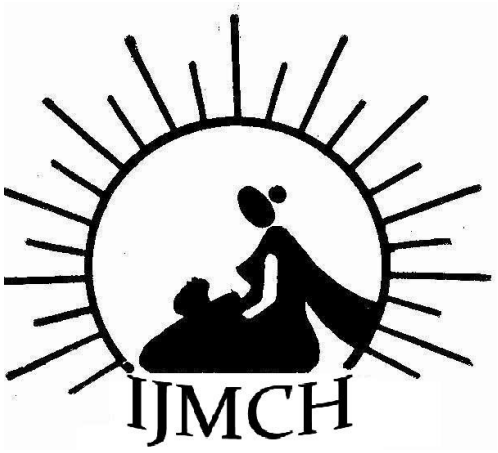
Volume 15 (4), 2013

Coagulation Profile in Menorrhagia of Child Bearing Age in Women of Odisha

G.Priyadarshini
S.R Moharana
A.Priyadarshini
Tushar Kar

www.ijmch.org



INDIAN JOURNAL OF MATERNAL AND CHILD HEALTH

Whether coagulation disorder is the cause of menorrhagia in child bearing age in women of Odisha?

Coagulation Profile in Menorrhagia of Child Bearing Age in Women of Odisha

G.Priyadarshini,** S.R Moharana ,A.Priyadarshini,****Tushar Kar**

Post Graduate,**Associate Professor,Associate Professor, Department of Physiology**
******Associate Professor Department of Obstetrics & Gynecology, S.C.B medical College Cuttack**

Correspondence: Dr G.Priyadarshini

ABSTRACT

Background: Abnormal uterine bleeding accounts for almost 50% of visit to gynaecologists. Common conditions associated with menorrhagia include platelet function disorder and coagulation factor deficiency.

Research question : Whether coagulation disorder is the cause of menorrhagia in child bearing age in women of Odisha?

Study design : Cross sectional study was done in a tertiary care institute over a period of one year. 30 women of child bearing age were included in the study.

Methodology : Each case was analysed for the demographic profile, duration of menorrhagia, severity of symptoms, degree of anemia and laboratory investigations**.**

Result : Mean age of patients was 39.57 years. A significant prolongation of aPTT, PT and decrease in platelet count haemoglobin and packed cell volume was seen in menorrhagia cases.

Conclusion: For evaluation of menorrhagia more emphasis should be given to rule out other hemostatic disorder. Menorrhagia may be considered as an inherited bleeding disorder.

Keywords : Menorrhagia, bleeding disorders

INTRODUCTION

Menorrhagia is one of gynaecological complaints seen in women of reproductive age. It is a public health challenge[(1)]**.** Insurance data and health care services research estimate that atleast 5-10% of women of reproductive age will seek medical attention for menorrhagia[(2,3)].

The WHO estimates that 18 million women worldwide are affected[(4).] Within a year of seeking medical attention, such a patient has upto 50% probability of undergoing surgical intervention[(5)]. Historically, the cause of menorrhagia have focussed on gynaecological & endocrinoligical conditions in terms of organic pathology & anovulation/hormonal imbalance, with remaining etiologies being systemic disorder such as hypothyroidism[(6)] & iatrogenic causes including IUD & use of anticoagulants[(3).]

Only in the past decade have underlying disorders of hemostasis been clearly recognised as an important etiological factor[(1)]. Historically, prior to extensive hemostasis testing in these patients, in approximately 50% of cases, no specific etiology was identified leading to

diagnosis of exclusion of dysfunctional uterine bleeding (DUB)[7]. Coagulation disorders are prevalent in 1% of general population & their incidence may be as high as in gynaecological population[8,9,10]. Yet, gynaecologists underestimate the coagulation disorders in etiology of abnormal uterine bleeding[8,11].

A majority of the study in west report von Willebrand disease(vWD) as the most common inherited bleeding disorder which leads to menorrhagia whereas studies from south- east Asia have found platelet function disorder as the leading cause[9,10]. My aim of study is to find the cause of menorrhagia of Odia women in child-bearing age by correlating with coagulation profile.

MATERIALS AND METHODS

30 women visiting Obstetric & Gynecology OPD with complaints of menorrhagia without any etiological finding referred to Clinical Hematology of S.C.B Medical College, Cuttack were included in the study group & age matched.Ethical clearance was taken from Institutional Ethical Committee and each subject gave consent.

30 healthy female taken from paramedical staff were included in the control group. Each case was evaluated for age of patient, age at menarche, clinical features, family history drug history, menstrual history, quantity of bleeding and associated dysmenorrhoea and other symptoms .

The laboratory investigations included evaluation of haemoglobin(Hb), packed cell volume(PCV), platelet count, bleeding time(BT), clotting time(CT), peripheral smear, prothrombin time(PT) & activated partial thromboplastin time(aPTT).

The inclusion criteria included all the females within the child bearing age who were referred to the hematology department from the Obstetrics and Gynaecology Dept. with the history of heavy irregular periods i.e when interval between start of cycle is <21 days or duration of menstrual flow is >7 days. Patients with gynaecological causes of menorrhagia, endocrine disorders and those who received treatment with anticoagulants, antifibrinolytics and NSAIDS were excluded from the study.

