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PRESCRIBING PATTERN OF DRUGS IN DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY IN A TERTIARY CARE HOSPITAL

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Abstract

Objective: To analyze the prescribing pattern of the drugs in Department of Obstetrics and Gynaecology in a tertiary care hospital.

Methods: This is a cross sectional study conducted in the Department of Pharmacy, Pondicherry Institute of Medical Sciences (PIMS), Puducherry. Three hundred and thirty four prescriptions from Obstetrics & Gynaecology outpatient department were collected and analyzed. The study duration was three months (July- August 2014). The prescriptions were analyzed using World Health Organization core prescribing indicators.

Results: A total of 392 prescriptions were assessed and 739 drugs were prescribed. The average number of drugs per prescription was 1.89. The total of number of drugs prescribed by generic name was 166 (22.46%). Out of the 392 prescriptions, 113 prescriptions (28.83%) had an antibiotic prescribed in them. An injection was prescribed in 23 prescriptions (5.87%). 641 drugs (86.74%) prescribed were on the essential drug list 2014 of India. The most commonly prescribed drugs were iron + folic acid (20.16%) and calcium + Vitamin D (16.64%). Most commonly prescribed antibiotics are clotrimazole and clindamycin combination (24.09%) and albendazole (15.33%).

Conclusion: The average number of drugs per prescription was 1.89 and most drugs are prescribed by brand names.

Keywords: Prescription pattern, Obstetrics and Gynaecology, WHO prescribing indicators.

Introduction: Irrational prescribing is a global problem. Bad prescribing habits lead to ineffective and unsafe treatment, exacerbation or prolongation of illness, distress and harm to the patient, and higher costs. In teaching hospitals, new graduates will copy them, completing the vicious circle. Changing existing prescribing habits becomes very difficult.¹

The rational use of drugs requires that ‘patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time, at the lowest cost to them and their community’.²

Another practice that has to be followed is, prescribing from National List of Essential Medicines of the each country. ‘Essential drugs are those that satisfy the health care needs of the majority of the population; they should therefore be available at all times, in adequate amounts and in the appropriate dosage forms’.³

The introduction of the manual ‘How to investigate drug use in Health facilities (WHO, 1993)’, following the collaboration of the International Network for the Rational Use of Drugs (INRUD) and the WHO Essential drugs and medicines policy department (WHO – EDM) provided a methodology for obtaining objective and reproducible measures of the effectiveness and efficiency of drug use. Assessment of drug use patterns with the WHO drug use indicators is becoming increasingly necessary to promote rational drug use in developing countries.^{4,5}

When it comes to patients in the Department of Obstetrics and Gynaecology more emphasis has to be given as a minor mistake can lead to congenital malformations in the fetus. Considering the vital role of prescribing practices in OB-GYN practice, the present study was conducted to study prescribing pattern of drugs in OB-GYN outpatient prescriptions.

The prescription audit studies have been conducted in diverse settings like outpatients and inpatients in hospitals, hospital pharmacy, and retail medical stores in the community, private medical practitioners, and so on.⁶ Studies have also been done on prescription pattern of various disease states during pregnancy. Very few studies have been done so far to assess the Obstetrics and Gynaecology practice, the present study was conducted to study prescription pattern of drugs in Obstetrics and Gynaecology outpatient.

Objective: To analyze the prescribing pattern of the drugs in accordance to WHO core drug prescribing indicators in a tertiary care hospital.

Methods:

- Cross sectional observational study.
- Sample size: 392 prescriptions (outpatients).
- Place: Department of Pharmacy, Pondicherry Institute of Medical Sciences (PIMS).
- Duration: 3 months. (July – September 2014)

- The prescriptions were analysed using WHO core prescribing indicators

WHO prescribing indicators:⁷

1. The average number of drugs prescribed per encounter was calculated to measure the degree of polypharmacy. It was calculated by dividing the total number of different drug products prescribed by the number of encounters surveyed. Combinations of drugs prescribed for one health problem were counted as one.

2. Percentage of drugs prescribed by generic name is calculated to measure the tendency of prescribing by generic name. It was calculated by dividing the number of drugs prescribed by generic name by total number of drugs prescribed, multiplied by 100.

