

## Analysis of Prescriptions Related to Female Disorders

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### ABSTRACT

In the present time the demand of gynecologists has been increasing with time as females are more prone to diseases related to reproductive organs and obviously pregnant females do need to visit gynecologist either they are diseased or not. Females do suffer from diseases related to reproductive organs. The recent study revealed that the maximum frequency of disease was found to be of menorrhagia, the combination of mefenamic acid and trenaxamic acid was prevalent, the female in 24-28 age group were found to be more prone to the diseases, the category NSAIDS was prescribed in most of the prescriptions followed by hormones therapy and approximately 160 prescriptions were found to be having different errors.

**Keywords:** Drugs, Errors, Prescription, Gynecology, Hormones therapy etc.

### INTRODUCTION

In the present time the demand of gynecologists has been increasing with time as females are more prone to diseases related to reproductive organs and obviously pregnant females do need to visit gynecologist either they are diseased or not. Females do suffer from diseases related to reproductive organs like:

**Amenorrhea:** lack of menstruation mainly caused by follicle-stimulating hormone deficiency, Hypergonadotropic hypogonadal ovarian failure, luteinizing hormone resistance etc<sup>1</sup>.

**Polycystic ovaries:** in which the sex hormones get out of balance. Normally, the ovaries make a tiny amount of male sex hormones (androgens). In PCOS (polycystic ovarian syndrome), they start making slightly more androgens. This may cause to stop ovulating, get acne, grow extra facial and body hair<sup>2</sup>.

**Urinary tract infection:** inflammation and discomfort is caused mainly by *Escherichia coli* and some other bacteria and fungi<sup>3</sup>.

**Infertility:** It may be caused by hormonal problems (failure to produce mature eggs, malfunction of hypothalamus, malfunction of pituitary gland) scarred ovaries, premature menopause, follicle problem<sup>4</sup>.

**Leucorrhoea:** In this disorder white vaginal discharge occurs which may be caused by infection, malignancy and imbalanced hormones. Leucorrhoea may occur during pregnancy due to increased blood flow in vagina due to increased estrogen level<sup>5</sup>.

**Menorrhagia:** Excessive loss of blood during menstruation mainly occurs in adolescent females and those women who

reach menopause and occurs due to imbalanced secretion of estrogen and progesterone<sup>6</sup>. **Anti partum hemorrhage:** Abnormal bleeding from womb before birth occurs mainly due to uterine atony, trauma, retained placenta, and coagulopathy<sup>7</sup>.

**Puerperal fever or childbed fever:** It is a bacterial infection contracted by women during childbirth or miscarriage. It can develop into puerperal sepsis, which is a serious form of septicemia. If untreated, it is often fatal<sup>8</sup>.

**Hyper emesis gravid arum:** Excessive vomiting during pregnancy caused mainly due to the hormonal changes of pregnancy, in particular, elevated levels of beta human chorionic gonadotropin encountered in the first trimester (often around 8 – 12 weeks of gestation), as HCG levels are highest at that time. Puerperal sepsis is caused by *haemophilus influenza*<sup>9</sup>.

**Infertility:** It is typically caused by fetal urinary tract abnormalities such as unilateral renal agenesis (Potter's syndrome), fetal polycystic kidneys, or genitourinary obstruction. Uteroplacental insufficiency is another common cause. Most of these abnormalities can also be detected by obstetric ultrasound. It may also occur simply due to dehydration of the mother, maternal use of angiotensin converting enzyme inhibitors, or without a determinable cause (idiopathic)<sup>10</sup>.

**Vaginitis:** Inflammation in vagina mainly caused due to fungal infection or infection of vulva and is most common in women with diabetes<sup>11</sup>.

**Dysmenorrhea:** These are generally of two types, primary and secondary. Primary dysmenorrhea is caused by excessive levels of prostaglandins, whereas secondary

dysmenorrhea is caused by a number of conditions like fibroids, sexually transmitted diseases, endometriosis, pelvic inflammatory disease, use of intra uterine device<sup>12</sup>.

Prescribing is a clinical skill that almost every physician practices regularly to transact the desired therapeutic goal. Correct prescription writing has a great influence on the fate of medicine therapy and health of patients. Irrational prescription of drugs is a common occurrence in clinical practice<sup>(13)</sup>. Since errors of prescribing are the commonest form of avoidable medication errors, it is the most important target for improvement<sup>14,15</sup>. Medication prescribing deficiencies are the most common cause of actual and potential adverse drug events<sup>14, 15, 16</sup>. Difficulties can arise at any part of the prescription process from the moment the prescriber makes the choice of drug treatment to the time the patient receives that treatment<sup>12,17</sup>. Incorrect prescribing, inadequate information given by the prescriber or the pharmacist and incorrect use of medicines by the patient can cause suffering to patients and expense to both patients and the community<sup>18-24</sup>. The magnitude of the problem may not be appreciated until a major adverse event happens. Therefore, it is important to monitor the performance of the system by paying attention to any problem that may arise<sup>25</sup>. The periodic evaluation of prescriptions can be a good tool to evaluate the rational use of drugs in terms of prescribing, dispensing and to evaluate patient understanding regarding drug usage<sup>26</sup>. Therefore in this study we planned to analyze the prescriptions related to female disorders and determine different types of errors in them.

