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STUDY OF PARENTERAL ANTIBIOTICS USED IN POST OPERATIVE FIBROID UTERUS IN THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

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ABSTRACT

Background: Uterine fibroids, or leiomyoma, are tumors or growths made of smooth muscle cells and other tissue in the uterus wall. They are the most common non-cancerous tumors in women of childbearing age. It can cause painful symptoms and abnormal bleeding from the uterus. Fibroids are located in certain parts of the uterus, such as the uterine cavity, can also make it difficult for a woman to get pregnant or maintain a pregnancy. Antibiotics are the more widely used drugs to prevent surgical site infections in gynaecology surgeries even though there was evidence of complication. The large exposure of antibiotic leads to high profile resistance which paved the way to high health care cost, lack of resources.

Objective: Study of parenteral antibiotics used in post operative fibroid uterus patients in the O&G department

Material method: Prospective observation study, all the patients admitted in O&G ward in RMMCH during in 4 month study period from October 2016 to January 2017 who has compliance with inclusion and exclusion criteria.

Results: The total number of 40 patients. Among the study population more patients with fibroid uterus were the under age group of 40-50 years. Mostly 35-50 years age women's were affected in the fibroid uterus. The majority of the parenteral antibiotics mostly prescribed in the antibiotic is a broad spectrum of antibiotic. Among this METRONIDAZOLE < CEFOTAXIM < AMPICILIN < GENTAMICIN < CEFTRIAXONE was prescribed. The comparisons of the mono therapy and combination therapy. The most of the patients treat with combination therapy 36 patients in 90 percentages. The monotherapy were is 4 patients in 10 percentages.

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INTRODUCTION

Uterine fibroids, or leiomyoma, are tumors or growths made of smooth muscle cells and other tissue in the uterus wall. They are the most common non-cancerous tumors in women of childbearing age. It can cause painful symptoms and abnormal bleeding from the uterus. Fibroids are located in certain parts of the uterus, such as the uterine cavity, can also make it difficult for a woman to get pregnant or maintain a pregnancy. Leiomyomas are the reason is one-third of all hospital admission to gynecology service and one of the

commonest indications for hysterectomy. Fibroid uterus are more common among nulliparous & obese women particularly ones the family history of the disease.

Common name: Uterine fibroids

Medical (or) scientific name: Uterine leiomyoma, myoma, fibroleiomyoma. While often asymptomatic, fibroids can result in abnormal uterine bleeding, pelvic pressure, pain, subfertility, dyspareunia, and other symptoms. Sub mucous and intramural fibroids are most associated with heavy

menstrual bleeding (HMB). subserosal fibroids are more often innocuous unless sufficiently large so as to contribute to bulk symptoms. Many fibroids contain elements of more than one fibroid type; that is, fibroids may have sub mucous and subserosal components and may be Transmural.

Types

- Pedunculated fibroid
- Intracavitary fibroid
- Intramural fibroid
- Subserosal fibroid
- Submucosal fibroid

Fibroids are most common benign female reproductive system tumour and remain the leading benign indication for hysterectomy in the USA. Between the years 1990 and 1997, the symptomatic leiomyomata uteri were the primary diagnosis in of all hysterectomies in the USA. In the UK, fibroids are the second most common indication for hysterectomy, as approximately 30% of annual hysterectomies are performed for fibroids. It is estimated that between 20-50 % of women reproductive age have fibroids, although not all are diagnosed. Some estimates state that up to 30-77 % women will develop fibroids sometimes during their childbearing age. Antibiotics are the more widely used drugs to prevent surgical site infections in gynaecology surgeries even though there was evidence of complication. The large exposure of antibiotic leads to high profile resistance which paved the way to high health care cost, lack of resources.

Symptoms

- Abdomen and pelvic pain
- Burning micturation
- Bleeding during the cycle
- Mass of abdomen
- Low back pain

Risk factors

- Obesity
- Polycystic ovary syndrome
- Diabetes
- Hypertension

Aim

To study the use of parenteral antibiotics in post operative fibroid uterus patients in obstetrics and gynaecology department.

Objective

- To observe the use and duration of parenteral antibiotics.
- To evaluate the type of surgery performed.
- To observe the mean length of hospital stay.

MATERIALS AND METHODS

Study design: Prospective observational study.

Study site: The study was conducted in the Department of Surgery, Rajah Muthiah Medical College. Annamalai

University. A 1260 bedded multispecialty tertiary care teaching hospital. Study design this research is a prospective observational study. Study period and duration. This study is conducted for 4 months period from October 2016 to January 2017.

