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Outpatient prescription practices: A cross-sectional study at an aesthetic hospital, Vietnam, in 2024

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ABSTRACT

Introduction: Rational drug use is a crucial factor in effective treatment. However, inappropriate prescribing remains common both globally and in Vietnam. In the field of aesthetic surgery, there is a lack of research evaluating outpatient prescribing practices. Objective: To determine the proportion of drugs, prescribing indicators, and drug interactions in outpatient prescriptions for post-aesthetic surgery patients at JT Angel Aesthetic Hospital in 2024. Materials and methods: A cross-sectional descriptive study based on retrospective outpatient prescription data of prescriptions meeting the inclusion criteria at JT Angel Aesthetic Hospital, Vietnam, from August 1st, 2024, to December 31st, 2024. Results: The study included 1,035 aesthetic surgery patients, with females accounting for 95.4%, primarily aged 35 - 59 years (66.4%). The most common surgeries were nasal (32.8%) and eyelid procedures (17.5%). The most frequently prescribed drug groups were antibiotics (99.9%), Analgesics, antipyretics, and anti-inflammatories (99.2%), and digestive medications (91.7%), with amoxicillin + clavulanic acid. Esomeprazole and alphachymotrypsin are the most used. The average number of drugs per prescription was 6.11 ± 1.96. The rate of prescriptions with drug interactions ranged from 46.4% to 47.1%, depending on the database used, with most being moderate or severe interactions. Conclusion: Prescribing practices after aesthetic surgery at the hospital reflected good adherence to prescription regulations, including the use of essential drugs and generic names. However, the high rates of antibiotic and corticosteroid use, along with polypharmacy, highlight the need for monitoring and optimization to ensure rational, safe, and effective drug use for patients.

Keywords: *outpatient, prescription, aesthetic hospital*

1. INTRODUCTION

medications appropriate to their clinical condition, in the correct dose, for an adequate duration, and at the lowest possible cost to themselves and their community [1]. Errors in prescribing not only reduce treatment efficacy and prolong recovery time but may also increase the risk of adverse drug reactions, antibiotic resistance, hospital admissions, and even mortality [2].

In this context, assessing the current status of outpatient prescribing practices in aesthetic hospitals - where postoperative analgesic use is particularly common - is essential to ensure safe, effective, and rational medication use.

In Vietnam, the Ministry of Health and the Government have issued numerous decrees, circulars, and official decisions to provide guidance and a legal framework for medical institutions to implement safe and rational prescribing and dispensing practices in outpatient settings. However, in practice, there are still many limitations in drug use, such as overprescribing, irrational prescribing, widespread use of antibiotics contributing to resistance, overuse of medications covered by health insurance leading to budget overruns, and prescribing of non-reimbursed medications that increase out-of-pocket expenses for patients [3].

In recent years, several studies conducted at hospitals nationwide have documented the frequent occurrence of non-compliance with

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prescribing guidelines, particularly in outpatient care. Specifically, several studies in Vietnam have all reported irrational prescribing practices [4 - 6]. To date, no studies have been conducted to evaluate outpatient prescribing practices for patients following surgery at Vietnamese aesthetic hospitals. Therefore, this study was carried out with two main objectives:

- To determine the proportion of prescribed drugs and outpatient prescribing indicators among patients after aesthetic surgery at JT Angel Aesthetic Hospital in 2024.
- To identify the rate, severity, and associated factors of drug interactions in outpatient prescriptions for patients after aesthetic surgery at JT Angel Aesthetic Hospital in 2024.

2. MATERIALS AND METHOD

2.1. Study subjects

Outpatient prescriptions for patients who underwent aesthetic surgery at JT Angel Aesthetic Hospital, Ho Chi Minh City, Vietnam, from August 1st, 2024, to December 31st, 2024.

Inclusion criteria

- Outpatient prescriptions following aesthetic surgery issued at JT Angel Aesthetic Hospital.
- Prescriptions with at least one drug prescribed for treatment.
- Prescriptions for patients aged 18 years or older.

Exclusion criteria

- Outpatient prescriptions that were not dispensed.
- Prescriptions that are illegible due to blurred or unclear writing.
- Prescriptions containing only skincare products unrelated to postoperative treatment

2.2. Methods

Study design: A descriptive cross-sectional study based on retrospective data from outpatient prescriptions at JT Angel Aesthetic Hospital, Ho Chi Minh City, Vietnam, in 2024.