METHODS

Blood sample was collected within 1^{st} - 4^{th} day of menstrual cycle for blood coagulation tests. 2 ml EDTA blood was taken for complete blood count. 1.8 ml of 3.2% sodium citrate blood was collected for PT & aPTT estimation. Estimation of Hb, PCV, BT & platelet count was done by cell counter. Estimation of BT was done by Duke method & CT done by capillary tube method. PT & aPTT was estimated by coagulometer. The data was analysed by unpaired t test using SPSS version 16. All data were expressed as mean $\pm$ SD.The p value less than 0.05 was considered statistically significant.

RESULTS

Present study was conducted over a period of one year. During this period 30 patients were studied. Out of 30 patients 12 were in the age group of 36-40 years. Mean age of cases was 39.57 years and that of control was 41.21 years

Menstrual cycle length was significantly decreased and duration significantly increased in study group.

Table 1: Variation of age, menstrual cycle length & duration in menorrhagia cases & controls

Parameter	Menorrhagia (n=30)	Normal (n=30)
	Mean ± SD	Mean ± SD
Age(in years)	39.57 ± 5.35	41.21 ± 5.46
Menstrual Cycle(days)	18.6 ± 6.41	26.17 ± 2.73
Menstrual Duration(days)	7.33 ± 1.71	3.86 ± 0.74

P<0.001

Table 2: variation of Hb, PCV, Platelet count, Bleeding time, Clotting time, PT and aPTT in menorrhagia cases and controls

Parameter	Menorrhagia (n=30)	Normal (n=30)
	Mean ± SD	Mean ± SD
Hb (gm%)	9.92 ± 1.44	13 ± 0.88
PCV(%)	34.51 ± 4.39	41.46 ± 2.69
Platelet count X $10^3/mm^3$	196.07 ± 57.2	290.95 ± 0.17
Bleeding Time(sec)	262.41 ± 6.22	154.67 ± 6.16
Clotting Time(sec)	588.46 ± 7.1	360.6 ± 8.47
PT(sec)	12.70 ± 0.93	12.02 ± 0.36
aPTT(sec)	27.08 ± 0.66	26.23 ± 0.43

P<0.001

Hb, PCV, Platelet count were significantly decreased in study group and bleeding time, clotting time PT, aPTT were significantly increased in study group

DISCUSSION

Menorrhagia patients referred to clinical Hematology from Dept. of O&G who had no other Gynecological finding belonged to age group 30-50 contrary to American Family Physician Study where the age group varied from 18-45 years[(12)].

There was reduced Hb 9.92 gm% and PCV 34.51% due to decreased cycle length and increased duration of 7.33 days similar to Kishan et al 2011[(13)]. Thrombocytopenia was idiopathic in nature correlating with the study of Bevan et al that caused increased bleeding time [(11)].

Clotting time was increased due to vWD as studied by Claessens and Cowell[(14).] The increase in prothrombin time and activated partial thromboplastin time was due to deficiency of Factor V,VII,XII,XIII as studied by Shankar et al [(15)].

CONCLUSION

Our study shows that the possibility of underlying haematological disorder in menorrhagia patients is high enough not to be ignored and so every patient with menorrhagia and Hb level <10 gm% should undergo detailed haematological investigation.

REFERENCES

1. James AH,Ragni M V,Picozzi VJ**.**Bleeding disorders in premenopausal women:Hematology *A Soc Hematol Educ Program* 2006;474-85.
2. Vessy MP et al.The epidemiology of hysterectomy*. Br J Obst Gynaecol* 1992;99**:**402-7
3. Oehler MK,Rees MC*.Menorrhagia :*an update.*Acta Obstet Gynaecol Scand* 2003 ;**82**:405-22
4. Shaw JA,Shaw HA.Menorrhagia. http;/www.emedicine.com/med/topic 1449.htm/
5. Doherty L,Harper A,Russell M.Menorrhagia management options.*Ulster Med J* 1995;**64**:64-71
6. Krassas GE et al.Disturbances of menstruation in hypothyroidism.*Clin Endocrinol* 1999 ; **50**:655-9
7. Rees M*. Menorrhagia. Br Med J (Clin Res Ed)* 1987 ; **294**:759-62
8. Hickey M,Balen A.Menstrual disorders in adolescence:inv & management.Human reproduction update 2003;9(5):493-504.
9. Roychowdhury J et al.*Online J Health Allied Scs* 2008;7(1):1-6.
10. Hossain N et al.*J Pak Med Assoc* 2010;60(2):127-9.
11. Bevan et al Bleeding disorder a common cause of menorrhagia *J Ped*2001;138:856-8614
12. American Family Physician.2001 Nov 15;64(10:1754-1756)
13. Kishan et al Menorrhagia:Study of coagulation profile in tertiary centre in South India.Journal of clinical and diagnostic research 2011 Dec Vol 5(8):1589-1592
14. Claesens EA, Cowell CAI(1981) Acute Menorrhagia Am J Obs & Gynecol 139:277-280
15. Shankar et al Coagulation factor deficiency in Menorrhagia*, Br J Obstet Gyn ecol* 2004; 111:734-740.