## EXPERIMENTAL

The planned work can be divided into following steps:

**Step1:** 200 prescriptions were collected from gynecological department

**Step2:** The prescriptions were separated according to the diseases.

**Step3:** The prescriptions were divided according to age, diseases and drugs prescribed.

**Step4:** The prescriptions were analyzed on the following basis:

- Disease of patients.
- Number of drugs prescribed in prescriptions
- Combination of drugs prescribed in prescriptions.
- Prevailing diseases according to age group.

- The category of same drugs prescribed.
- Frequency of errors found in prescriptions.

## RESULT AND DISCUSSION

In the recent study, total 200 prescriptions were collected from gynecology department of a nursing home located in Moradabad. Prescriptions were analyzed related to following matters- study of commonly prevalent diseases, number of the drugs that were prescribed in the prescriptions, combination of drugs, prevailing diseases according to age group, category of the drugs used and errors in prescription.

### Study of commonly prevalent diseases

The maximum frequency of disease was found to be of menorrhagia (72.41%) followed by leucorrhoea (41.37%) and amenorrhoea (37.93%). The minimum frequency was of eclampsia, pre-eclampsia, puerperal sepsis, pyosalpingitis, vaginismus, and vaginitis. Reason behind occurrence of menorrhagia is may be hormonal imbalance, particularly estrogen and progesterone. This is most common in adolescents who recently began their menstruation and women who are getting close to menopause. Hormonal imbalance may also occur if there is a problem in the functioning of the ovaries, fibroids or noncancerous tumors of the uterus, miscarriage or ectopic pregnancy<sup>44</sup>, use of blood thinners like Aspirin, anticoagulants, intrauterine device (IUD), Pelvic inflammatory disease (PID)<sup>31</sup> and Other medical conditions, including thyroid disease<sup>43</sup> and bleeding or platelet disorders.

### How to control the problem

Medication treatment for menorrhagia may include one or more of the following:

Non steroidal anti-inflammatory drugs such as ibuprofen and naproxen to reduce the amount of blood loss and help in pain<sup>36,42</sup>.

Non-Hormone therapy can be used to correct hormonal imbalances that include mainly (tranexamic acid), a non-hormonal medication that promotes blood clotting<sup>47</sup>. Surgical treatment for menorrhagia may include one or more of the following:

### Dilation and curettage (D&C)

It involves dilating the cervix and scraping the lining of the uterus. Hysteroscopy- This is a procedure in which a long, thin scope is inserted into the uterus through the vagina and cervix. It allows the doctor to see and remove fibroids (a type of procedure called

myomectomy) or other growths that may cause bleeding<sup>29</sup>.

**Endometrial resection or ablation-** In this procedure, the lining of the uterus is removed or destroyed. After this procedure is done, it will not be possible to conceive a baby<sup>48</sup>.

### Hysterectomy

This is the surgical removal of the uterus and cervix. This procedure also makes it impossible to have a baby<sup>28</sup>.

Leucorrhoea was found to be the second most prevalent disease after menorrhagia. It may occur due to pregnancy, stress, unhygienic conditions, infections, douching, hormonal changes, vitamin B complex deficiency, sexually transmitted diseases (STDs), diet and disturbed menstruation etc<sup>(30)</sup>. Leucorrhoea may also appear before girl's first menstruation and increases during pregnancy because of the increased blood flow<sup>28</sup>.

### How to over control this problem

#### Medication

Antibiotics like ceftazidime, amoxicillin and doxycycline were generally prescribed in leucorrhoea because most of the women were having bacterial infections and STDs.

#### Non medicinal treatment of leucorrhoea

Genital hygiene is utmost necessary. Drink plenty of water which helps in flushing out the toxins from body, Do not unnecessary use powders and perfumes in the genital area. Do stress bursting exercises daily. Amenorrhoea was the third most prevalent disease as observed in the study and is generally classified into two types. Primary amenorrhoea (menstruation cycles never starting) may be caused by developmental problems such as the congenital absence of the uterus, failure of the ovary to receive or maintain egg cells<sup>32</sup>. Secondary amenorrhoea (menstruation cycles ceasing) is often caused by hormonal disturbances from the hypothalamus and the pituitary gland, from premature menopause or intrauterine scar formation<sup>45</sup>.

### How to overcome this problem

#### Medication

Combination of estrogen and progesterone is generally prescribed in amenorrhoea<sup>46</sup>.