Study sample

Sample size

To determine the appropriate sample size, the formula for estimating a single population proportion was applied.

$$N = \frac{Z^2_{1-\alpha/2} * p * (1-p)}{d^2}$$

Where:

N: required sample size (number of prescriptions)

Z: Z-score corresponding to the desired confidence level; for $\alpha = 0.05$, $Z_{(1-\alpha/2)} = 1.96$

p: estimated proportion of irrational prescriptions. taken from the study by Bui Tri Hieu on outpatient prescribing practices [7], where P = 0.7525.

d: acceptable margin of error, set at 0.03

By applying the formula, the minimum required sample size was calculated to be n = 795. To enhance the representativeness of the study sample, an additional 30% was added. As a result, a total of 1,035 outpatient prescriptions were collected for analysis.

Sampling method: The study employed a systematic random sampling method. From August to December 2024, outpatient prescriptions were arranged chronologically, and one prescription was randomly selected from every group of eight until the target sample size of 1,035 was reached. The study assessed multicollinearity using the Variance Inflation Factor (VIF).

Study variables

The study variables included:

- Patient characteristics such as age, gender, and type of surgical procedure.
- Medication-related information, including drug classes and active pharmaceutical ingredients; and various prescribing indicators such as the number of drugs per prescription, the proportion of prescriptions containing antibiotics, the proportion of prescriptions including vitamins and minerals, and those containing corticosteroids.
- Drug interaction variables were assessed, including the presence of interactions within each prescription and the severity of those interactions.

2.3. Data analysis

Drug interaction risks were identified using the following resources: Drugs.com, Medscape, and Micromedex Drug Interaction 2.0. Data were processed and analyzed using Microsoft Excel and SPSS version 20. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated using MedCalc® Statistical Software (MedCalc Software Ltd, Ostend, Belgium) [8].

2.4. Ethical considerations

This study was approved by the Ethics Committee of

JT Angel Aesthetic Hospital and the Medical Ethics Council of Hong Bang International University under Decision No. 565/QĐ-HIU dated July 31st, 2024. The study involved no patient intervention. All patient information contained in prescriptions was kept confidential, and the collected data were securely stored and used solely for research purposes.

3. RESULTS

3.1. Proportion of prescribed drug classes and prescribing indicators in outpatient treatment

A total of 1,035 outpatient prescriptions for post-aesthetic surgery patients at JT Angel Aesthetic Hospital were surveyed. The characteristics of the study sample are presented in Table 1.

Table 1. Characteristics of the study sample

Characteristics		Frequency	Percentage (%)
Age group	From 18 to 34	296	28.6
	From 35 to 59	688	66.4
	≥ 60 years	51	5.0
Gender	Male	47	4.6
	Female	988	95.4
Type of surgery group	Breast augmentation with implants	84	8.1
	Nasal surgery	339	32.8
	Gluteal augmentation with implants	33	3.2
	Facelift and neck lift surgery	61	5.9
	Eyelid surgery	181	17.5
	Liposuction	124	12.0
	Body contouring surgery	32	3.0
	Mastopexy for breast ptosis	37	3.6
	Reduction mammoplasty for macromastia	31	3.0
	Other surgeries	113	10.9
	Total number of prescriptions surveyed	1,035	100.0

According to Table 1, the results showed that the age group 35 - 59 years accounted for the highest proportion (66.4%). and the majority of patients were female (95.4%). The most common surgical procedure was nasal surgery (32.8%). followed by eyelid surgery (17.5%) and liposuction (12%).

Table 2. Identification of drug classes and commonly used medications

Serial No.	Drug classes	Frequency	Percentage (%)
1	**Antibiotic group**	1,034	99.9
	amoxicillin + acid clavulanic	568	54.9
	cefixim	396	38.3
	linezolid	358	34.6
	levofloxacin	306	29.6
	fosfomycin	63	6.1
2	**Analgesics, antipyretics, and anti-inflammatories**	1027	99.2
	paracetamol	981	94.8
	meloxicam	464	44.8
	diclofenac	209	20.2
3	**Corticosteroids**	401	38.8
	methylprednisolone	401	38.8
4	Gastrointestinal medications	949	91.7
	Omeprazole	938	90.6
5	H1-antihistamines	389	37.6

