

# Evaluation of dermatology consultations requested for inpatients in a tertiary institution from Türkiye

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## Abstract

**Objective:** To investigate and present the features of the consultations requested for inpatients in a tertiary institution retrospectively.

**Methods:** Archive of our tertiary institution located in the South Marmara Region of Türkiye was reviewed and every single consultation responded by Dermatology Department was investigated.

**Results:** The mean age of the 421 consulted patients (191 females, 230 males) was  $62 \pm 17$  (1-95) years. The most frequently consultation requesting departments were Cardiology (18.8%), Neurology (11.4%) and Physical medicine and Rehabilitation (8.3%). The most common lesions resulting in consultation were rashes (22.3%), erythematous lesions (14.5%) and wounds (14%). The most common dermatologic diagnoses were contact dermatitis (10.7%), tinea pedis (8%) and cellulitis (5.2%). Among 421 patients, 62 (14.7%) patients required a histopathologic diagnosis and underwent biopsy. Most frequent histopathologic diagnoses were non-specific findings 14 (22.6%), basal cell carcinoma (12.9%), maculopapular drug reaction (12.9%) and contact dermatitis (9.7%).

**Conclusion:** The perspective of interdisciplinary approach leads physicians request dermatology consultations frequently for inpatients particularly having systemic diseases and reviewing and reporting the features of consulted patients periodically might provide a satisfactory contribution to the current literature.

**Keywords:** Dermatology, Consultation, Interdisciplinary, Inpatient, Rash, Contact Dermatitis

## INTRODUCTION

Tertiary medical institutions generally admit many patients having various systemic diseases in Türkiye. Patients having any systemic disease may manifest with a dermatologic symptom or may have an accompanying dermatologic disease. Although Dermatology and Venerology is a department admitting many outpatients, consultations are frequently requested from other services because of frequent skin findings of systemic diseases, accompanying dermatologic symptoms and dermatologic side effects of the medications used (1). In daily dermatology practice, high- mortality conditions like acute graft versus host disease (GVHD) and purpura fulminans might not be common among outpatient clinic admissions, however, high- mortality diseases are commonly seen among inpatient consultations (1).

Based on this perspective, this study aimed to investigate and present the features of the consultations requested for inpatients in a tertiary institution retrospectively.

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## METHODS

This retrospective- archival investigation was conducted in line with the dictates of Helsinki Declaration by World Medical association. After the approval of the local ethical committee of Balıkesir University, Clinical / Human (IRB Number: 2022/71) the medical archive of our tertiary institution located in the South Marmara Region of Türkiye was reviewed and every single consultation responded by Dermatology Department was investigated. The ages, genders, consultation requesting departments, dermatologic diagnoses and histopathologic diagnoses of the patients underwent biopsy were analyzed and noted. Findings of the study were presented as number (percentage).

## RESULTS

In total, 421 consultations were requested between January 2022 and January 2023, for inpatients of our tertiary institution. The mean age of the patients was  $62 \pm 17$  (1-95) years (Eight children in total, 5 children from Department of

**Table 1. The distribution of the departments that requested consultations.**

Department	n	(%)
Cardiology	79	(18.8%)
Neurology	48	(11.4%)
Physical Medicine and Rehabilitation	35	(8.3%)
Otolaryngology	31	(7.4%)
Anesthesiology and Reanimation	27	(6.4%)
Internal Medicine	25	(5.9%)
Infectious diseases	22	(5.2%)
Gastroenterology	20	(4.8%)
Pulmonary Diseases	20	(4.8%)
Urology	16	(3.8%)
Orthopedics	15	(3.6%)
Cardiovascular Surgery	14	(3.3%)
Psychiatry	13	(3.1%)
General Surgery	11	(2.6%)
Neurosurgery	11	(2.6%)
Gynecology and Obstetrics	7	(1.7%)
Plastic and Reconstructive Surgery	6	(1.4%)
Pediatrics	5	(1.2%)
Ophthalmology	5	(1.2%)
Geriatrics	4	(1%)
Endocrinology and Metabolism	4	(1%)
Nephrology	2	(0.5%)
Immunology and Allergy	1	(0.2%)
<b>Total</b>	<b>421</b>	<b>(100%)</b>

Pediatrics). Additionally, 191 (45.4%) patients were female, and 230 (54.6%) patients were male. The distribution of the departments that requested consultations were presented in Table 1. The most frequently consultation requesting departments were Cardiology (18.8%), Neurology (11.4%) and Physical medicine and Rehabilitation (8.3%). Table 2 presents the distribution of the reasons for dermatology consultation. The most common lesions resulting in consultation were rashes (22.3%), erythematous lesions (14.5%) and wounds (14%). Table 3 presents the distribution of dermatologic diagnosis of consulted patients. Out of 421 patients, 24 (5.7%) had no dermatologic diagnosis. The most common dermatologic diagnoses were contact dermatitis (10.7%),