#### Drugs usually prescribed in prescriptions

In the prescriptions collected, a total of 49 drugs were prescribed. Out of these the maximum times prescribed salt was mefenamic acid (65.30%) followed by

progesterone(63.26%),estrogen(51.02%),ethamsylate(40.81%). Mefenamic acid is an anti-inflammatory drug used in treatment of menorrhagia, cervical erosion and amenorrhoea. Over all description of the salts and number of times they are prescribed is mentioned in table number 2. Mefenamic acid was prescribed 64 times in the study conducted. It is a non-steroidal anti-inflammatory drug<sup>49</sup> used to treat pain, including menstrual pain, prescribed for oral administration. Mefenamic acid decreases inflammation, swelling and uterine contractions by inhibition of prostaglandin synthesis.

Pre-menstrual migraine headache prophylactically can be treated with treatment starting 2 days prior to the onset of flow or 1 day prior to the expected onset of the headache and continuing for the duration of menstruation<sup>41</sup>.

#### Progesterone

Progesterone was prescribed 62 times as observed in the study of prescriptions. It is a type of female hormone (progestin)<sup>50</sup>. This medication is similar to the progesterone that your body naturally makes and is given to replace the hormone when your body is not making enough of it. In women who are not pregnant and not going through menopause, this medication is used to restore normal menstrual periods that have stopped for several months<sup>38</sup> (amenorrhoea). Progesterone is also used as part of combination hormone replacement therapy with estrogens to reduce menopause symptoms (e.g. hot flashes).

#### Estrogen

Estrogen was prescribed almost 50 times. This medication is a female sex hormone<sup>52</sup>. They play an important role in both menstrual and estrous reproductive cycles. Like all steroid hormones, estrogens readily diffuse across the cell membrane<sup>53</sup>. Once inside the cell, they bind to and activate estrogen receptors which in turn modulate the expression of many genes. Additionally, estrogens have been shown to activate a G protein-coupled receptor, GPR30<sup>39</sup>.

#### Ethamsylate

Ethamsylate is a haemostatic agent.<sup>54</sup> It also promotes angioprotective and anti-platelet action.<sup>55</sup> It stimulates thrombopoiesis and their release from bone marrow. Haemostatic action is due to activation of thromboplastin formation on damaged sites of small blood vessels and decrease of PGI<sub>2</sub> (Prostacyclin I<sub>2</sub>) synthesis, it also facilitates platelet aggregation

and adhesion, that at last induce decrease and stop of hemorrhage. It also inhibits the effects of the prostaglandin mediated vasodilatation and increased capillary permeability, thereby reducing oedema secondary to capillary leakage. ethamsylate was prescribed 40 times<sup>56</sup>.

#### **Combination of drugs prescribed in prescriptions:**

Various salts were used in different combinations (e.g. estrogen +progesterone etc.) in the collected prescriptions. From the study of prescriptions it was found that the combination of mefenamic acid and tranexamic acid was prevalent (45.45%) and the combination of hormones (estrogen +progesterone) was also prevailing (43.63%). The statistics for the combination of salts and the frequency of time they are used is illustrated in table number 3. Mefenamic acid+ tranexamic acid was most commonly used in the prescriptions and was prescribed to the patients having disorders like menorrhagia, cervical dystocia and metorrhagia. Mefenamic acid & tranexamic acid acts by reducing menstrual pain and blood flow<sup>57</sup> by altering the production of prostaglandins which play an important role in menstruation<sup>58</sup>. These drugs are most effective if you start taking them just before the onset of bleeding. Mefenamic acid is a NSAID (non steroidal anti inflammatory drug)<sup>49</sup>. It is used as an anti inflammatory and anti pyretic drug<sup>35</sup>. It is mainly given orally to treat arthritis, headache, menstrual cramps, muscle ache, dental pain<sup>34</sup>. Tranexamic acid acts on the mechanisms in the uterine lining which control blood loss during menstruation<sup>60</sup>. Tranexamic acid is known to interact with drugs like factor VIII<sup>(61)</sup>. Estrogens are important in the development and maintenance of female urogenital system, and secondary sex characteristics. It is contraindicated in conditions like breast cancer, genital tract bleeding, thromboembolism, thrombophlebitis<sup>39</sup>. Estrogen is known to interact with drugs like alcohol, capreomycin, dapson, gresiofulvin, insulin, methyl prednisolone, northistrone, ritonavir, somatropin, thymomodulin. The adverse effects of estrogen are nausea, vomiting, alopecia, abdominal cramps, rashes, break through bleeding, spotting, and blotting. It should be used with caution in patients with breast lumps, cancer, diabetes, asthma, epilepsy, migrane headache, heart or kidney disease, jaundice. Higher strength doses may cause darkening of skin<sup>59</sup>. Progesterone is a sex hormone which is also known as

pregnancy hormone. It mainly acts on uterus with estrogen in order to prepare endometrium to receive fertilized ovum. Progesterone is used to treat abnormal uterine bleeding, breast and uterine cancers, as contraception and to treat amenorrhoea. It is contraindicated in vaginal bleeding, cancer, liver disease<sup>38</sup>. This combination of female hormones was prescribed in amenorrhoea, polycystic ovaries, post partum haemorrhage, polymenorrhoea, metorrhagia, dysfunctional uterine bleeding. These are given in order to treat the hormonal imbalance caused in the body by the above mentioned conditions.