Serial No.	Drug classes	Frequency	Percentage (%)
6	**fexofenadine**	385	37.2
	Anti-edema/protein-digesting enzyme	1,028	99.3
	Aalphachymotrypsine	1,028	99.3
7	Vitamins and minerals	140	13.5
8	Other medications*	437	42.2
Total number of prescriptions surveyed		1,035	100.0

As shown in Table 2, the antibiotic drug group accounted for a very high proportion, present in 99.9% of prescriptions, with amoxicillin + clavulanic acid (54.9%), cefixime (38.3%), and linezolid (34.6%) being the most frequently prescribed agents. Analgesic, antipyretic, and anti-inflammatory drugs were found in 99.2% of prescriptions, primarily paracetamol (94.8%). Gastrointestinal medications (91.7%) and H1-antihistamines (37.6%) were also widely used, with omeprazole (90.6%) and fexofenadine (37.2%) being the most common in their respective groups. Corticosteroids, represented by methylprednisolone (38.8%), were prescribed to manage inflammation and swelling; however, prolonged use requires caution due to the potential for adverse effects. In the anti-edema/protein-digesting enzyme group, alphachymotrypsin was used in 99.3% of prescriptions. Vitamin and mineral supplements (13.5%), such as multivitamins (12.4%), along with other medications (42.2%), were used less frequently.

Table 3. Distribution of the number of antibiotic drugs per prescription

Serial No.	Detailed content	Frequency	Percentage (%)
1	Prescriptions containing 0 drug	1	0.1
2	Prescriptions containing 1 drug	596	57.6
3	Prescriptions containing 2 drugs	150	14.5
4	Prescriptions containing 3 drugs	288	27.8
Total number of prescriptions surveyed		1,035	
Average number of drugs per prescription		1.7 ± 0.9	

Among 1,035 prescriptions analyzed, the majority contained a single antibiotic (57.6%), followed by those containing three antibiotics (27.8%) and two antibiotics (14.5%). Only 0.1% of prescriptions did not include any antibiotics. The mean number of antibiotics per prescription was 1.7 ± 0.9.

Table 4. Distribution of the number of drugs per prescription

Serial No.	Detailed content	Frequency	Percentage (%)
1	Prescriptions containing 1 drug	0	0.0
2	Prescriptions containing 2 drugs	1	0.1
3	Prescriptions containing 3 drugs	81	7.8
4	Prescriptions containing 4 drugs	196	18.9
5	Prescriptions containing ≥ 5 drugs	757	73.1
Total number of prescriptions surveyed		1,035	
Average number of drugs per prescription		6.11 ± 1.96	

According to Table 4, the analysis of 1,035 outpatient prescriptions revealed that the average number of drugs per prescription was 6.11 ± 1.96. Among them, prescriptions containing ≥ 5 drugs accounted for the highest proportion (73.1%), followed by those with 4 drugs (18.9%), 3 drugs (7.8%), and 2 drugs (0.1%).

3.2. Characteristics of drug interactions

The results of drug interaction screening from three data sources showed the highest proportion of interactions according to the Medscape database (47.1%), followed by Drugs.com (46.5%), and the lowest was observed with Micromedex (46.4%).

Table 5. Proportion of drug interactions in prescriptions

Drugs interactions	n = 1,035					
	Drugs		Medscape		Micromedex	
	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Prescription with drug interaction	481	46.5	488	47.1	480	46.4
Prescription without drug interaction	554	53.5	547	52.9	555	53.6
Total	**1,035**	**100**	**1,035**	**100**	**1,035**	**100**

Table 6. Proportion of drug interaction severity levels by reference database (n = 1,035)

Database	Severity	Number of prescriptions	Percentage (%)
Drugs	Major	234	22.6
	Moderate	420	40.6
	Minor	89	8.6
Medscape	Contraindicated	0	0.0
	Major	278	26.9
	Moderate	375	36.2
	Minor	332	32.1
Micromedex	Contraindicated	0	0
	Major	294	28.4
	Moderate	347	33.5
	Minor	117	11.3
	Unknown	6	0.6

According to the Drugs.com database, moderate interactions accounted for the highest proportion (40.6%), followed by severe interactions (22.6%) and minor interactions (8.6%). On the Medscape database, moderate interactions were also the most common (36.2%), followed by minor (32.1%) and severe interactions (26.9%), with no contraindicated interactions reported. In the Micromedex database, severe interactions were predominant (28.4%), followed by moderate (33.5%) and minor (11.3%) interactions, with a small proportion of interactions of unknown severity (0.6%); similarly to Medscape, no contraindicated interactions were identified.