Selection procedure: The patients admitted to the obstetrics and gynaecology wards and post-operative surgical care unit with problem of fibroid uterus.

Inclusion criteria

- Newly diagnosed cases of the fibroid uterus patients
- Patient with age above 18.

Exclusion criteria

- Patient who are admitted to intensive care unit
- Early discharge and treatment discontinuation.

Study population

All diagnosed cases of fibroid uterus patients admitted in O&G ward.

Data collection

- Patient's case record was evaluated to collect following data.
- Personal information: Name, age, address, education and occupation, socioeconomic status.
- Stress, alcohol, smoking and tobacco intake in any form

Test

- Ultrasonography
- Magnetic resonance imaging(MRI)
- CT scan
- X-ray

RESULTS

The result was obtained from 40 patients with fibroid uterus in O&G ward, who were enrolled in this study after fulfilment of above criteria and after obtaining other consent.

Table 1. Age wise distribution

S.no	Age	No of patients	Percentage
1	18-28	1	2.5
2	29-39	17	42.5
3	40-50	22	55
4	Above 50	Nil	Nil
	TOTAL	40	100

Among the study population, majority of patients with FIBROID UTERUS were the under the age group of 40-50 years. Mostly 35-50 years age women's were affected in the fibroid uterus. Among 40 patients comorbidity of the FIBROID UTERUS with SHT (systemic hypertension) was 8 patients in 20% people and FIBROID UTERUS with DM(diabetic mellitus) was 6 patients in 15% and FIBROID UTERUS with HYPOTHYROIDISM was 10 patients in 25% and FIBROID UTERUS with ANEMIA was 6 patients in 15% of the people.

Table 2. Comorbidities

S.no	Comorbidities	No of patients	Percentage
1	Systemic Hypertension	8	20
2	Diabetic Mellitus	6	15
3	Hypothyroidism	10	25
4	Anemia	6	15
5	Without	10	25
	Total	40	100

Table 3. Surgery methods

S.no	Surgery performed	No of patients	Percentage
1	Hysterectomy with salphigo ophactomy	12	30
2	Laparoscope with myomectomy	28	70
	total	40	100

Among the 40 patients, 28 patients were under gone surgical procedure LAPROSCOPE and 12 patients with HYSTERECTOMY.

Table 4. Parenteral antibiotics

S.no	Parenteral antibiotic	No of patients	Percentage
1	Cefotaxim	19	47.5
2	Metronidazole	30	75
3	Ampicillin	12	30
4	Gentamicin	10	25
5	Ceftriaxone	6	15

The majority of prescribed antibiotic is a broad spectrum of antibiotic. Among this Metronidazole < Cefotaxim < Ampicilin < Gentamicin < Ceftriaxone was prescribed.

Table 5. Combarision between mono & combination therapy

S.no	Therapy	No of patients	Percentage %
1	Mono Therapy	4	10
2	Combination Therapy	36	90
	Total	40	100

The comparisons of the mono therapy and combination therapy. The most of the patients treat with combination therapy 36 patients in 90 percentages. The monotherapy were is 4 patients in 10 percentages.

Table 6. Combination of antibiotic used in therapy

S.no	Combination of drugs	No of patients	Percentage
1	Cefotaxim + Metronidazole	16	40
2	Ampicillin + Gentamicin+ Metronidazole	9	22.5
3	Ampicillin + Metronidazole	11	27.5
4	Mono Therapy	4	10
	Total	40	100

Combination therapy which consists of dual and triple therapy of antibiotic and most of this combinational therapy were prescribed.

- Cefotaxime + metronidazole are the widely used combination therapy with 16 patients in 40% prescriptions.
- Secondly ampicillin+ Metronidazole were seen in 11 patients in 27.5% prescriptions.

- Next ampicillin + gentamicin + metronidazole were seen in 09 patients in 22.5% prescriptions.

Table 7. Duration of parentral antibiotic

S.no	Parentral antibiotic	Duration
1	Metronidazole	10
2	Ceftriaxone	7
3	Cefotaxim	7
6	Gentamycin	10
7	Ampicillin	7

In our study, parenteral antibiotics were continued for 7 days and after that oral antibiotics were given for 5 days. Usually ampicillin, metronidazole was given for 5-7 days.

