medicine providers.

15. The assessment of lie and presentation of each fetus on admission in labor is encouraged, via ultrasound is optimal.

16. The option for intravenous access should be discussed with the client.

17. For either twin, the indication for any intervention should be convincing, compelling, and documented at the time of event. However, for the second twin, delivery should be expedited should fetal distress occur. There is little evidence to suggest the best operative method of delivering the second twin who remains in the vertex position, should the need arise. In the hospital forceps and vacuum and options; however, in the home setting, conversion to breech and delivery by breech extraction.

   Breech extraction with or without internal podalic version is associated with a lower cesarean section rate and similar neonatal and maternal outcomes compared with external cephalic version in the twin pairs whose estimated fetal weights are greater than 15,00 grams.
18. Documentation of all aspects of labor and delivery should be clear, contemporaneous, and consistent among all involved health care providers.

19. Progress of labor should emerge clearly from the documentation.

20. Fetal heart tone assessments must be attained through utilization of the fetal cardio machine to assure both twins are being monitored individually. The presence of an ultrasound machine in the delivery room may be advantageous.

21. The time of between the delivery of each baby should be noted.

22. The third stage of labor should be managed actively, with oxytocin being administered with the delivery of the second twin.

23. Placentas should undergo gross examination, with microscopic pathological examination considered.

24. The client should be well informed that emergency cesarean in the event of fetal indication is not available. Client should also be encouraged to birth as close as possible to a hospital with in-house anesthesia and obstetrical crew.

Counseling Specific to the Twin Family

25. The twin family should be provided additional information and support services that may provide assistance for emotional, financial, and practical stresses related to their twins. Such information should include preventative health and parenting education as well as psychosocial services to help them cope with the high health and psychosocial risks related to multiple births.

REFERENCES:

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