Table 7. Concordant clinically significant drug interactions across three databases

Serial No.	Interaction pairs	Severity		
		Drugs	Medscape	Micromedex
1	ciprofloxacin - methylprednisolone	Major	Major	Major
2	levofloxacin - methylprednisolone	Major	Major	Major
3	ciprofloxacin - diclofenac	Moderate	Moderate	Moderate
4	diclofenac - levofloxacin	Moderate	Moderate	Moderate
5	meloxicam - levofloxacin	Moderate	Moderate	Moderate

The results showed that among the surveyed drug interaction pairs, two were classified as major: ciprofloxacin - methylprednisolone and levofloxacin - methylprednisolone. In addition, three interaction pairs were classified as moderate: ciprofloxacin - diclofenac, diclofenac - levofloxacin, and meloxicam - levofloxacin.

3.3. Factors associated with drug interactions

Table 8 shows that the concomitant use of corticosteroids, anti-histamine H1 agents, gastrointestinal drugs, and vitamins/minerals was significantly associated with a higher likelihood of drug interactions ($p < 0.05$ in all three databases). In particular, corticosteroids (OR range: 59.564 - 70.097) and anti-histamine H1 drugs (OR range: 54.413 -64.666) were strongly associated with drug interactions. Conversely, antibiotics and NSAIDs did not show statistically significant associations across the three reference sources. Interestingly, vitamin and mineral use was associated with a lower likelihood of drug interactions (OR range: 0.074 - 0.077, $p < 0.05$). Multicollinearity analysis showed that corticosteroids and H1-antihistamines had VIF values above 5, suggesting moderate correlation since these drug classes are frequently co-prescribed in cosmetic surgery patients. Other drug groups demonstrated VIF values below 5.

Table 8. Factors associated with drug interactions

Characteristics		Drugs		Medscape		Micromedex	
		OR (95% CI)	**p**	**OR (95% CI)**	**p**	**OR (95% CI)**	**p**
Antibiotics	Yes	2.610 (0.106 - 64.216)	0.557	2.682 (0.109 - 65.984)	0.604	2.600 (0.106 - 63.967)	0.559
	No						
Corticosteroid	Yes	61.784 (40.1699 - 95.0288)	**< 0.05**	70.097 (44.5457 - 110.3048)	**< 0.05**	59.564 (38.9255 - 91.1458)	**< 0.05**
	No						
NSAIDs	Yes	2.181 (0.4212 - 11.2945)	0.352	2.241 (0.4329 - 11.6075)	0.336	2.172 (0.4196 - 11.2505)	0.355
	No						
Anti-histamin H1	Yes	56.513 (36.6666 - 87.1038)	**< 0.05**	64.666 (40.9311- 102.1652)	**< 0.05**	54.413 (35.4977 - 83.4099)	**< 0.05**
	No						
Gastrointestinal drugs	Yes	28.077 (8.8119 - 89.4665)	**< 0.05**	28.918 (9.0758 - 92.1464)	**< 0.05**	27.959 (8.7748 - 89.0902)	**< 0.05**
	No						
Vitamins and minerals	Yes	0.077 (0.0411 - 0.1447)	**< 0.05**	0.074 (0.0398 - 0.1402)	**< 0.05**	0.077 (0.0413 - 0.1453)	**< 0.05**
	No						
Others	Yes	1.418 (1.1066 - 1.8167)	**0.0058**	1.464 (1.1428 - 1.8762)	**0.0026**	1.427 (1.1141 - 1.8292)	**0.0049**
	No						

4. DISCUSSION

The study surveyed 1,035 outpatient prescriptions of patients undergoing aesthetic surgery at JT Angel Aesthetic Hospital and found that the age group with the highest proportion was 35 to 59 years, accounting for 66.4%, followed by the 18 to under-35 age group (28.6%), and lastly, patients aged 60 years and older. comprising only 5.0%. These findings are consistent with the results reported by Dang Khoa et al. (2023), in which 944 patients were between 19 and 34 years old (56.3%), and 702 patients (41.9%) were over 34 years of age [9]. Regarding gender, the study results showed that female patients overwhelmingly dominated aesthetic surgery cases, accounting for 95.4%. This reflects the reality that cosmetic surgery is primarily a demand among women, consistent with both domestic and international reports. According to the American Society of Plastic Surgeons (ASPS, 2020), women

accounted for approximately 92% of all aesthetic surgical procedures performed in the United States [9]. The findings of the current study are also relatively consistent with data reported by the International Society of Aesthetic Plastic Surgery (ISAPS) in 2022, which listed the most common global procedures as liposuction, breast augmentation, blepharoplasty, and rhinoplasty. However, in this study, rhinoplasty was performed at a higher rate than liposuction or breast augmentation [10]. According to the ISAPS 2019 report, rhinoplasty was among the three most frequently performed aesthetic procedures worldwide [10].

