ENT Medications Therapeutic Interchanges: A Narrative Review

Yousef Ahmed Alomi*, BSc. Pharm, MSc. Clin Pharm, BCPS, BCNSP, DiBA, Critical Care Clinical Pharmacists, TPN Clinical Pharmacist, Freelancer Business Planner, Content Editor and Data Analyst, Riyad, Saudi Arabia.

Faiz Abdullah. Bahadig, RPh, Informatics Pharmacist, Pharmaceutical Care Department, King Abdul-Aziz Medical, City-WR-Jeddah, Ministry of National Guard, Saudi Arabia.

Correspondence: Dr. Yousef Ahmed Alomi, BSc. Pharm, MSc. Clin Pharm, BCPS, BCNSP, DiBA, CDE, Critical care clinical pharmacists, TPN clinical pharmacist, Freelancer Business Planner, Content Editor and Data Analyst. P.O.BOX 100, Riyadh 11392, Riyadh, Saudi Arabia.

Phone no: +966504417712
E-mail: yalomi@gmail.com

ABSTRACT

Objective: To analysis the ENT medications therapeutic interchanges therapy.

Methods: It is an extensive search, or fifty databases comprised the following through the Saudi Digital Library (SDL) searching engine. It included the various types of studies (meta-analysis, randomized controlled studies and observational studies) in the English language with human study only for the update May 2017. The search in terms of therapeutic interchange, medication, therapy and type of disease or medication base on therapeutics class of anti-psychiatric. The medication list and switch from one drug to another based on the literature found the search that has included comparative safety, efficacy and cost of the type of medication for each disease and national or international evidence-based guidelines. Results: The total number of studies after an extensive search with a specific term search was 487 studies. Of those, there were 107 duplicated studies, and 380 studies included for future assessment. After assessment, 375 Records were excluded due to non-ENT therapeutics interchange. Of the previous search, there were 5 review studies that had been found discussed the ENT medications therapeutic interchanges. Conclusion: There are no randomized controlled or observational studies about ear, nose, throat therapeutic interchange. The ENT therapeutic guidelines as evidence sources of therapeutic interchange in this subject.

Key words: Review, ENT, Ear, Nose, Throat, Therapeutic interchanges, Literature.

INTRODUCTION

Ear, nose, throat is one of the vital particularly in the medical field. It pact with various diseases, including but not limited to the typical conditions that happened with adults and pediatrics patients; for instance, the otitis media, external ear infection, allergy rhinitis and acute or chronic sinusitis. Each had a list of medications for medications and each pharmacological class has various medications.1-4 The different medications in each can be used for almost the same therapeutic indications. If one drug was not available for any reason, the other medications should be substituted in a system called therapeutic interchange. That is to prevent any drug-related problems and more observance to management guidelines. Few studies discussed ENT therapeutic interchange as prevalence usage of medications classes, while it discussed in the comparison efficiency and safety per each class based on the evidence-based guidelines.1-10 The authors and his colleagues were not familiar with any review or studies about otic therapeutic interchange locally or Gulf and Middle East countries. The aim of the report is to declare the ENT therapeutic interchange based on updated literature and therapeutic management guidelines as a new initiatives program in the Kingdom of Saudi Arabia.

MATERIALS AND METHODS

It is widespread search or fifty databases included the following through Saudi Digital Library (SDL) searching engine; Willy online library, Web of Science, Springer link, Taylor and Francis, Social Science Journal via ProQuest, Science Journal via ProQuest, Scopus, Scifinder, Science Direct, Sage Journal, Royal Society of Medicine, Royal Society of Chemistry, Psychology Journals via ProQuest. Pharmaceutical news index via ProQuest, patient education via MD consult, Drug via MD Consult, Oxford Journals via Oxford University, Ovid Journals, Nursing and Allied Health Sources via ProQuest, Nature Publisher group, Medline index via ProQuest, Medline complete via EBSCO, Medical Evidence Matter via ProQuest, IGI InfoSci Journals, Health Management via ProQuest, Health and Medical complete via ProQuest. Global Health Database-CABI, Family Health via ProQuest, Eric via ProQuest and EBSCO, Emerald, Dynamed via EBSCO, Directory of Open Access Journal (DOAJ), Current Content via Web of Knowledge, Dentistry and Oral Science via EBSCO, Clinical Key-Nursing, Clinical Key-Physician, CINAHL via EBSCO, Central via ProQuest, CBCA via ProQuest, Canadian Science Publishing. Cambridge Journals via Cambridge University, Britannica Academic, BMJ Journals, BMJ Clinical Evidence via BMJ Best Practice, BMJ

