

## PROCEDURE

### 1.0 Antenatal Care

Once a woman has confirmed pregnancy, prenatal care begins. Women with SCI injury above T6 (those at risk for autonomic dysreflexia) should receive care from Maternal Fetal Medicine. Women with injury below T6 (those who do not experience autonomic dysreflexia) receive care from General OB. Care may be shared with the woman's primary care physician.

#### Additional care components include:

#### 1.1 Complications

##### a. Urinary Tract Infection

- Pregnant women with SCI are at increased risk for Urinary Tract Infections (UTI) due to incomplete bladder emptying or need for frequent bladder catheterizations
- A complete assessment of a woman's voiding patterns is required. An ongoing assessment is required as issues may change throughout the pregnancy.
  - Voiding can be spontaneous or managed through application of suprapubic pressure, intermittent or indwelling catheterization
  - Advanced pregnancy can create problems with urinary incontinence and make self-catheterization more difficult.
  - Urine cultures should be taken at each antenatal visit
- Bladder management can be discussed in collaboration with the woman's physiatrist, who may assist with care recommendations.
- -If a UTI is confirmed, consult with the woman's physiatrist to guide need for antibiotic therapy and to guide choice of treatment.

##### b. Anemia

- Anemia is a common complication of pregnant women with SCI and may increase the risk of skin breakdown and decubitus ulcers if left untreated
- Iron supplementation should be accompanied by stool softeners and careful attention to bowel regimen, with the inclusion of high-fiber foods in the diet, in order to decrease risk of constipation.
- If anemia cannot be improved by diet and iron supplementation, blood transfusion may be considered.

##### c. Pressure Ulcers

- Pregnant SCI women are at increased risk of developing pressure ulcers but they are preventable with proper management .
- Factors contributing to the development of pressure ulcers include:
  - excess weight gain,
  - immobilization,
  - dependent edema, and
  - inappropriately sized medical equipment such as wheelchairs.
- Antenatal visits should include regular skin examination for possible breakdown.
- Women should be encouraged to frequently change body positions.
- Family or support people should be involved in prenatal care discussions regarding position changes. If a woman was previously managing them herself consider whether she will be able to continue to do so independently or whether additional support is necessary.
- It may be necessary to increase padding of wheelchairs or consider larger wheelchairs
- If pressure ulcers are found they should be treated immediately and may require physiotherapy to prevent further skin deterioration.

**d. Autonomic Dysreflexia**

- Women with SCI are at higher risk for developing uncontrolled AD in pregnancy
- Assessment of the woman's current experiences with AD should be completed.
- AD may occur when some sort of stimulus is present, such as a full bladder, enema, bowel movement, uterine contraction, insertion of a catheter, or a vaginal or rectal examination. The woman will have the most informed knowledge of her needs and bladder and bowel management
- In most instances AD can be effectively managed by removing the stimulus
- Hypotension should be avoided as it may result in poor fetal response
- Acute hypertension may pose the greatest risk for stroke if blood pressure remains elevated and uncontrolled. Vigilant monitoring of blood pressure throughout pregnancy is recommended.

**e. Respiratory Compromise**

- Women may be at risk of compromised respiratory function, especially those with high thoracic or cervical spine regions usually above the T5 level .
- Serial measurements of vital capacity, arterial blood gas analysis, spirometric pulmonary function tests, and respirology consultation should be considered to monitor respiratory function.
- Women should be taught deep breathing and coughing exercises.
- When sleeping if breathing becomes difficult or the woman is into her second trimester adopting a partial sitting position may be more comfortable. Side lying may be better to avoid shearing force; change position frequently to avoid pressure sores.

**f. Risk for developing blood clots**

- Women may be at increased risk for venous thromboembolism
- There is not sufficient evidence to recommend prophylactic anticoagulants during pregnancy, thus treatment should be individualized based on physical limitations and medical history
- Women should be instructed to change positions as often as possible and to elevate their legs periodically throughout pregnancy
- Wearing graduated compression stockings may be indicated in some cases
- Active or passive range of motion exercises are helpful in the lower extremities

**g. Preterm Labour**

- Many pregnant SCI women perceive labour depending upon the level of injury
- Women with SCI, especially those with injuries in the upper cervical spine regions, may be at increased risk of premature labour.
- Women may confuse urinary incontinence with the rupture of membranes and vice versa
- Women should be taught abdominal palpation techniques to detect contractions at home
- Signs and symptoms of labour such as abdominal or leg spasms, shortness of breath, and increased spasticity should also be reviewed. These signs often mirror the signs of autonomic dysreflexia.
- It is recommended that vaginal/cervical examinations by vaginal ultrasound be performed during antenatal visits starting from the 24th-28th weeks gestation
  - Induction of labour may be recommended for some women with SCI due to the increased risk of unattended delivery
  - Tocolytic agents may be used to delay premature labour unless contraindicated

**h. Other**

- Woman should follow up with her physiotherapist/occupational therapist early in her pregnancy so as to have a baseline assessment completed. Early planning and follow up allows time for realistic goal setting, adjustments and alterations of existing equipment or purchase of any new equipment as necessary.
  - Posture and weight shifting may affect her back leading to back pain and/or discomfort in her pelvis especially while in her wheelchair. Her physiotherapist may need to alter cushioning on wheelchair and prescribe appropriate exercises for her back and pelvis.

## 2. Creating a delivery plan

- A multidisciplinary advanced care plan for birth should be completed. This should include the woman's physician, physiatrist, urologist, obstetrician, and nursing staff who will be caring for her while in hospital.
- Hospital nursing staff should be made aware of the woman's routine SCI care needs and discussion should take place on how to accommodate them
- Most women with SCI are able to have vaginal deliveries. The decision on whether to deliver vaginally or via caesarean section should be based on individual obstetrical indications
- An antepartum anaesthetic consultation with an anaesthesiologist should be completed prenatally as part of the preparation for delivery should a caesarean section become necessary later on. Discussion surrounding options for analgesia and prophylaxis for AD should occur with evaluation of the benefits and risks associated with an epidural block
- Women should be informed that an emergency caesarean section may be required if autonomic dysreflexia cannot be treated successfully through other, less invasive means.

## DOCUMENTATION

### Physician's History Antenatal Record

## REFERENCES

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