The survey results showed that antibiotics were prescribed at an extremely high rate (99.9%), appearing in nearly all prescriptions reviewed. This is a noteworthy figure, as although antibiotics are essential in the treatment of infections, their near-universal use suggests a potential for overuse during the initial treatment phase, even in the absence of clear clinical indications. High-level antibiotics such as linezolid, fosfomycin were mainly prescribed in patients undergoing more invasive cosmetic procedures (e.g., breast augmentation, liposuction, abdominoplasty, facial lifting), which carry a higher surgical-site infection risk compared with minimally invasive procedures. WHO emphasizes that the use and misuse of antibiotics in humans, animals, and plants are the primary drivers of antibiotic resistance [11]. As a result, patients may face treatment failure, longer hospital stays, and a higher risk of complications and death, while healthcare costs can rise substantially due to the need for more complex and expensive treatments. On average, each prescription contained 1.7 ± 0.9 antibiotics, and 42.3% of prescriptions included two or more antibiotics, indicating a frequent use of combination therapy. Such prescribing patterns, particularly the inclusion of multiple broad-spectrum agents, warrant careful evaluation against current postoperative prophylaxis guidelines to ensure rational antibiotic use. Analgesic and anti-inflammatory drugs were also highly prevalent (99.2%), with paracetamol (94.8%) being the most frequently prescribed agents, due to their effectiveness in reducing postoperative swelling and pain. Currently, postoperative analgesics are widely used in nearly all patients undergoing surgery in general, and cosmetic surgery in particular. Proton pump inhibitors (PPIs), predominantly omeprazole, were prescribed in nearly 90% of outpatient prescriptions. In most cases, PPIs were given prophylactically to prevent gastric irritation potentially associated with postoperative antibiotic or analgesic use, rather than for pre-existing gastrointestinal conditions. However, according to current guidelines, routine prophylactic use of PPIs is not warranted in patients without gastrointestinal risk factors. This high prescribing rate indicates a possible pattern of overuse, em-phasizing the need for more judicious prescribing of gastroprotective agents in outpatient cosmetic surgery. In the anti-edema/protein-digesting enzyme group, alphachymotrypsin was used in 99.3% of prescriptions, alphachymotrypsin plays a significant role in post-operative care. Its ability to reduce inflammation and assist in the breakdown of proteins helps manage edema (swelling) and accelerates tissue healing, which is crucial following surgical procedures. By promoting faster recovery, alphachymotrypsin contributes to improving aesthetic outcomes after cosmetic surgeries.

Analysis of 1,035 outpatient prescriptions at JT Angel Aesthetic Hospital showed that the average number of drugs per prescription was 6.11 ± 1.96. Among these, prescriptions containing ≥ 5 drugs were the most common. accounting for 73.1%, followed by those with 4 drugs (19.8%). This average is more than three times higher than the WHO recommendation of 2 drugs per prescription, and higher than what was reported in several previous studies [12]. This may be explained by the characteristics of the study population, which consisted mainly of patients aged 35-59 years (66.4%) and predominantly female (95.4%). This age group tends to have a slower recovery rate and is more prone to complications compared with younger individuals. In addition, most of the cosmetic procedures performed such as rhinoplasty, blepharoplasty, liposuction, or breast augmentation, are of moderate to high invasiveness, requiring intensive postoperative care. Therefore, physicians often combine multiple classes of medications to comprehensively manage symptoms and prevent complications, including antibiotics, analgesic-anti-inflammatory agents, gastroprotective drugs, antihistamines, anti-edema enzymes, corticosteroids, as well as vitamins or other supportive agents. This reflects a multimodal therapeutic