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solution to overcome this problem. Therapeutic interchange services are one of the excellent systems to solve the shortage of medications or any missing of drugs. Rare studies discussed ENT therapeutic interchange worldwide. As a result, the authors and his colleagues recommended the medications list of ENT therapeutic interchange (Table 1). If any medications missed, the other one could be replaced. The medications list drove from comparative studies safety and efficacy mentioned in the ENT disease management international guidelines. The medications therapeutic interchange consisted of antibiotics used for common ENT infectious diseases, anti-allergies medications, nasal steroid therapy and oral antihistamine therapy. The suggested list might be used inside hospitals and primary healthcare centers and within Saudi managed care services. The pharmacist should review the list and update the medications according to the healthcare institution’s policy and procedures. Besides, medications healthcare insurance policy should review for ENT therapeutic interchange services. Therapeutic interchange medications guidelines for ENT is highly suggesting to prevent drug misadventures and avoid needless economic burden on the healthcare system in the Kingdom of Saudi Arabia.

**CONCLUSION**

ENT medications and therapeutic interchange are occasionally findings in the literatuer, although it used in the healthcare practice. Further studies obligatory to standardized ENT medications therapeutic interchange. Besides, therapeutic interchange in the ENT medications is suggested to start with genetic alternatives and based on ENT international guidelines.

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None.

**CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

**RESULTS**

The total number of studies after an extensive search with a specific term search was 487 studies. Of those, there were 107 duplicated studies, and 380 studies included for future assessment. After assessment, 375 Records were excluded due to Non ENT therapeutics interchange. Of the previous search, there were 5 review studies that had been found discussed the ENT medications therapeutic interchanges. All of the studies were not included for assessment because there were not fitted with research criteria (figure 1).

**DISCUSSION**

Head and neck diseases with prominence on ear, nose and trachea are common in the practice that including acute and chronic sinusitis, otitis media, external ear infection and allergies rhinitis. Each common had various pharmacological classes and each classes had multiple medications. The acquiescence of therapeutic management is essential to prevent any bug resistance and best clinical outcomes for disease management. The endurance of care is required with an emphasis on medications. As a result, if there are any missed medications or shortage or non-available drugs, it wants another
| No. | Ordered Drug or Interchange Drug | Regular Days | Frequency Per Day | Doses/Day | Frequency Per day | Doses/Day |
|-----|---------------------------------|--------------|------------------|-----------|------------------|-----------|
| 1.  | Beclomethasone (42 mcg spray per nostril) OR | 2 | Sprays in each nostril daily | 2 | In one dose | 2 |
| 2.  | Fluticasone (50 mcg spray per nostril) OR Mometasone (50 mcg spray per nostril) OR Triamcinolone (110 mcg spray per nostril) | 1-2 | Sprays in each nostril daily | 2 | In one dose | 2 |
| 3.  | Fluticasone (50 mcg spray per nostril) OR Mometasone (50 mcg spray per nostril) OR Triamcinolone (110 mcg spray per nostril) | 2 | Sprays in each nostril daily | 2 | In one dose | 2 |
| 4.  | Cetirizine PO OR Desloratadine PO OR Loratadine PO | 5-10 mg | In one dose | 5 mg | In one dose | 5 mg |
|     | Cartrizine PO OR Desloratadine PO OR Loratadine PO | 2 | In one dose | 10 mg | In one dose | 10 mg |
|     | Ciprofloxacin 0.2% otic OR Ofloxacin 0.3% | 0.3 mg | In one dose | 0.5 mg | In one dose | 0.5 mg |
|     | Azelastine 0.1% OR Olopatadine (666 mcg/ml) | 1-2 | In one dose | 1-2 | In one dose | 1-2 |

**Note:** The prescriber should adjust the dose after interchange according to the patient condition.

**RSFDA:** The Drug has been registered in Saudi Food and Drug Authority. MOHDF: The Drug is Ministry of Health Drug Formulary.

**ISL:** Saudi Digital Library.

**ABBREVIATIONS**

- MOH: Ministry of Health
- KSA: Kingdom of Saudi Arabia
- USA: United States of America
- TI: Therapeutic Interchange
- USD: United States Dollar
- SDL: Saudi Digital Library

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**ORCID ID**

Yousef Ahmed Alomi https://orcid.org/0000-0003-1381-628X