Table 8. Other drugs

S.No	Drugs	No of patients	Percentage
1	Tramadol/ Paracetamol	40	100
2	Ranitidine	40	100
3	Fst/Vit-C	21	52.5
4	Calcium	26	65
5	Cap- Hems	28	70

The capsule HEMSI contains iron, amino acid, zinc with vitamins & minerals

- Non steroidal anti-inflammatory drugs (NSAIDs), which are not hormonal medications, may be effective in relieving pain related to fibroids, but they don't reduce bleeding caused by fibroids.
- Tramadol / paracetamol treat for pain,
- Ranitidine – anti ulcer agents,
- FST/VIT-C & CALCIUM – it's a vitamin supplements,
- Capsule – HEMSI contains iron, amino acids, zinc with vitamins & minerals.

Table 9. Duration of Hospital Stay In Days

S.no	No of patients	Mean length of hospital stay
1	Hysterectomy With Salphigo Ophactomy	10 DAYS
2	Laparoscope With Myomectomy	7 DAYS

The mean length of stay in hospital was 7-10 days.

DISCUSION

The study describes the parenteral antibiotics used in fibroid uterus patient's age wise distribution among the sample. The total number of patients 40. Among the study population more patients with fibroid uterus were the under the age group of 40-50 years. Mostly 35-50 years age women's were affected in the fibroid uterus. The majority of parenteral antibiotics prescribed are a broad spectrum of antibiotic. Among this METRONIDAZOLE < CEFOTAXIM < AMPICILIN < GENTAMICIN < CEFTRIAZONE was prescribed. Fibroids can result in abnormal uterine bleeding, pelvic pressure, pain, subfertility, dyspareunia, and other symptoms. Sub mucous and intramural fibroids are most associated with heavy menstrual bleeding (HMB). subserosal fibroids are more often innocuous unless sufficiently large so as to contribute to bulk symptoms. Many fibroids contain elements of more than one fibroid type; that is, fibroids may have sub mucous and subserosal components and may be transmural. Among 40

patients comorbidities of the FIBROID UTERUS with SHT (systemic hypertension) was 8 patients in 20% people and FIBROID UTERUS with DM(diabetic mellitus) was 6 patients in 15% and FIBROID UTERUS with HYPOTHYROIDISM was 10 patients in 25% and FIBROID UTERUS with ANEMIA was 6 patients in 15% of the people. The comparisons of the mono therapy and combination therapy. The most of the patients treat with combination therapy 36 patients in 90 percentages. The monotherapy were is 4 patients in 10 percentages

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- Tramadol / paracetamol treat for pain,
- Ranitidine – anti ulcer agents,
- FST/VIT-C & CALCIUM – it's a vitamin supplements,
- Capsule – HEMSI contains iron, amino acids, zinc with vitamins & minerals.

Conclusion

The study describes the parenteral antibiotics used in fibroid uterus patient's age wise distribution among the sample. The total number of patients 40. Among the study population more patients with fibroid uterus were the under the age group of 40-50 years. Mostly 35-50 years age women's were affected in the fibroid uterus. The majority of parenteral antibiotics prescribed are a broad spectrum of antibiotic. Among this METRONIDAZOLE < CEFOTAXIM < AMPICILIN < GENTAMICIN < CEFTRIAZONE was prescribed. Among 40 patients, 28 patients were under gone surgical procedure LAPROSCOPE and 12 patients with HYSTERECTOMY. The most of the patients treat with combination therapy 36 patients in 90 percentages. The monotherapy were is 4 patients in 10 percentages. Combination therapy which consists of dual and triple therapy of antibiotic and most of this combinational therapy were prescribed.