approach in postoperative care, aiming to optimize recovery and minimize complication risks for patients. In the assessment of prescribing indicators, the study recorded that corticosteroids were included in 38.8% of prescriptions, indicating a relatively high level of corticosteroid use in prescribing practices at the study site, particularly in the postoperative and aesthetic treatment context. The use of corticosteroids aims to control inflammation, reduce swelling, and alleviate postoperative pain. This finding is comparable to the results of a study conducted at Can Tho University of Medicine and Pharmacy Hospital during 2019-2020, which reported a corticosteroid prescribing rate of 37.38%. However, it is notably higher than the rate observed at Phong Dien District Medical Center during the same period, which was 12.1% [6]. For corticosteroids, neither the WHO nor the Ministry of Health has established a specific reference value for this prescribing indicator. In this study, 95.8% of the prescribed drugs were listed in the Essential Medicines List, while 4.2% were not. This is considered a positive outcome, indicating a high level of adherence by physicians to the principles of safe, rational, and cost-effective prescribing. It aligns with the WHO recommendation that at least 90% of prescribed medicines should be from the essential medicines list to optimize treatment cost and efficacy [12]. Additionally, 99.8% of the prescriptions were written using generic names, reflecting strong compliance with guidelines promoting generic prescribing to enhance safety, reduce costs, and minimize confusion in drug use.

The proportion of prescriptions with drug interactions ranged from 46.4% to 47.1%, depending on the reference database used (Medscape: 46.5%; Micromedex: 47.1%). This is a considerable figure, highlighting the need for greater attention to prescribing practices at JT Angel Aesthetic Hospital. A drug interaction rate exceeding 46% serves as a warning signal, emphasizing the importance of enhanced monitoring and drug review during the prescribing process - particularly given the widespread use of antibiotics, nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, and gastrointestinal drugs. These findings indicate that nearly half of the prescriptions issued post-aesthetic surgery carry a risk of drug interactions, which is relatively high. Compared to other studies, the interaction rate in this research was significantly higher - for instance, a study at the University of Medicine and Pharmacy Hospital in Can Tho during 2021-2022 reported a 26.2% rate of drug interactions in outpatient prescriptions [5], while a study by Thi Hien Nguyen on 5,338 prescriptions at the University of Medicine and Pharmacy Hospital in Hue in 2017 found only 6.7% of prescriptions involved drug interactions [4]. This finding suggests that prescribing in the field of aesthetic surgery tends to involve a greater number of medications, thereby increasing the risk of drug interactions. Drug interactions in postoperative aesthetic treatment are a matter that should not be overlooked. Clinical policies and protocols should incorporate multi-source drug interaction analysis systems to assist physicians in identifying potential interactions at the time of prescribing. Ongoing education for healthcare professionals on the risks of drug interactions, along with the development of integrated drug interaction alert features within electronic prescribing systems, may help minimize risks and enhance medication safety for patients.

Our study highlights several drug categories strongly associated with potential drug interactions in outpatient prescriptions after aesthetic surgery. Corticosteroids were among the most significant contributors, reflecting their well-documented risk when co-prescribed with NSAIDs, as such combinations markedly increase gastrointestinal bleeding and ulcer risk [13]. Interestingly, NSAID use alone was not significantly associated with interactions in our cohort, which contrasts with reports from general outpatient populations where NSAIDs frequently drive pDDIs [14, 15]. This may be explained by the relatively younger and healthier aesthetic surgery population, where NSAIDs are prescribed more selectively to avoid bleeding complications. Another notable finding is the strong association between H1-antihistamines and interaction risk. While not traditionally considered high-risk drugs, sedating antihistamines can potentiate central nervous system depression when combined with opioids or benzodiazepines, a concern highlighted by both WHO and FDA safety communications [16]. This suggests that multimodal postoperative regimens involving antihistamines should be prescribed with greater caution in surgical outpatients. Similarly, vitamin and mineral

supplements were unexpectedly associated with elevated pDDI risk, consistent with evidence that calcium, magnesium, and herbal products can interfere with antibiotic absorption or enhance anticoagulant effects [13, 15]. This underscores the importance of medication reconciliation that includes over-the-counter and supplement use. In the context of polypharmacy, clinical pharmacists play a crucial role in ensuring the rational, safe, and effective use of medications for patients, as well as supporting physicians in selecting optimal treatment regimens based on clinical evidence.

