

A study of the relation between the size of a uterine fibroid(s), the site of a uterine fibroid(s), the duration of menstruation and the intensity of dysmenorrhea and menorrhagia.

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Abstract:

Background: This study was targeted at concluding on any relation between size and site of uterine fibroids and the influence on the intensity of dysmenorrhoea and menorrhagia. Another parameter that was considered was the duration of menstruation and its relation with the fore mentioned parameters.

Methods: Patients who visited the department of Obstetrics and Gynaecology at our hospital with evidence of uterine fibroids on ultrasonography were selected as the participants of the study. A Pictorial Blood Loss Assessment Chart and a pain score was provided to each of the participants after obtaining their consent and were asked to quantify dysmenorrhoea and menorrhagia. The charts were analysed and conclusions were derived at.

Results and conclusions: There was no relation between the size of uterine fibroids and intensity of menorrhagia and dysmenorrhea. Both intramural and subserosal fibroids had variable patterns in the intensity of menorrhagia and dysmenorrhea. It was also noted that patients with multiple fibroids showed that there was no relation with duration of blood loss or with the intensity of menorrhagia but all patients with multiple fibroids had a higher intensity of dysmenorrhoea on the pain scale. There was also no relation between duration of menstruation and intensity of dysmenorrhoea.

Keywords

Uterine fibroids, menorrhagia, dysmenorrhea, ultrasonography

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I. Introduction

Uterine fibroids are benign tumours of smooth muscle of the uterus, hence called uterine leiomyomas¹. Common symptoms of uterine fibroids are painful periods (dysmenorrhea) and heavy periods (menorrhagia). Fibroids could also cause lower back pain and painful intercourse. A small fraction of fibroids are even asymptomatic¹. The incidence of uterine fibroids globally was 171 million women as of 2013². Symptoms of uterine fibroids like menorrhagia have negative effects on women's quality of life³. Dysmenorrhoea is painful uterine cramps; with (primary) or without (secondary) organic pathology⁴. Menorrhagia is heavy menstrual bleeding of more than 80-100ml/cycle⁵. Fibroids have been the cause for severe menorrhagia in 40% of the women in a study conducted by Kirsten Duckitt et al⁵.

II. Aim

This study is targeted at finding any existing relation between the size of uterine fibroids, the site of uterine fibroids, the duration of menstruation and the intensity of dysmenorrhoea and menorrhagia.

III. Materials and Methods

a. Type of study

This is a cross sectional study (observational).

b. Participants

The study group consists of 17 women (n=17) who have evidence of uterine fibroids on abdominal ultrasonography/ transvaginal ultrasonography amongst those who presented to the Department of Obstetrics and Gynaecology at our hospital during the months of August, 2019 and September, 2019. Both out patients as well as in patients were included. Amongst all members of the study group, status before any intervention (medical/ surgical) was considered. Patients who had attained menopause were excluded from the study group.

c. Study design

Written informed consent was obtained from each patient. Ultrasound scans of all patients with complaints of abnormal uterine bleeding were reviewed and those with evidence of fibroids were included in the study. In the scans, the site, size and number of the fibroids were noted. Detailed menstrual history was procured from the patients. Each patient was provided a pictorial blood loss assessment chart and a pain scale chart and was asked to quantify the degree of menorrhagia and dysmenorrhea according to the charts. The charts were analysed along with respective ultrasound scan findings and menstrual history.

Figure I
Pictorial Blood Loss Assessment Chart

DAY	DAY1	DAY2	DAY3	DAY4	DAY5	DAY6	DAY7	DAY8	DAY9	DAY10	TOTAL TALLIES	MULTIPLYING FACTOR	ROW TOTAL
												X1	
												X5	
												X20	
												X1	
												X5	
												X10	
Small blood clots (= Dime)												X1	
Large blood clots (≥ Quarter)												X5	
Menstrual accidents												X5	
Total Score (Sum of rows)													

How to use the Pictorial Blood Assessment Chart:

- Record the number of tampons and sanitary pads used each day during your period by placing a tally mark under the day next to the box representing the amount of bleeding noted each time you change your pads or tampon (see example at right)
- Record clots by indicating whether they are the size of a dime or a quarter coin in the small and in the large blood clot row under the relevant day.
- Record any incidences of flooding (accidents) by placing a tally mark in the menstrual accident row.