#### **Prevalent diseases in different age groups:**

In 14-18 age group the common disease was menorrhagia which is generally thought to be caused by hormonal imbalance, particularly in estrogen and progesterone. This is most common in adolescents who recently began their periods<sup>12</sup>. In 19-23 age group polycystic ovaries was more common. A main underlying cause of this after analyzing the prescriptions may be is hormonal imbalance<sup>2</sup>. In age group 24-28 leucorrhoea is the common disease. From the study of prescriptions the main cause of this disease may be was found to be estrogen imbalance & genital infection<sup>(5)</sup>. In age group 29-33 oligohydramnios and amenorrhoea were more common. After the study it was found that may be due to lack of water and nutrients the pregnant females were dehydrated and that resulted in oligohydramnios<sup>27</sup>. Also in this age group some females were having other altered physiological conditions like imbalance in hormones, polycystic ovarian syndrome and pregnancy which were the main cause of amenorrhoea<sup>1</sup>.

In 34-38 age group female cervical dystocia and Chlamydia were more common. The reason for dystocia in this group was may be generally the age. In this age the tendency of cervix to expel out the baby decreases as compared to young female. In some cases it was also observed that the size of the baby was large which also caused this condition. From the study the reason for the female getting chlamydial infection was found to be sexually transmitted diseases<sup>62</sup>. The group 39-43 age female were more affected by dysfunctional uterine bleeding & after studying the prescriptions it was noted that progesterone imbalance and defects in local endometrial haemostasis in these female would be the reason of this condition<sup>28</sup>. In 44-48 age group menorrhagia and metorrhagia were more common. Female in this age group

generally suffered from hormonal imbalance would be related directly to these conditions<sup>6</sup>.

### Category of drugs

The salts prescribed were alienated as per their category. The category NSAIDS was prescribed in most of the prescriptions (92 times) and hormones were prescribed 88 times. Other categories prescribed were antibiotics (78 times), antifibrinolytics (70 times), proton pump blocker(44 times),anti protozoal (34 times),muscle relaxant(20 times).The data collected of the above discussion is described in table number 5. From the prescriptions studied it was found that Anti-biotics like doxycycline, ceftazidime, clavulanic acid etc. were prescribed in almost every prescription. Along with anti-biotics, anti-fibrinolytics were also prescribed many times because many of the female were having menorrhagia and cervical dystocia<sup>6</sup>. Another category of the drugs prescribed most of the times were hormones as most of the disorders in the study were due to imbalance in the hormonal concentration<sup>(59,38)</sup>. Study of the prescription also showed that NSAIDS (e.g. mefenamic acid) were also used many times to decrease the pain and inflammatory conditions<sup>49</sup>.

### Errors in the prescriptions

From the study conducted it was found that most of the prescriptions were having errors like:

dosage form not mentioned, duration not mentioned, frequency not mentioned, wrong spelling of the drugs (ceftazidine instead of caftazidime) strength of the drug not

mentioned, unauthorized abbreviations, same drugs of same category prescribed in the same prescription(eg-trenexamic acid and ethamsylate both are haemostatic agents yet prescribed in same prescription), hand writing unable to read and risk factor. From all of these the most frequent error was strength of the drug not mentioned which occurred in 136 prescriptions. Also 98 prescriptions were having handwriting unable to read and some were having wrong spelling of drugs and other type of errors. The frequency of errors in total prescriptions is described in table number 6.

### CONCLUSION

From the study undertaken it was found that most of the prescriptions were having one or more type of errors. Therefore there is a need to emphasize the legibility of prescription, correct spelling of drugs, authorized abbreviations and all other information of a prescription concerned with patient, prescriber and drugs to minimize occurrence of medication errors. Special attention is required regarding the composition of combination drug preparations mainly when prescribed by brand names.

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**Table 1: Percentage of Diseases found in the prescriptions**

Diseases	Frequency	%
Amenorrhea	22	37.93%
Ante partum hemorrhage	4	6.89%
Cervical erosion	4	6.89%
Cervicitis	4	6.89%
Chlamydia	4	6.89%
Dysfunctional uterine bleeding	4	6.89%
Dysmenorrhea	4	6.89%
Eclampsia	2	3.44%
Endometriosis	4	6.89%
Hyperemesis gravidarum	4	6.89%
Infertility	4	6.89%
Leucorrhoea	24	41.37%
Menorrhagia	42	72.41%
Metrorrhagia	4	6.89%
Oligohydramnios	4	6.89%
Polycystic ovaries	14	24.13%
Polymenorrhea	4	6.89%
Postpartum hemorrhage	4	6.89%
Pre-eclampsia	2	3.44%