This study provides a comprehensive overview of outpatient prescribing practices following aesthetic surgery at a specialized hospital in Vietnam. Detailed analysis of drug classes, average number of medications per prescription, prevalence of drug interactions, and adherence to the essential medicines list offers valuable evidence to promote rational prescribing practices. However, the study was conducted in a single aesthetic hospital over a limited time period, which may not fully reflect the overall situation in Vietnam. Moreover, as the data were retrospectively collected from prescriptions, clinical outcomes, treatment effectiveness, and adverse drug reactions were not evaluated, thereby limiting the generalizability of the findings.

To enhance prescribing quality, it is essential to strengthen collaboration between physicians and clinical pharmacists to ensure the rational use of medicines. In parallel, evidence-based prescribing guidelines should be regularly developed and updated, and continuous education programs on safe medication use should be organized for healthcare professionals. The findings of this study can support hospitals and physicians in improving prescribing practices, minimizing the overuse of antibiotics, corticosteroids, and multiple medications, reducing the risk of adverse drug interactions, and ultimately optimizing medication use and improving the quality of patient care.

5. CONCLUSION

Prescribing practices following aesthetic surgery at JT Angel Aesthetic Hospital reflect good compliance with regulations on prescription writing, the use of essential medicines, and generic prescribing. However, the rates of antibiotic and corticosteroid use remain relatively high, accompanied by a tendency toward polypharmacy, which contributes to a notable incidence of drug interactions. These issues warrant closer monitoring and optimization to ensure the rational, safe, and effective use of medications for patients.

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Thực hành kê đơn ngoại trú: Nghiên cứu cắt ngang tại một bệnh viện thẩm mỹ ở Việt Nam năm 2024

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TÓM TẮT

Đặt vấn đề: Sử dụng thuốc hợp lý là yếu tố then chốt đảm bảo hiệu quả điều trị. Tuy nhiên, tình trạng kê đơn không phù hợp vẫn còn phổ biến trên toàn cầu và tại Việt Nam. Trong lĩnh vực phẫu thuật thẩm mỹ, hiện còn thiếu các nghiên cứu đánh giá thực hành kê đơn ngoại trú. Mục tiêu nghiên cứu: Xác định tỷ lệ các nhóm thuốc được kê, các chỉ số kê đơn và tình trạng tương tác thuốc trong đơn thuốc ngoại trú của bệnh nhân sau phẫu thuật thẩm mỹ tại Bệnh viện Thẩm mỹ JT Angel năm 2024. Đối tượng và phương pháp nghiên cứu: Nghiên cứu mô tả cắt ngang dựa trên dữ liệu hồi cứu của 1,035 đơn thuốc ngoại trú đáp ứng tiêu chuẩn lựa chọn tại Bệnh viện Thẩm mỹ JT Angel, Việt Nam, trong giai đoạn từ 01/8/2024 đến 31/12/2024.Kết quả: Nghiên cứu bao gồm 1,035 bệnh nhân phẫu thuật thẩm mỹ, nữ giới chiếm 95.4%, chủ yếu ở nhóm tuổi 35 - 59 (66.4%). Các phẫu thuật phổ biến nhất là phẫu thuật mũi (32.8%) và phẫu thuật mí mắt (17.5%). Nhóm thuốc được kê nhiều nhất là kháng sinh (99.9%), giảm đau - hạ sốt - kháng viêm (99.3%) và thuốc đường tiêu hoá (91.7%), trong đó amoxicillin + acid clavulanic, esomeprazol và alphachymotrypsin là các thuốc được sử dụng phổ biến. Số thuốc trung bình trong mỗi đơn là 6.11 ± 1.96. Tỷ lệ đơn có tương tác thuốc dao động từ 46.4% đến 47.1% tùy theo cơ sở dữ liệu sử dụng, phần lớn là tương tác mức độ trung bình đến nặng. Kết luận: Thực hành kê đơn sau phẫu thuật thẩm mỹ tại bệnh viện nhìn chung tuân thủ tốt các quy định về kê đơn, bao gồm sử dụng thuốc thiết yếu và tên gốc. Tuy nhiên, tỷ lệ cao sử dụng kháng sinh, corticosteroid và tình trạng đa trị liệu cho thấy cần tăng cường giám sát và tối ưu hóa nhằm đảm bảo việc sử dụng thuốc hợp lý, an toàn và hiệu quả cho người bệnh.

Từ khóa: *kê đơn ngoại trú, phẫu thuật thẩm mỹ, tương tác thuốc*

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