Scoring the Chart:

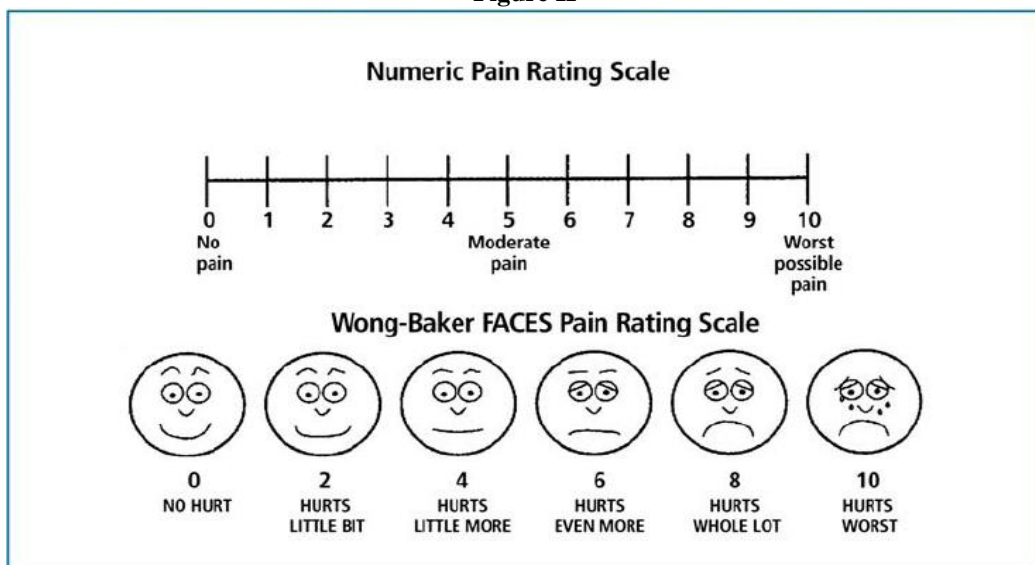
At the end of your period tabulate a "Total Score" by multiplying the total number of tallies in each row by the "Multiplying Factor" at the end of the row. Then sum the "Row Totals" to obtain the final "Total Score"

Example:

Ms. Smith in the first day of her period, she used 7 pads (5 lightly stained, 1 moderately and 1 heavily stained). She also used 1 moderately stained tampon and had 3 blood clots 1 small and 2 large. She also had one incidence of flooding.

Days	D1	D2	D3	D4
	###			
Small blood clots (= Dime)				
Large blood clots (≥ Quarter)				
Menstrual accidents				
Total Score:				

Figure II



IV. Results

Among 150 patients who presented to the Department of Obstetrics and Gynaecology at our hospital during the months of August, 2019 and September, 2019, 17 patients had evidence of uterine fibroids on abdominal/ transvaginal ultrasonography.

Table number 1: Shows features of the fibroids, duration of menstruation, PBLAC and pain score

Participant	Site of fibroid	Size of fibroid	PBLAC score	Pain score	Duration of menstruation
1	Intramural	2.5cm x 3cm	497	5	9
2	Intramural	3.9cm x 3.6cm	486	0	14
3	i. Intramural	5.9cm x 4.9cm	51	4	3
	ii. Intramural	4cm x 3.2cm			
	iii. Subserosal	2.9cm x 1.8cm			
4	Multiple Subserosal	5.8cm x 4cm (largest)	51	4	3
5	i. Subserosal	7mm x 6mm	630	5	7
	ii. Subserosal	7mm x 6mm			
	iii. Intramural	7mm x 6mm			
	iv. Subserosal	2.4cm x 1.1cm			
6	Intramural	50mm x 43mm	720	0	10
7	Multiple Intramural	5cm x 4cm (largest)	155	4	8
8	Intramural	3.6cm x 3.5cm	86	1	6
9	i. Intramural	7.2cm x 7.8cm	178	5	4
	ii. Subserosal	2.1mm x 1.2mm			
10	Intramural	3.1cm x 2.8cm	68	0	5
11	i. Intramural	12.9mm x 11mm	98	5	5
	ii. Subserosal	12mm x 10mm			
12	i. Intramural	3.7cm x 3.6cm	328	5	5
	ii. Intramural	2.6cm x 2.1cm			
	iii. Intramural	1.8cm x 1.4cm			
13	Multiple seedling fibroids	9mm x 7mm (largest)	27	0	3
14	Intramural	9.4cm x 5.9cm x 5.9cm	55	5	3
15	i. Intramural	4.6cm x 4.7cm	210	5	6

	ii. Intramural	0.7cm x 0.6cm			
16	Intramural	1cm x 1cm	320	4	13
17	Intramural	1.2cm x 1.6cm	61	0	4