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REFERENCES

- ACOG practice bulletin, 2008. "Alternatives to hysterectomy in the management of leiomyomas," *Obstetrics and Gynecology*, vol. 112, no. 2, part 1, pp. 387–400, View at Google Scholar
- Agdi, M. and T. Tulandi, 2008. "Endoscopic management of uterine fibroids," *Best Practice and Research*, vol. 22, no. 4, pp. 707–716, View at Publisher · View at Google Scholar · View at PubMed
- Clevenger-Hoefl, M. 1999. C. H. Syrop, D. W. Stovall, et al., "Sonohysterography in premenopausal women with and without abnormal bleeding," *Obstetrics and Gynecology*, vol. 94, no. 4, pp. 516–520, View at Publisher · View at Google Scholar · View at Scopus
- Coad, J. 2005. "Thermal fixation: a central outcome of hyperthermic therapies," in *Thermal Treatment of Tissue: Energy Delivery and Assessment III*, T. P. Ryan, Ed., vol. 5698 of *Proceedings of SPIE*, pp. 15–22, Bellingham, Wash, USA.
- Day Baird, D. D. B. Dunson, M. C. Hill, et al., 2003. "High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence," *American Journal of Obstetrics and Gynecology* vol. 188, no. 1, pp. 100–107, View at Publisher · View at Google Scholar · View at scopus.
- Edozien, L. C. 2005. "Hysterectomy for benign conditions," *British Medical Journal*, vol. 330, no. 7506, pp. 1457–1458, View at Google Scholar · View at Scopus
- Edwards, R. D., J. G. Moss, M. A. Lumsden et al., 2007. "Uterine-artery embolization versus surgery for symptomatic uterine fibroids," *New England Journal of Medicine*, vol. 356, no. 4, pp. 360–370, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Emanuel, M. H. M. J. C. Verdel, and H. Stas, 1995. "An audit of true prevalence of intra-uterine pathology: the hysteroscopic findings controlled for patient selection in 1202 patients with abnormal uterine bleeding," *Gynaecological Endoscopy*, vol. 4, no. 4, pp. 237–241, View at Google Scholar · View at Scopus
- Farquhar, C. M. and C. A. Steiner, 2002. "Hysterectomy rates in the United States 1990–1997," *Obstetrics and Gynecology*, vol. 99, no. 2, pp. 229–234, View at Publisher · View at Google Scholar · View at Scopus
- Fennessy, F. M. and C. M. Tempany, 2006. "A review of magnetic resonance imaging-guided focused ultrasound surgery of uterine fibroids," *Topics in Magnetic Resonance Imaging*, vol. 17, no. 3, pp. 173–179, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Flynn, M., M. Jamison, S. Datta, et al., 2006. "Health care resource use for uterine fibroid tumors in the United States," *American Journal of Obstetrics and Gynecology*, vol. 195, no. 4, pp. 955–964, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Funaki, K., K. Sawada, F. Maeda, et al., 2007. "Subjective effect of magnetic resonance-guided focused ultrasound surgery for uterine fibroids," *Journal of Obstetrics and Gynaecology Research*, vol. 33, no. 6, pp. 834–839,

2007. View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Gabriel-Cox, K., G. F. Jacobson, M. A. Armstrong, et al., 2007. "Predictors of hysterectomy after uterine artery embolization for leiomyoma," *American Journal of Obstetrics and Gynecology*, vol. 196, no. 6, pp. 588.e1–588.e6, 2007. View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Hartmann, K. E., H. Birnbaum, R. Ben-Hamadi et al., 2006. "Annual costs associated with diagnosis of uterine leiomyomata," *Obstetrics and Gynecology*, vol. 108, no. 4, pp. 930–937, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Hesley, G. K. K. R. Gorny, T. L. Henrichsen, et al., 2008. "A clinical review of focused ultrasound ablation with magnetic resonance guidance: an option for treating uterine fibroids," *Ultrasound Quarterly*, vol. 24, no. 2, pp. 131–139, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Spies, J. B. 2002. K. Coyne, N. Guaou Guaou, et al., "The UFS-QOL, a new disease-specific symptom and health-related quality of life questionnaire for leiomyomata," *Obstetrics and Gynecology*, vol. 99, no. 2, pp. 290–300, View at Publisher · View at Google Scholar · View at Scopus
- Stewart, E. A. B. Gostout, J. Rabinovici, et al., 2007. "Sustained relief of leiomyoma symptoms by using focused ultrasound surgery," *Obstetrics and Gynecology*, vol. 110, no. 2, part 1, pp. 279–287, 2007. View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
- Stewart, E. A. Gedroyc, W. M. C. M. Tempany et al., 2003. "Focused ultrasound treatment of uterine fibroid tumors: safety and feasibility of a noninvasive thermoablative technique," *American Journal of Obstetrics and Gynecology*, vol. 189, no. 1, pp. 48–54, View at Publisher · View at Google Scholar · View at Scopus
- Sulaiman, S. 2004. A. Khaund, N. McMillan, et al., "Uterine fibroids—do size and location determine menstrual blood loss?" *European Journal of Obstetrics Gynecology and Reproductive Biology*, vol. 115, no. 1, pp. 85–89, View at Publisher · View at Google Scholar · View at PubMed
- Wise, L. A., J. R. Palmer, E. A. Stewart, et al., 2005. "Age-specific incidence rates for self-reported uterine leiomyomata in the Black Women's Health Study," *Obstetrics and Gynecology*, vol. 105, no. 3, pp. 563–568, View at Publisher · View at Google Scholar · View at PubMed · View at Scopus
