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A cost comparison of different brands of the same generic name for drugs used in day: To-day life

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***Abstract*---**Cost-Effectiveness Analysis (CEA) is a method of examining both the etiology and the health consequence of one or more interventions. It compares one intervention to another by calculating the cost of gaining a unit of a health outcome, such as a life year gained or a death avoided. It is calculated by dividing the total cost of

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the intervention or medicine by the number of outcome units. This study aimed to determine the cost comparison of different brands of the same generic name for drugs used in day-to-day life. To evaluate the price difference in different brands with same generic drug Collecting the Maximum Retail Price (MRP) of five different drugs namely Metformin, Folic acid, Atorvastatin, Ondansetron and Azithromycin. Cost comparing of different types of brands of same generic name. Calculate the cost effectiveness of each drug using Microsoft excel. Conclusion: In our study cost effective analysis of five different generic drugs with each different brand name, we found that folic acid [FOLCI (5.6)] is more cost effective with lowest MRP as compared with the other entire drug involved in this study

***Keywords*---**cost-effectiveness analysis, metformin, folic acid, atorvastatin, ondansetron azithromycin.

Introduction

Cost-Effectiveness Analysis (CEA) is a method of examining both the etiology and the health consequence of one or more interventions. It compares one intervention to another by calculating the cost of gaining a unit of a health outcome, such as a life year gained or a death avoided. It is calculated by dividing the total cost of the intervention or medicine by the number of outcome units. The 12th outcome is measured in natural units (e.g., lives saved, life years gained, incidences of disease prevented) or functional status changes (e.g., units of blood pressure in hypertension, cholesterol in hypercholesterolemia).[1]

In medicine, CEA is used to analyses two or more drugs that are not exactly equal in terms of dose or therapeutic benefit but are used to treat the same clinical condition. This type of analysis is difficult to perform and is frequently limited to the national level. It necessitates calculating the cost per defined measurable clinical outcome (effect) for each drug. Cost-effectiveness studies are frequently shown on a plane with four quadrants, with the cost on one axis and the efficacy on the other.[1] The core methods of CEA are extended to include concerns for the distribution of outcomes as well as their average level and make trade-offs between equity and efficiency. These more sophisticated methods are of particular interest for analyzing interventions to address health inequality.

Aim and Objective

To determine the cost comparison of different brands of the same generic name for drugs used in day-to-day life. To evaluate the price difference in different brands with same generic drug Collecting the Maximum Retail Price (MRP) of five different drugs namely Metformin, Folic acid, Atorvastatin, Ondansetron and Azithromycin. Cost comparing of different types of brands of same generic name. Calculate the cost effectiveness of each drug using Microsoft excel

Materials and Methods

To study the entitled "COST EFFECTIVE ANALYSIS OF DIFFERENT BRAND WITH SAME GENERIC NAME" in retails and pharmacy stores, Chennai. Cross-sectional study 11-month (June 2021-May 2022). A cross-sectional study was conducted over 11 months, so we selected a five different brand of same generic drugs such as ondansetron, atorvastatin, azithromycin, folic acid, and metformin. The study data was collected and gathered from various pharmaceutical shops with their consent permission to collect the drug data which includes the brand name, price, and pack size, after that we calculate the cost-comparison of each different brand of same generic drug. Also, we calculate the cost difference of each one. Within health and medical research, statistical analysis of cost-effectiveness data is becoming increasingly relevant. Statistical analysis of cost-effectiveness data is a useful book that summarizes the vast amount of research that has been done in the field over the last two decades

Results

In CEA of vitamin-water soluble drugs, we take AFOL (13.73), ALFOLIC (12.9), BACIL (15), BIOFOLIC (12), CHEWFOL (13), ELFOL (19.5), EMFOL (16), EMFOLIC (23), FACITAB (6.6), FLOVIN (9), FOL (17), FOLACIN (9), FOLAT (6.9), FOLCI (5.6), FOLEX (6), FOLERA (40.94), OBG (77.5), FOLNEW (104.9), FOLICON (6.5), FOLID (8). We also calculate the cost per unit and percentage of each drug in these dugs the highest price is FOLNEW (104.9) and the lowest one is FOLCI (5.6). (Fig: 1)