3. Percentage of encounters in which an antibiotic was prescribed was calculated to measure the overall use of commonly overused and costly forms of drug therapy. It was calculated by dividing the number of patient encounters in which an antibiotic was prescribed by the total number of encounters surveyed, multiplied by 100.

4. Percentage of encounters with an injection prescribed was calculated to measure the overall level use of commonly overused and costly forms of drug therapy. It was calculated by dividing the number of patient encounters in which an injection was prescribed by the total number of encounters surveyed, multiplied by 100.

5. Percentage of drugs prescribed from an essential drug list (EDL) was calculated to measure the degree to which practices conform to a national drug policy as indicated in the national drug list of India. Percentage is calculated by dividing number of products prescribed which are in essential drug list by the total number of drugs prescribed, multiplied by 100.

Statistical methods:

Data are expressed as descriptive statistics.

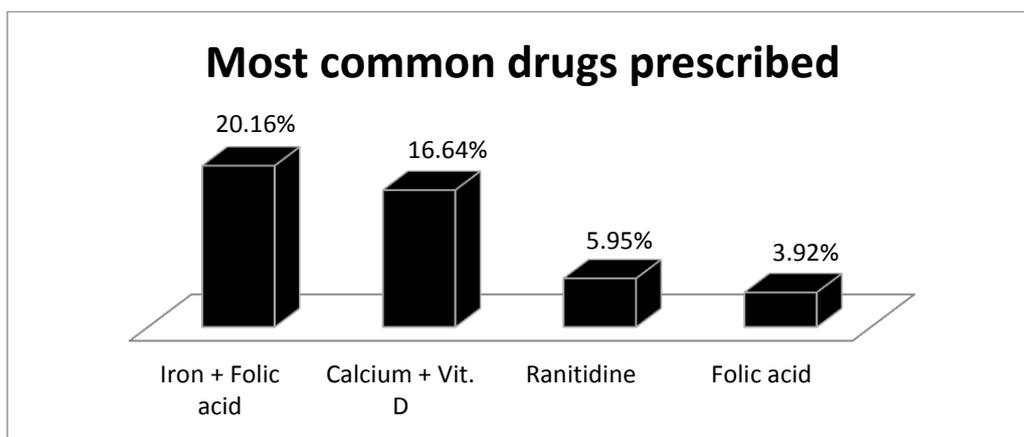
Results:

A total of 392 prescriptions were assessed. A total of 739 drugs were prescribed out of the 392 prescriptions. The average number of drugs per prescription was 1.89. The total of number of drugs prescribed by generic name was 166 (22.46%). Out of the 392 prescriptions, 113 prescriptions (28.83%) had an antibiotic prescribed in them. An injection was prescribed in 23 prescriptions (5.87%). 641 drugs (86.74%) prescribed were on the Essential Medicines List 2014 of India. 233 prescriptions had a Fixed Dose Combination (FDC) prescribed in them, giving an incidence of 59.44%.

Table 1:

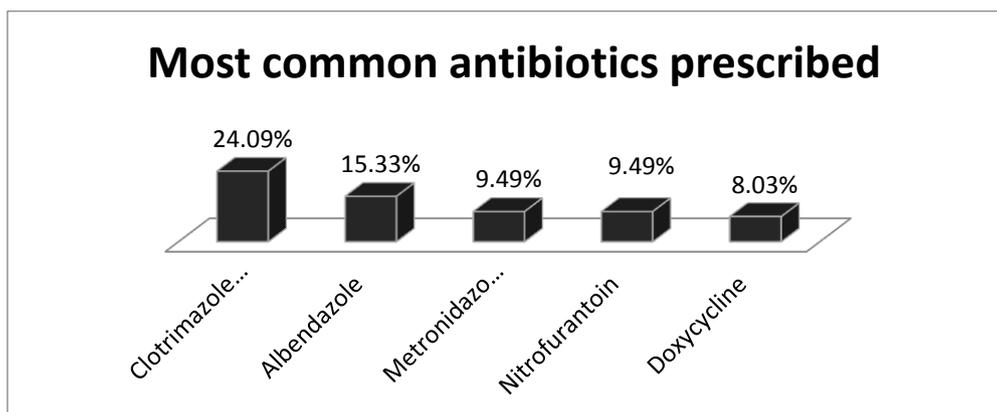
Prescribing indicators	Total number of drugs/encounters (n)	Average/percent	Standard derived
Average number of drugs per encounter	739	1.89	1.6-1.8
Percentage of drugs prescribed by generic	166	22.46%	100%
Percentage of encounter with antibiotics	113	28.83%	20.0%-26.8%
Percentage of encounters with injection	23	5.87%	13.4%-24.1%
Percentage of drugs from essential drug list	641	86.74%	100%
Percentage of encounters with FDC	233	59.44%	-