Peurperal sepsis	2	3.44%
Pyosalpingitis	2	3.44%
Vaginismus	2	3.44%
Vaginitis	2	3.44%
Fibroidenoma breast	2	3.44%
Urinary tract infection	20	34.48%
Pain in pelvis +discharge	4	6.89%
Pregnant +fever	2	3.44%
Fever +white discharge	2	3.44%
Polymenorrhea	4	6.89%

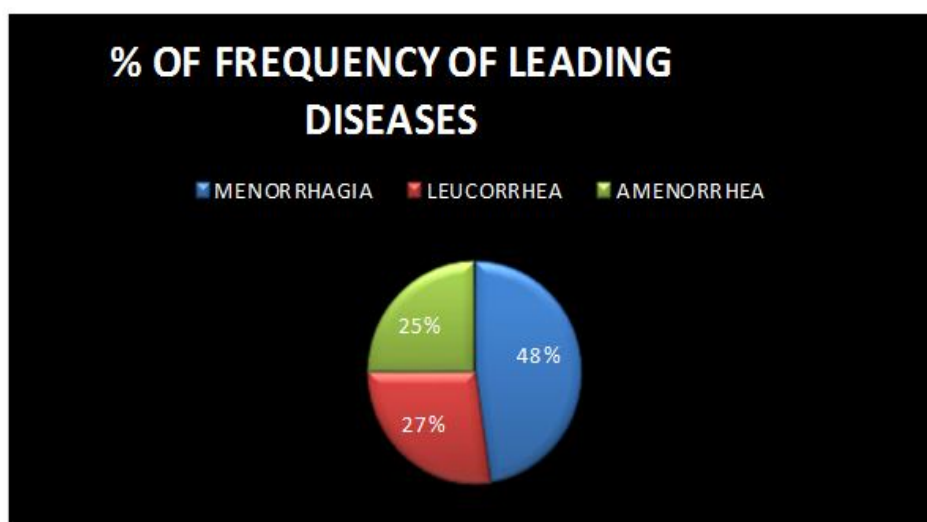


Fig. 1: Leading diseases found in the prescriptions

Table 2: Number of drugs prescribed in prescriptions

Drugs used	Frequency	%
Estrogen	50	51.02%
Progesterone	62	63.26%
Aceclofenac	28	28.57%
Ethamsylate	40	40.81%
Aspirin	4	4.08%
Doxycycline	30	30.61%
Ceftazidime	30	30.61%
Metronidazole	28	28.57%
Fluconazole	6	6.12%
Paracetamol	20	20.40%
Tinidazole	6	6.12%
Rabeprazole	12	12.64%
Mefenamic acid	64	65.30%
Drotaverine	4	4.08%
Hyoscine	4	4.08%
Butyl bromide	2	3.44%
Labetalol	2	3.44%
Furosemide	2	3.44%
Amoxicilline	6	6.12%
Antacid	2	3.44%
Danazol	6	6.12%
Doxillamine succinate	4	4.08%
Pyridoxine	2	3.44%
Ondansetron	6	6.12%
Clomiphene citrate	4	4.08%
HCG injection	4	4.08%

Omeprazole	28	28.57%
Trenexamic acid	10	10.20%
Methyl ergotamine maleate	4	4.08%
Prostanoic acid	4	4.08%
Methyl dopa	2	3.44%
Nandrolone decanoate	2	3.44%
Amikacin	2	3.44%
Ranitidine	8	8.16%
Clavulanic acid	2	3.44%
Nimesulide	4	4.08%
Serratiopeptidase	4	4.08%
Azithromycin	2	3.44%
Secnidazole	2	3.44%
Lactulose	2	3.44%
Ciprofloxacin	4	4.08%
Chlorzoxazone	2	3.44%
Fungal diastase	2	3.44%
Betamethasone	2	3.44%
Dicyclomine	2	3.44%
Dimethyl polysiloxane	2	3.44%
Chlorpheniramine	2	3.44%
Fluoxetine	4	4.08%
Domperidone	2	3.44%
Isoxsupreme HCL	2	3.44%