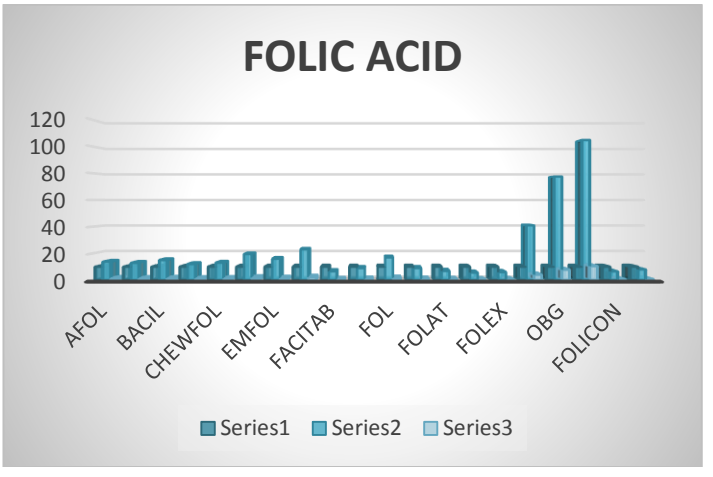

Fig 1: Cost Effective Analysis Of Vitamins-Water Soluble Drugs

The CEA of SEROTONIN 5-HT3 RECEPTOR ANTAGONIST DRUG we take DOMI-UP (42.7), EMITUS (54.15), EMESET (49.28), VOMIKIND (35), SUPRACETRON (32), ONDEM (51.9), ZOFER MD (94), VOMICURE MD (56), PERISET MD (49.33), FFVOMIHALT MD (46.84), ONDAMAC (41.03), OSETRON (34), DANOTRAN (125), ONDEM MD (64), ON N ON MD (45), VORAST DT (29), ONDET (75), ODEP (45), ODANASE (43), PERISET (41.5).We also calculate the cost per unit and

percentage of each drugs. In these dugs the highest price is DANOTRAN (125) and the lowest one is VORAST DT (29). (Table 2 and Fig 2)

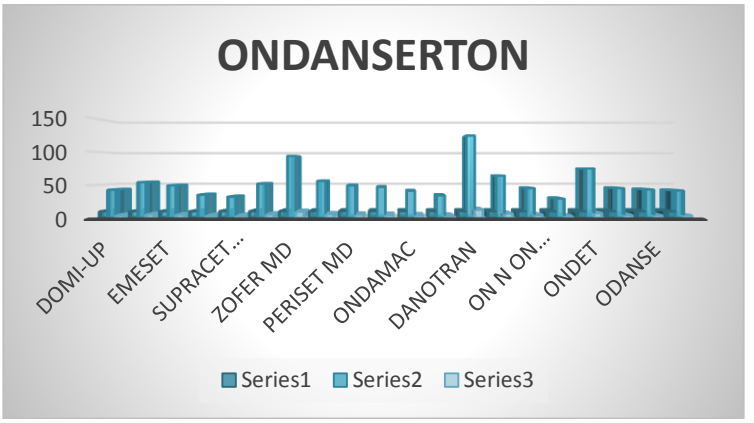

Fig 2: Cea Of Serotonin 5-Ht3 Receptor Antagonist Drug

In CEA of BIGUANIDE DRUGS we take ZYMET (7.18), GLUMET (7.5), ETFORMINE (7.65), INSUMET (9.7), BIGOMET (9.87), IRMET(14), DIAMET(15.5), GLYCOMET(15.79), METSAR(17.55), METBAY(17.95), METDAY(18.92), ZOMET(7.18), METOFIX(15.57), METGEM(19.33), METLOG(25.86), METSMAL(49.14), EXERMET(28.27), GLUFORMIN(28.99), ASOFORMIN(12.9), CETAPIN(6.69). We also calculate the cost per unit and percentage of each drug. In these dugs the highest price is METSMAL (49.14) and the lowest one is CETAPIN (6.69). (Table: 3 and Fig: 3)

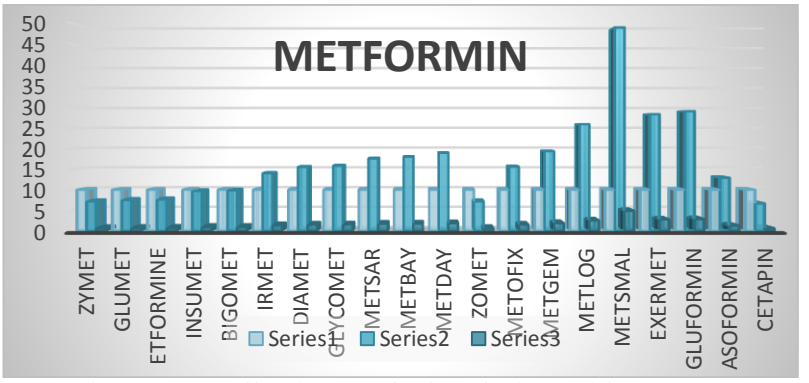

Fig 3: Cost Effective Analysis Of Biguanides Drugs

In CEA of ANTIBIOTIC DRUGS, we take AZEE (67.17), AZIBACT (67.17), AZITHRAL (111.94), AZIWIN (56), AZIFAST (67.17), AZ3 (56.16), ZEETHROM (56.38), AZITAB (56.4), AZIBEST (58.3), AZRO (59.72), CORZI (62.49), AZIROX (62.5), AZIKEM (62.56), ZETORIN (63.84), AZAX (64.9), AZICIP (64.95), AZITHCURE (65), AZIVISTA (68.69), MAXITHRAL (68.7), ZOMYCINE (75.99). We also calculate the cost per unit and percentage of each drug. In these dugs the highest price is AZITHRAL (111.94) and the lowest one is AZIWIN (56). (Table: 4 and Fig: 4)

