

Short communication

Deficiencies in medical prescriptions in a Sudanese hospital

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أوجه القصور في الوصفات الطبية في مستشفى سوداني

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الخلاصة: تم في إطار هذه الدراسة تقييم جودة الوصفات الطبية في مستشفى جامعة الرباط، في الخرطوم، من خلال تحري أخطاء الأطباء في هذه الوصفات الطبية. فقد تم، عشوائياً انتقاء ألف وصفة طبية، ومراجعتها للوقوف على مدى استيفائها وسهولة قراءتها. وكان إجمالي عدد الأطباء المسؤولين عن كتابة هذه الوصفات 46 طبيباً. وقد لوحظ أنه في 18.8٪ فقط من هذه الوصفات تم تدوين اسم المريض بالكامل، ولم يدوّن اسم الطبيب بالكامل إلا في 6.7٪ منها. وبلغت نسبة الوصفات التي دُوّنت فيها الأسماء الجينية (غير المحددة الملكية) للأدوية 19.5٪ كما لم يتم تحديد كمية الدواء في 59.7٪ من الوصفات، ولم تُذكر مدة المعالجة في 25.7٪ منها، وكانت 15.8٪ من هذه الوصفات الطبية صعبة القراءة. وخلصت الدراسة إلى وجود أوجه قصور خطيرة في نوعية كتابة الوصفات الدوائية من قِبَل أطباء المستشفى.

ABSTRACT We determined the quality of medical prescription in Ribat University Hospital, Khartoum through detecting errors in doctors' prescriptions. We randomly selected 1000 medical prescriptions and checked them for completeness and legibility. The total number of doctors responsible for writing the prescriptions was 46. The patient's full name was written on only 18.8% of prescriptions and that of the doctor on only 6.7%. In only 19.5% of prescriptions were drugs prescribed by their generic names, 59.7% lacked the quantity of the drug, 25.7% lacked the duration of treatment and 15.8% were difficult to read. The quality of drug prescriptions written by our hospital doctors is seriously deficient.

Faiblesses de la prescription médicale dans un hôpital soudanais

RÉSUMÉ Nous avons déterminé la qualité de la prescription médicale à l'hôpital universitaire Ribat de Khartoum en détectant les erreurs dans les ordonnances des médecins. Nous avons sélectionné au hasard 1000 ordonnances médicales et avons contrôlé leur complétude et leur lisibilité. Le nombre total de médecins responsables de la rédaction des ordonnances était de 46. Le nom complet du patient était inscrit sur seulement 18,8 % des ordonnances et celui du médecin sur seulement 6,7 %. Les médicaments étaient prescrits sous leur nom générique dans seulement 19,5 % des ordonnances ; 59,7 % ne mentionnaient pas la quantité de médicament, 25,7 % ne comportaient pas la durée du traitement et 15,8 % étaient difficiles à lire. La qualité des prescriptions médicamenteuses rédigées par les médecins de l'hôpital est gravement déficiente.

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Introduction

Drug prescription is the end product of most medical consultations. Despite the importance of good quality prescriptions, erroneous prescribing habits are not uncommon worldwide [1,2].

Recently, drug prescription has become increasingly important in Sudan. There is an accelerating shift toward modern, drug-demanding medical practice. There have also been recent changes in patterns of diseases that affect the Sudanese population, with increasing numbers of cases of non-communicable diseases that require lifelong drug treatment.

For several reasons, current methods of medical prescribing suffer deficiencies. There is a lack of knowledge in clinical pharmacology among doctors and students. Clinical pharmacology and therapeutics are poorly taught in our schools, and there are only a few teachers specializing in, or even interested in, such subjects. Hospital pharmacists play no role in advising doctors, they only store and dispense drugs. We lack national guidelines on prescribing for chronic diseases, or even emergencies.

There is now a huge range of drugs available on the market. Along with the unbalanced, and often persuasive, information on drug treatment, this exerts unnecessary pressure on patients and their relatives.

The aim of this study was to determine the quality of medical prescription in a university hospital through detecting the errors in the doctors' prescriptions.

Methods

The study was done in Ribat University Hospital, Khartoum, which serves as a training centre for the medical students of Ribat University. The hospital has 230 beds

and covers all the major, and most of the minor, specialties. Our study was done over the first 4 days of October 2003. We randomly selected 1000 medical prescriptions (snap-shot study). These sample prescriptions were investigated using a checklist for the following items: date, full name, sex, age, diagnosis, generic name of drug, drug dosage and instructions for use, duration of treatment, legibility of handwriting, and name, signature and department of the doctor. Although the doctors were not informed of all methods of prescription analysis, they were assured of the confidentiality of our study.