Figure 1:



Out of the 739 drugs prescribed, the commonest drugs prescribed were iron + folic acid combination 149 (20.16%), calcium + Vit. D combination 123 (16.64%), ranitidine 44 (5.95%) and folic acid 29 (3.92%).

Figure 2:



Of the 739 drugs prescribed 137 were antibiotics, 18.53%. The commonest antibiotics prescribed in the outpatient department of obstetrics and gynaecology were clotrimazole+clindamycin combination 33 (24.09%), albendazole 21 (15.33%), metronidazole and nitrofurantoin both each 13 (9.49%) and doxycycline 11 (8.03%).

Discussion:

Of the 392 prescriptions, the average number of drugs per prescription is 1.89, which is comparable with the standard (1.6-1.8).⁷ In a study done by Sunil Karande et al⁸ in Mumbai, India the value was 2.9, which is high when compared to the present study and the standard value. In another study done by Pushpendra Sharma et al⁹ in Jammu & Kashmir the value was 2.53, which also high when compared to the present study. The study done by Desalegn⁷ in Ethiopia showed a similar result of 1.9.

In the present study the percentage of drugs prescribed by generic name was only 22.46%, which is very low when compared to the standard value which is 100%.⁷ In a similar study done by Pushpendra Sharma et al⁹ in Jammu & Kashmir the value was much lower, 5.13% and the study done by Sunil Karande et al⁸ in Mumbai, India showed a higher value, 73.4%, than the present study. Desalegn⁷ in his study reported the percentage of drugs prescribed by generic name was 98.7%, which is almost similar with the standard value.

In the present study the percentage of encounters with an antibiotic prescribed was 28.83%, which is almost similar to the standard value (20.0%-26.8%).⁷ Sunil Karande et al⁸ in his study reported a high value of antibiotic usage, 39.6%. The result from our study shows that there is no overuse of antibiotics, which may in turn help in preventing development of resistant organisms.

In the present study the percentage of encounters with an injection prescribed was 5.87%, which is low when compared to the standard value (13.4%-24.1%).⁷ Desalegn⁷ in his study reported a very high value of injection usage, 38.1%, which is high when compared to the present study and the standard value. The possible reason for low usage of injections in the present study could be: 1) injections are very expensive compared to other dosage forms and 2) requirement of trained personnel for administration.⁷

The percentage of drugs prescribed from Essential Medicines List, 2014 India was only 86.74% which is low when compared to the standard which is 100%.⁷ Two other studies done by Desalegn⁷ in Ethiopia and Sunil Karande et al⁸ in Mumbai showed high values 96.6% and 90.3% respectively, which were comparable to the standard value. The result of the present study shows that the physicians have to be encouraged to prescribe from the Essential Medicines

List, 2014 India. The interns should be educated about the importance of prescribing from the Essential Medicines List, 2014 India and it has to be ensured by the senior faculty that this routine is being practised.

In the present study, most commonly prescribed drug was iron + folic acid combination 20.16%. The reason for this is that majority of the patients attending obstetrics and gynaecology outpatient clinic are antenatal mothers.

The most commonly prescribed antibiotic in the present is clotrimazole + clindamycin combination, 24.09%. This combination is used to treat bacterial vaginitis.

Conclusion:

In the present study the average number of drugs prescribed was 1.89. Majority of the drugs were prescribed by brand name. And drugs prescribed from Essential Medicines List were less compared to standard. The clinicians of the concerned department should be presented with the results of the study and should be encouraged to prescribe drugs using generic names. The hospital formulary can be kept as the guideline for prescribing drugs which will ensure safe and effective drugs being prescribed.

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