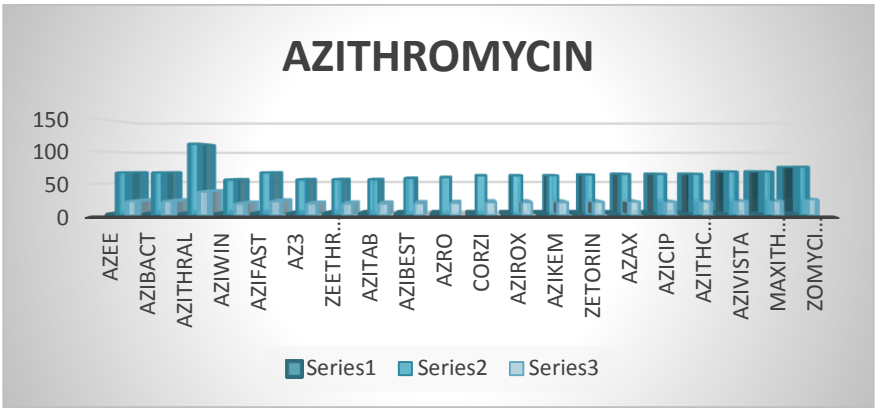

Fig 4: Cost Effectiveness Analysis Of Antibiotic Drugs

In CEA of HMG CoA REDUCTASE INHIBITOR (STATINS) we take GENXVAST (15.85), ATCHOL (23.13), ZIVAST (40.65), CADITOR (40.66), ATORIMINE (43.6), IBITOR (48), CANSTAT (49.5), ATORVEST (53.4), ATV (55), AZERVA (55.78), ASTIN (55.78), LIPOFIX (57), TG TOR (57.64), ATORIN (58.5), ATVEL (60), LIPVAS (61.24), PLEOTOR (70.85), SORATON (75), ATOCARD (83.93), ATORVA (91.89). We also calculate the cost per unit and percentage of each drug. In these dugs the highest price is ATORVA (91.89) and the lowest one is GENXVAST (15.85). (Fig: 5)

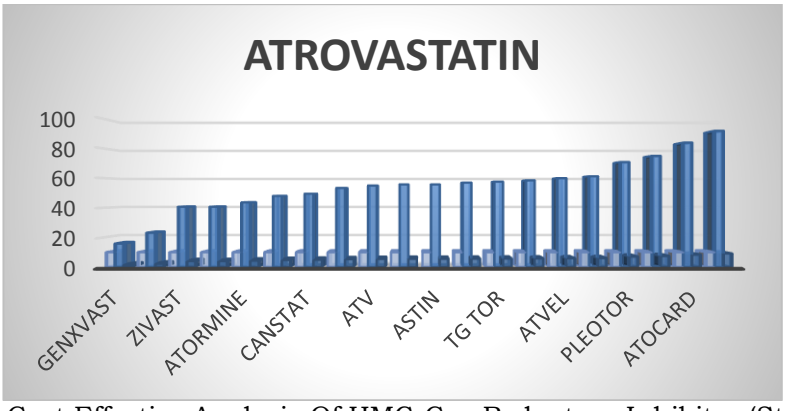

Fig 5: Cost Effective Analysis Of HMG Coa Reductase Inhibitor (Statins)

Discussion

In our cost comparative study, there are totally 100 drugs which includes 20 brands of each category drug. Drugs were collected from various types of retails and the pharmacy in Chennai city. Once the samples were collected the cost comparison study was carried out for each generic drug which contain different brand, the MRP of each brand were compared along with its, weight in mg, cost for per unit, and tablet sin each strip. After conducting the cost effectiveness analysis of vitamins water soluble drugs (FOLIC ACID) we found the highest MRP of the drug name called FOLNEW (104.9) and the lowest MRP of the drug name called FOLCI (5.6), and in cost effectiveness analysis of serotonin 5-HT3 receptor antagonist dugs (ONDANSETRON), we found the highest MRP of the drug name

called DANOTRAN (125) and the lowest MRP of the drug name called VORAST DT (29), and in the cost effectiveness analysis the biguanide drugs (METFORMIN), the highest MRP of the drug name called METSMAL (49.14) and the lowest MRP of the drug name called CETAPIN (6.69), and in the cost effectiveness analysis antibiotic drugs (AZITHROMYCIN), the highest MRP of the drug name called AZITHRAL (111.94) and the lowest MRP of the drug name called AZIWIN (56), and in the cost effectiveness analysis of HMG CoA reductase inhibitor (ATORVASTATIN), the highest MRP of the drug name called ATORVA (91.89) and the lowest MRP of the drug name called GENXVAST (15.85).

Conclusion

In our study cost effective analysis of five different generic drugs with each different brand name, we found that folic acid [FOLCI (5.6)] is more cost effective with lowest MRP as compared with the other entire drug involved in this study

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