Results

The total number of doctors responsible for writing the prescriptions was 46. The patient's full name (3 names required) was written on 188 prescriptions (18.8%) whereas the full name of the prescriber was present on only 67 (6.7%). The prescriber's signature was absent in 46 prescriptions (4.6%). The mean number of drugs per prescription was 3.0 (standard deviation 1.4). In only 195 prescriptions (19.5%) were drugs prescribed by their generic names. One hundred and fifty eight prescriptions (15.8%) were poorly written (difficult to read).

Other information lacking on the prescriptions included:

- quantity of drug: 597 (59.7%)
- duration of treatment: 257 (25.7%)
- diagnosis: 940 (94.0%)
- date: 112 (11.2%)
- department: 854 (85.4%)
- instructions for use: 181 (18.1%)
- age: 935 (93.5%).
- sex: 943 (94.3%).

Discussion

Our study clearly indicates that the quality of drug prescribing among the hospital doctors in this study had serious deficiencies in comparison with studies done elsewhere [3–5].

It is clear that our doctors are not used to including certain information that is normally considered a requirement for medical prescriptions, such as age, sex, diagnosis, full name and department of prescriber. In many hospitals, even the officially stamped prescription forms lack specific fields for these items. The acquiescent stance of pharmacists may underlie this practice: they are used to accepting prescriptions on plain paper, or even on the oral request of patients. Their role should be rather to raise the awareness of doctors towards upgrading their prescribing skills; in any event, pharmacists should not accept incomplete prescriptions.

On the prescriptions we studied, doctors rarely wrote the generic names of drugs (19.5%). Some studies from other countries have reported much higher figures (up to 90% of prescriptions) giving the generic name [3–5]. This practice may debar patients from benefitting from differences in drug prices and side-effects. The use of generic names should be encouraged as it leads to the dispensing of the appropriate product (unless there is a problem of drug availability, in which case the patient should receive the specified product).

One of the prescription problems in our study was that doctors paid little attention

to the instructions for drug use, which leads to poor compliance. Instead of using plain Arabic that the patient can understand, they used Latin abbreviations such as *bd* (twice a day) or *tds* (3 times a day), or figures such as 1×2 or 2×4 , or mixed English and Arabic. On the other hand, the term “as directed” should be avoided because patients tend to forget oral instructions. The instructions should be written on the label of the container by the dispensing pharmacist.

Our findings lead to the clear conclusion that drug prescribing is a neglected art in our medical practice. We suggest further studies need to be carried out to highlight the situation in health units at a lower level, such as primary health care units, and also the private sector. Teaching and training methods for students and doctors need to be revised to improve their theoretical knowledge and prescribing skills. The issuing of guidelines for prescribing for chronic diseases and emergencies should be encouraged. At the hospital level, unit consultants should be aware whether their juniors are acquainted with the action, dosage and side-effects of at least the commonly used drugs. The hospital should provide standard prescription forms with all the necessary fields for the identification of both patient and doctor, as well as the legally required items, ready to fill in.

This is the first study of its type in our hospital. We hope that it will initiate debate and a review of prescribing habits in the medical community in Sudan.

References

1. Blatt A, Chamban R, Lemardeley P. *Forme légale et coût des prescriptions à l'Hôpital Central de Yaoundé, Cameroun* [Legal format and costs of prescriptions at the Central Hospital in Yaounde, Cameroon]. *Medecine tropicale*, 1997, 57(1):37–40.

2. Francois P et al. Evaluation of prescription-writing quality in a French university hospital. Clinical performance and quality health care, 1997, 5(3):111-5.
3. Gregory DA. Prescription writing by general practitioners. British medical journal, 1987, 295(6596):478-9.
4. Balbaid OM, Al-Dawood KM. Assessment of physician prescribing practices at Ministry of Health hospitals in Jeddah city, Saudi Arabia. Saudi medical journal, 1998, 19(1):28-35.
5. Alexander N, Goodwin JS, Currie C. Comparison of admission and discharge medications in two geriatric populations. Journal of the American Geriatrics Society, 1985, 33(12):827-33.

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