

Needs of Special Populations

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Special Needs of Women

- Contraception
 - Birth control pills increase the risk of thrombosis 3 to 4-fold
 - Patches expose women to 60% more estrogen
 - Progestin-only contraceptives do not increase the risk
- Menopausal symptoms
 - Postmenopausal hormone therapy increases the risk of clots
 - Progestin, in doses to treat abnormal bleeding increases the risk 5 to 6-fold
- Heavy menstrual bleeding
 - May affect half of women on anticoagulants
- Hemorrhagic ovarian cysts

Special Needs of Pregnant Women

- Women on warfarin must convert to heparin
- Women with a history of thrombosis will require heparin during pregnancy and for at least 6 weeks postpartum
- Women with thrombophilia are at risk for poor pregnancy outcome
- Women with thrombophilia and a history of poor pregnancy outcome will likely require heparin
- Women with thrombophilia but no history of thrombosis or poor pregnancy outcome do not require anticoagulation.

Thromboses in Unborn Babies

- Vascular disruptions
- Renal veins
- Vena cavae
- Cerebral venous sinuses
- Umbilical veins
- Placental vessels

Thromboses in Infants

- 80% catheter-related
 - Lines in upper body
 - Lines in umbilical vein
- 20% spontaneous
 - Renal veins
 - Cerebral veins
- Treat with anticoagulants or thrombolysis
- Neonatal purpura fulminans

Special Needs of Children

- The coagulation system changes with age
- High circulatory demands
- Different illnesses and different medications
- Inability to cooperate
- Intravenous access
- No pediatric formulations of any anticoagulants
- No liquid warfarin or pediatric doses of pre-filled syringes
- Different diets and formulas contain different amounts of vitamin K
- Different level of understanding
- Dependent on their parents

Assembling a Team to Meet the Needs of Individuals

- No specialist for venous thromboembolism
- Community hematologists devote 90% of their time to cancer patients
- The ideal team:
 - Expert in coagulation
 - Pharmacist knowledgeable in anticoagulation
 - Nurse to educate the patient
 - Primary provider

Assembling a Team to Meet the Needs of Families

- Young adults and children with spontaneous DVT or PE often have thrombophilia
- Questions arise regarding:
 - Whom to test
 - Whom to treat
- Ideal team includes a knowledgeable genetic counselor

Creating a Center that Meets the Needs of the Community

- Consultative services for inpatients and outpatients
- Direct care in complex cases
- Coagulation laboratory support
- Educational materials for patients
- Continuing medical education
- Websites
- Protocols
- Publications

Meeting the Needs of the Nation

- Spyropoulos and Haire described the Clinical Thrombosis Center
- Needs of special populations were not considered
- In 2001, the CDC initiated a pilot program of thrombophilia centers to:
 - Determine the value of a multi-disciplinary team in providing care to persons with coagulation disorders.
 - Assess unmet needs and identify outreach strategies to improve access to care.
 - Develop effective messages aimed at disease management and prevention.
 - Foster the development of training programs to enhance provider skills.
- 8 receiving funding, networking and modeling care