

Drug Information Retrieval among Surgeons: Overlooked or Axiomatic?**Gabriel Rodrigues^{1*} & Sohil Ahmed Khan²**¹ Department of General Surgery, Kasturba Medical College, Manipal University, Karnataka India² Department of Pharmacy Practice, Manipal College of Pharmaceutical Sciences, Manipal University, Karnataka, India**Citation:** Rodrigues G* & Khan SA. **Drug Information Retrieval among Surgeons: Overlooked or Axiomatic?** Archives of Pharmacy Practice. 2010;1(2), pp 3-4.**Introduction**

With the passage of time and the innovations in the field of medicine the drug literature is expanding massively and getting complex due to its inter-disciplinary and inter-professional nature. The accelerating pace of change in medicine stems from a progression of scientific information and the need to blend this information into the art and practice of medicine. Particularly speaking in context of surgery the access and retrieval of drug information is a very critical issue. It is seen that with the passage of time the drug information process for the surgeons has become more complex than the past. Hospitals and professional bodies require a culture that supports surgeons in their quest for knowledge, and provides the technological and educational environment in which they can promote evidence-based surgery [1]. In addition the identification of clinical problems and critical appraisal of the literature need to be taught either by incorporating its components in the curriculum or by organizing Continuous Medical Education (CME) Sessions which will help in making the drug information process more robust.

History Of Drug Information

The term drug information developed an identity in the early 1960s. The first drug information center was opened at the University of Kentucky Medical Center in 1962. An area separated from the pharmacy was dedicated to provide drug information. This centre was shortly followed by several other drug information centers in the US, UK, Canada and Australia. Different approaches to providing drug information services included decentralizing pharmacists in the hospital, offering a clinical consultation service and providing services for a geographic area through a regional center. The first formal survey conducted in 1973 identified 54 pharmacist-operated centers in the United States [6]. Given the ever-increasing patient load, the increasing demand for better healthcare delivery with decreasing cost expenditure on health services the usage of effective drug information by the surgeons are

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relevant in developing countries like Pakistan, India and other countries of the South east Asian region and African continent. As compared to the western scenario the eastern globe seems still in its infancy with respect to well equipped drug information centers (DICs) [7].

Drug Information: Basic Facts Among Surgeons

Focal purpose for drug information among the surgeons includes better patient care, continuing medical education, curiosity, patient education, medicolegal purpose, academic teaching, research and publication. Major barriers in accessing drug information by the surgeons includes location of their practice (rural vs. urban set-up), isolation from medical schools, computer illiteracy, rural environment, isolation from libraries, lack of drug information resources, isolation from conferences and expert colleagues apart from time constraint due to busy surgical practice [2]. Creating a culture of evidence based surgery forms the priority for an effective patient care. In other word it will be better to say that drug information constitutes the pillar of evidence based knowledge which will affect the process of patient care in the end. For the fulfillment of this essential part of the patient care process surgeons do need assistance from the personals that are well trained and familiar with the process of drug information i.e Clinical Pharmacist. Clinical Pharmacists can play a crucial role as they possess the expertise in provision of drug information for rational drug use. Numerous studies show a positive impact of their presence in surgical units [3, 4]. Surgical patients may be at risk for medication discrepancies that lead to medication errors which can be life threatening. In a typical surgery the team members involved in the surgery handles the patient information in their own way. The anesthesiologist and the surgeon write separate preoperative medications and patient histories, which further increases the risk of medication discrepancies for the patient [5]. Incorporation of the clinical pharmacist as an essential team member in surgeries will not only reduces the risk of medication errors but it will also help in reducing the number of drug related problems in post operative patients confounded in the surgery wards.

Potential focal areas where clinical pharmacist can provide drug information to surgeons are;

(1) Rational use and cost affective selection of antimicrobial agents according to the therapeutic guidelines [8].

(2) One of the overlooked issues is the appropriate use of **prophylactic antibiotics** in surgery. There are numerous studies which show irrational prescription for

prophylactic antibiotic. The major reasons include non-adherence to clinical guidelines, reluctance in following evidence based approach to name a few [9]. Selection of correct antibiotic with presumed pathogen for the type of surgery along with adequate duration is the basic issues to be looked in.

(3) Basic information on therapeutic drug level with respect to duration of surgery helps in administering correct dose of the drug with proper duration. *Pharmacokinetics-Pharmacodynamics* (PK-PD) can decrease the risk and cost of antibacterial drug development. Preclinical PK-PD infection models in conjunction with the pharmacokinetic modeling and simulation can finally put an end to the risk-rich era of dose guessing.

(4) Majority of surgical patients needs additional nutritional supplements. Total parenteral nutrition (TPN) is widely used. Calculation of adequate amount of nutrients and prevention of any drug interactions is necessary. Various resources provides appropriate formulae to calculate the ample amount of required nutrients

(5) Need for apt drug information retrieval is the obvious in specialties like cardiothoracic surgery, urology, neurosurgery, plastic surgery, gastrointestinal surgery to name a few.

Conclusion

Drug information retrieval among surgeons is scarce. Major source of information include drug promotion by pharmaceutical companies which is frequently biased. There are obvious reasons for inadequacy in retrieving drug information that include time constraint, location and limited resources. Involvement of clinical pharmacists, access to drug information centers on 24 hours on-call basis with periodic continuing education programs on medicines update can serve as a valuable means in serving surgeons for relevant, unbiased, critically evaluated and timely information for making rational therapeutic decisions.

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