

Evaluating Current Treatment Practices for Acute Adolescent Menorrhagia

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Background Menorrhagia is a clinical condition where menstrual blood loss is greater than 80mL/month, and in severe menorrhagia, hemoglobin levels fall below 10mg/100mLs. Up to 20% of women during their reproductive years may experience excessive blood loss, but the risk is highest during adolescence at the onset of menarche. Between 1964 and 1999, 11 different treatment regimens were published, but none studied adolescent menorrhagia. Also, most recommendations were based on expert opinion and not clinical studies: the only randomized clinical trial studied IV estrogen versus placebo. Because the optimal treatment is still unknown, the purpose of this study is to evaluate current treatment practices in order to better design a clinical practice guideline.

Objective To determine frequency of IV estrogen treatment in:

- 1) a clinical vignette survey of adolescent providers
- 2) a retrospective chart review of adolescents admitted to CCHMC.

Hypothesis 1 More providers report using IV estrogen than oral estrogen.

Hypothesis 2 In hospital admissions, IV estrogen was used more than oral estrogen.

Methods Part I.) A survey describing a clinical vignette followed by a series of questions was administered to attendants at the 2006 North American Society of Pediatric and Adolescent Gynecologists (NASPAG) Annual Clinical Meeting and to the Division of Adolescent Medicine at CCHMC. The survey questions included options for labs, initial treatment and maintenance therapy. Analysis involved descriptive statistics looking at the frequency/percentages of each medical treatment plan, as well as a Chi-squared test for differences in treatment by specialty of the respondent. Part II.) A chart review was conducted of CCHMC admissions from 2000-2005 with admit or discharge ICD-9 codes 626.2/626.8 who were treated for acute menorrhagia. The analysis was similar to the survey analysis, including descriptive statistics of the patient population and frequency/percentages for treatment plans.

Results Part I.) Fifty-five (n=55) surveys were collected from NASPAG and CCHMC. The respondents included 24 physicians trained in Obstetrics/Gynecology, 19 in Adolescent Medicine, 2 in Pediatrics and 3 in other specialties, with 7 missing data. Thirty of the 55 providers (55%) chose oral contraceptive pills (OCPs) in their initial treatment. Twenty-five (43%) chose a treatment plan that included estrogen. Of that group, 80% (20/25) reported using IV estrogen. Part II.) Twenty-six (n=26) CCHMC admissions from 2000-2005 were included in this study (ages 10-19, mean age 14, average hemoglobin 8.06). Of the 26 admissions, OCPs only were prescribed for 20 (76%) patients, with 7 (27%) admissions given both estrogen and OCPs. Twelve patients (46%) were given estrogen only treatment with 83% (10/12) administered by IV.

Conclusion Although the only clinical trial involving menorrhagia treatment studied IV estrogen, the provider survey of NASPAG and CCHMC adolescent medicine practitioners and the retrospective chart review of CCHMC admissions both indicate that current opinion and actual practice favor oral contraceptive treatment more than oral or IV estrogen only therapy. Further analysis will investigate how training/specialty, transfusion, or admission hemoglobin levels affect which treatment plans are implemented or reported. The results of this evaluation of current treatment practices can be used to design a clinical practice guideline for acute adolescent menorrhagia.