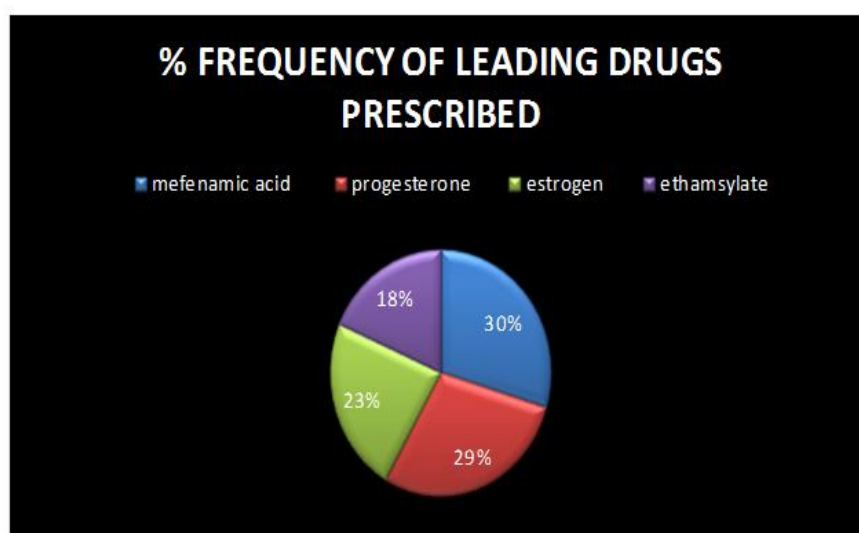


Fig. 2: Leading drugs prescribed

Table 3: Combination of drugs prescribed in prescriptions

Combination of drugs	Number of uses	Prescribed for Diseases	%
Estrogen+Progesterone	48	Amenorrhea, Polycystic ovaries, postpartum haemorrhage, polymenorrhea, metrorrhagia, dysfunctional uterine bleeding	43.63%
Estrogen + progesterone+proton pump blockers	46	Dysfunctional uterine bleeding, amenorrhea, polycystic ovaries	23.63%
Trenaxamic acid + mefenamic acid	50	Amenorrhea, metrorrhagia, cervical dystocia, menorrhagia	45.45%
Estrogen+progesterone+ethamsylate	4	Postpartum haemorrhage	3.63%
Cotrimazole+Tinidazole	6	Cervicitis, fever, white discharge	5.45%
Aceclofenac+Rabeprazole	8	Dysfunctional uterine bleeding, dysmenorrheal, amenorrhea	7.27%
Mefenamic acid + Drotaverine	4	Cervical erosion	3.63%
Hyoscine+Butyl bromide	4	Cervical erosion	3.63%

Labetalol+Furosemide	2	Eclampsia	1.81%
Amoxicilline+Antacid	2	Eclampsia	1.81%
Danazol	4	Endometriosis	3.63%
Doxylamine succinate +Pyrridoxine HCL	8	Hyperemesis gravidarum, amenorrhea	7.27%
Doxylamine succinate +Pyrridoxine HCL +Ondansetron	6	Hyperemesis gravidarum, amenorrhea	5.45%
Clomiphene citrate +HCG injection	4	Infertility	3.63%
Doxycycline+Ceftazidime	24	Leucorrhoea, cervicitis, Chlamydia	21.81%
Ceftazidime+Amoxicilline	24	Leucorrhoea	21.81%
Metronidazole+Cefixime	24	Leucorrhoea	21.81%
Trenaxamic acid +Mefanamic acid +Ethamsylate	42	Menorrhagia	38.18%
Estrogen+Progesterone+Trenaxamic acid +Mefanamic acid	4	Menorrhagia	3.63%
Methyl ergometrine maleate+Prostanoic acid	4	Post partum haemorrhage	3.63%
Methyl ergometrine maleate +Trenaxamic acid	4	Post partum haemorrhage	3.63%
Methyldopa+progesterone	2	Pre eclampsia	1.81%
Nandrolone decanoate	2	Pre eclampsia	1.81%
Minoxycycline+Metronidazole	2	Puerperal sepsis	1.81%
Minoxycycline+Amikacin	2	Puerperal sepsis	1.81%
Amoxicilline+Clavulanic acid	4	Puerperal sepsis +Amenorrhea	3.63%
Doxycycline+Metronidazole	2	Pyosalpingitis, vaginitis	1.81%
Doxycycline+Omeprazole	2	Pyosalpingitis	1.81%
Nitrofurantoin+Paracetamol	20	Urinary tract infection	18.18%
Estrogen+Progesterone+Dicyclomine	10	Amenorrhea	9.09%
Progesterone+Astymin drip	4	Oligohydromnios	3.63%
Drosperinov+Estrogen	4	Polycystic ovaries	3.63%
Estrogen+Progesterone+Fluoxetine	4	Polycystic ovaries	3.63%
Estrogen+Progesterone+Fluoxetine+Rabeprazole	2	Polycystic ovaries	1.81%
Doxycycline+Metronidazole	2	Vaginitis	1.81%
Nitrofurantoin+DicyclomineHcl+Mefanamic acid	18	Urinary tract infection	16.36%
Nimesulide+Serratiopeptidase	2	Leucorrhoea	1.81%
Azithromycin+Fluconazole+Secnidazole	2	Leucorrhoea	1.81%
Aceclofenac+paraceta-mol+ciprofloxacin	2	Leucorrhoea	1.81%
Chlorzoxazone+dicyclofenac+paracetamol	2	Amenorrhea	1.81%
Ranitidine+dicyclomine	2	Amenorrhea	1.81%
Doxycycline+serratiopeptidase	2	Amenorrhea	1.81%
Pantoprazole+ondansetron	2	Amenorrhea	1.81%
Serratiopeptidase+Cephalosporin	2	Leaking PLV	1.81%
Cephalexin+betamethasone	2	Pregnant +fever	1.81%
Clotrimazole+Tinidazole	2	Fever +white discharge	1.81%
Ranitidine+Dicyclomine	12	Menorrhagia	10.90%
Estrogen+Progesterone+tetracycline	4	Amenorrhea	3.63%
Dicyclomine+Dimethyl polysiloxane	2	Amenorrhea	1.81%
Doxycycline+ceftazidime	2	Leucorrhoea	1.81%
Doxycycline+Metronidazole	2	Leucorrhoea	1.81%
Doxycycline+Chlorpheneramine	2	Leucorrhoea	1.81%