Table II. Shows statistics of observed values

	Mean	Median	Mode
PBLAC Score	236.5	155	51
Pain Score	3.05	4	5

Table III: Shows site of observed fibroids

	Intramural only	Subserosal only	Multiple Intramural	Multiple Subserosal	Multiple Intramural and Subserosal
Number of Fibroids	9 (including 3 multiple intramural)	1 (including 1 subserosal)	3	1	4

The patients were in the age group 30 years to 48 years. None of the patients were nulliparous. It was also noted that patients with multiple fibroids showed that there was no relation with duration of blood loss or with the intensity of menorrhagia but all patients with multiple fibroids had a higher intensity of dysmenorrhoea on the pain scale (ranging between 4-5). There was also no relation between duration of menstruation and intensity of dysmenorrhoea.

The most common location of uterine fibroids observed was intramural. The maximum PBLAC score was 720 with an associated pain score of 0. The minimum PBLAC score was 27 with an associated pain score of 0.

The maximum PBLAC score recorded was 720 with an associated pain score of 0. The size of the fibroid was 50mm x 43mm. It was a single intramural fibroid. The duration of menstruation was 10 days. The biggest fibroid recorded was 9.4cm x 5.9cm (Intramural) with a PBLAC score of 55, an associated pain score of 5 and duration of menstruation of 3 days. The smallest fibroid recorded was 7mm x 6mm which were in multiple (3) in number and subserosal. PBLAC score was 630, associated pain score was 5 and duration of menstruation was 7 days. On observation of further parameters, the duration of menstruation was 3 days for the biggest fibroid recorded (9.4cm x 5.9cm - Intramural), 10 days for the smallest fibroid recorded (50mm x 43mm - Intramural) and 13 days for an intramural fibroid measuring 1cm x 1cm.

V. Conclusion

On analysing the procured data, there was no relation between the size of uterine fibroids and intensity of menorrhagia and dysmenorrhea. Both intramural and subserosal fibroids had variable patterns in the intensity of menorrhagia and dysmenorrhea. A similar study conducted in Glasgow, UK had concluded on the same lines⁶. It was also noted that patients with multiple fibroids showed that there was no relation with duration of blood loss or with the intensity of menorrhagia but all patients with multiple fibroids had a higher intensity of dysmenorrhoea on the pain scale (ranging between 4-5). There was also no relation between duration of menstruation and intensity of dysmenorrhoea.

VI. Keywords

Uterine fibroids, menorrhagia, dysmenorrhea, ultrasonography

References

- [1]. "Uterine fibroids fact sheet". *Office on Women's Health*. January 15, 2015. Archived from the original on 7 July 2015. Retrieved 26 June 2015.
- [2]. Global Burden of Disease Study 2013, Collaborators (5 June 2015). "Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013". *Lancet*. 386 (9995): 743–800. doi:10.1016/S0140-6736(15)60692-4. PMC 4561509. PMID 26063472.
- [3]. Sule Gokyildiz, Ergul Aslan, Nezihe Kizilkaya Beji, and Meltem Mecdi, "The Effects of Menorrhagia on Women's Quality of Life: A Case-Control Study," *ISRN Obstetrics and Gynecology*, vol. 2013, Article ID 918179, 7 pages, 2013.
- [4]. Latthe PM, Champaneria R, Khan KS. Dysmenorrhoea. *BMJ Clin Evid*. 2011;2011:0813. Published 2011 Feb 21.
- [5]. Duckitt K, Collins S. *BMJ Clin Evid*. 2008 Sep 18;2008. pii: 0805. Review. PMID: 19445802
- [6]. Sulaiman S, Khaund A, McMillan N, Moss J, Lumsden MA. *Eur J Obstet Gynecol Reprod Biol*. 2004 Jul 15;115(1):85-9. PMID: 15223171.

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