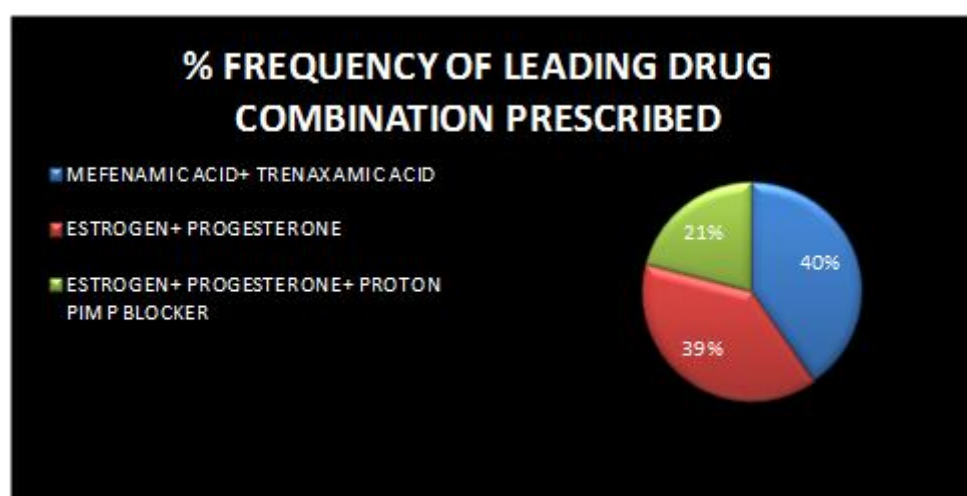


Fig. 3: Leading drug combination prescribed



**Table 4: Prevalent diseases according to age groups**

Age Groups	Diseases	Frequency of diseases
14-18	Dysmenorrhea	4
	Menorrhagia	36
19-23	Infertility	4
	Vaginismus	4
	Polycystic ovaries	12
	Amenorrhea	6
	Leaking pelvis+ Pain	4
24-28	Pregnant+ fever	2
	Amenorrhea	8
	Eclampsia	2
	Hyper emesis gravidarum	2
	Leucorrhoea	20
	Puerperal sepsis	2
	Pyosalpingitis	2
	Fibriodenoma	2
	Urinary tract infection	4
	Anti partum haemorrhage	2
	Cervicitis	2
	Menorrhagia	2
	Post partum haemorrhage	2
	Vaginitis	2
	29-33	Cervicitis
Chlamydia		2
Oligohydromnios		4
Post partum haemorrhage		2
Pre-eclampsia		2
Endometriosis		2
Vaginitis		2
Amenorrhea		4
Hyper emesis gravidarum		2
Fever+White discharge		2
34-38	Dysfunctional uterine bleeding,	2
	Cervical dystocia	4
	Chlamydia	4
	Cervical dystocia	2
39-43	Chlamydia	2
	Dysfunctional uterine bleeding	2
44-48	Polymenorrhea	2
	Leucorrhoea	2
	Amenorrhea	2
	Menorrhagia	4
	Metrorrhagia	4

**Table 5: Category wise prescribed drugs**

Drugs	Number of times used
Hormones	88
NSAIDS	92
Antibiotics	78
Antifibrinolytic agent(coagulant)	70
Proton pump blocker	44
Histamine antagonist	10
Ovulation inductor	4
Antiprotozoal	34
Muscle relaxant	20
Uterine stimulant	6
Non opioid analgesic	12
Anthelmentic	8
Corticosteroid	4
Tricyclic antidepressant	4
Anti emetic	12
B-blockers	8
Diuretic	4
Urinary antiseptic	4
Anabolic agents	4
Antifungal	4

Prostaglandins	4
Anticholinergic agents	4
Vasopressor agents	2

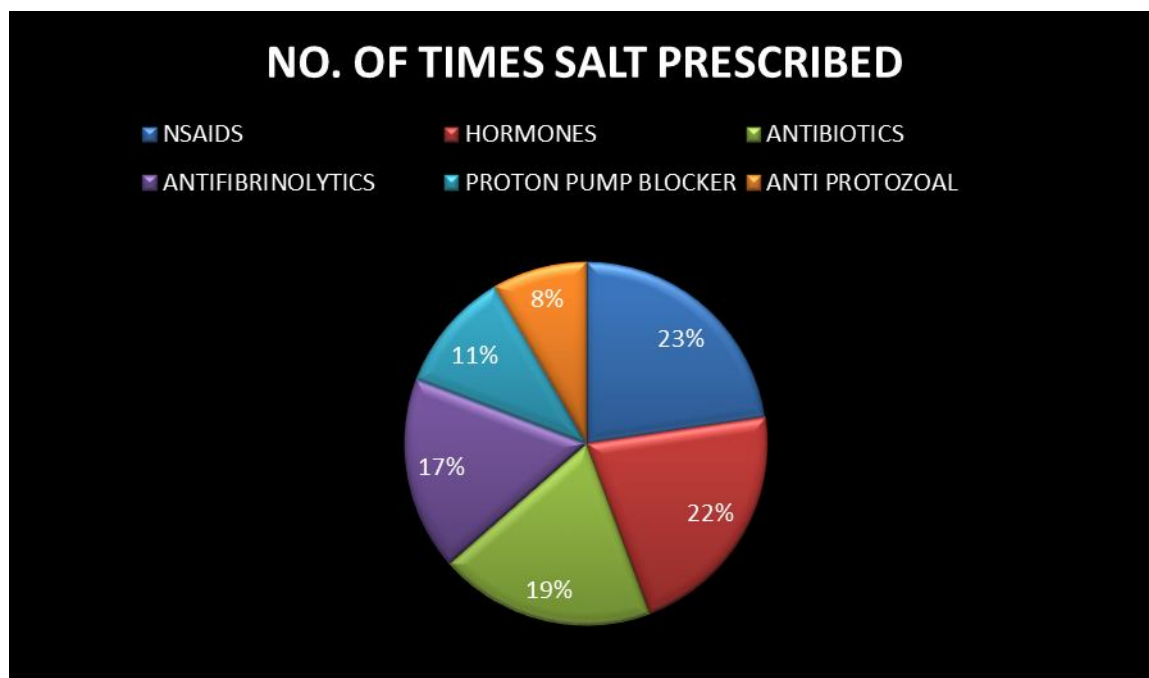


Fig. 4: Frequency of salt prescribed

Table 6: The frequency of errors found in total prescription

Type of errors	Number of errors	% of errors
Dosage form not mentioned	48	24%
Duration not mentioned	30	15%
Frequency not mentioned	26	13%
Wrong spelling of drugs	84	42%
Strength of drug not mentioned	136	68%
Unauthorised abbreviations	32	16%
Two same drugs of same category prescribed in the same prescription	46	23%
Hand writing unable to read	98	49%
Risk factors	63	31.5%

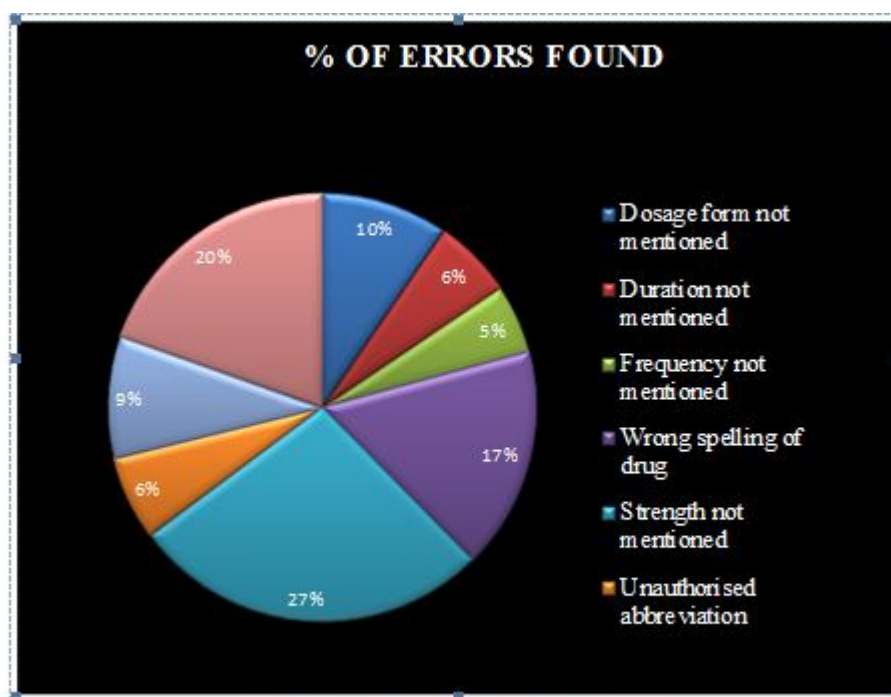


Fig. 5: Errors found in the prescriptions

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