**Table 2. Distribution of Dermatology consultation reasons.**

Reason for consultation	n	(%)
Rash	94	(22.3%)
Erythematous lesions	61	(14.5%)
Wound	59	(14%)
Pruritis	43	(10.2%)
Rash with pruritis	19	(4.5%)
Rash with erythema	19	(4.5%)
Bullous lesions	13	(3%)
Oral lesions	13	(3%)
Suspicion of Behcet Disease	12	(2.9%)
For any additional suggestions for treatment	11	(2.6%)
Re-consultation for control	11	(2.6%)
Papulous lesions	11	(2.6%)
Discharged lesions	9	(2.1%)
Erythema with warmth	8	(1.9%)
Erythema with pruritis	8	(1.9%)
Nail disorders	4	(1%)
Acne	4	(1%)
Ulcer	4	(1%)
Painful lesions	3	(0.7%)
Consultation for biopsy results	3	(0.7%)
Stain on skin	3	(0.7%)
Alopecia	2	(0.5%)
Rash with warmth	2	(0.5%)
Subcutaneous nodule	1	(0.2%)
Edema	1	(0.2%)
For melanoma scan	1	(0.2%)
Ecchymosis	1	(0.2%)
Suspicion of Dermatomyositis	1	(0.2%)
<b>Total</b>	<b>421</b>	<b>(100%)</b>

**Table 3. The distribution of dermatologic diagnosis of consulted patients.**

Dermatologic diagnosis	n	(%)
Contact dermatitis	45	(10.7%)
Tinea pedis	34	(8%)
Cellulitis	22	(5.2%)
Maculopapular drug reaction	17	(4%)
Xerosis cutis	15	(3.5%)
Decubitus ulcer	15	(3.5%)
Urticaria	13	(3%)
Stasis dermatitis	13	(3%)
Vesicular dermatitis of herpes virus	12	(2.9%)
Intertrigo	12	(2.9%)
Pyoderma gangrenosum	12	(2.9%)
Traumatic ecchymosis	10	(2.4%)
Basal cell carcinoma	9	(2.1%)
Oral candidiasis	9	(2.1%)
Psoriasis	8	(1.9%)
Zona Zoster	7	(1.7%)
Tinea corporis	7	(1.7%)
Bullous pemphigoid	7	(1.7%)
Scabies	6	(1.4%)
Tinea cruris	5	(1.2%)
Acne vulgaris	5	(1.2%)
Pigmented purpuric dermatosis	4	(1%)
Lymphedema	4	(1%)
Seborrheic dermatitis	4	(1%)

**Table 3. (continued) The distribution of dermatologic diagnosis of consulted patients.**

Verruca vulgaris	4	(1%)
Traumatic bulla	4	(1%)
Seborrheic keratosis	3	(0.7%)
Asteatotic eczema	3	(0.7%)
Atopic dermatitis	3	(0.7%)
Tinea unguium	3	(0.7%)
Diabetic ulcer	3	(0.7%)
Uremic pruritus	2	(0.5%)
Pigmented actinic keratosis	2	(0.5%)
Postherpetic neuralgia	2	(0.5%)
Toxic epidermal necrolysis	2	(0.5%)
Fixed drug eruption	2	(0.5%)
Dermatomyositis	2	(0.5%)
DRESS	2	(0.5%)
Liken amyloidosis	2	(0.5%)
Erythema multiforme	2	(0.5%)
Carcinoma metastasis	2	(0.5%)
Acute GVHD	1	(0.2%)
Anaphylaxis	1	(0.2%)
Atypical mycobacteria infection	1	(0.2%)
Behcet Disease	1	(0.2%)
Heparin induced thrombocytopenia	1	(0.2%)
Gardner Diamond syndrome	1	(0.2%)
Other diagnosis	53	(12.6%)
NONE	24	(5.7%)
Total	421	(100%)

tinea pedis (8%) and cellulitis (5.2%). Among 421 patients, 62 (14.7%) patients required a histopathologic diagnosis and underwent biopsy. The distribution of histopathologic diagnosis of 62 patients underwent biopsy was presented in table 4. Among 62 biopsy reports, 14 (22.6%) revealed non-specific findings. Following most frequent histopathologic diagnoses were basal cell carcinoma (12.9%), maculopapular drug reaction (12.9%) and contact dermatitis (9.7%).

## DISCUSSION

Interdisciplinary approach to systemic diseases of inpatients is crucial for accurate treatment. Because many systemic diseases might manifest along with dermatologic symptoms, dermatology consultations are commonly requested for inpatients of other services. In this retrospective study, we aimed to review the features of the patients referred to Dermatology Department for consultation from other services. We basically found that the most frequently consultation requesting service was Cardiology, followed by Neurology and Physical Medicine. We can hypothesize that

the systemic diseases seen in cardiology patients might be more likely to manifest with dermatologic findings.

The idea of reviewing the consultations is not novel for the current literature (2). Taşçı reported an analysis focusing psychiatry consultations in a city hospital (3). The consultations requested from otolaryngology department of a tertiary institution were analyzed and reported by Kayabasi et al previously (4). Moreover, many studies focusing on dermatology consultations are available in the prior literature. Walia et al reported that dermatologic consultations changed the diagnosis and treatment in more than 66% of the patients (5). In this study, the service requesting consultation more frequently was cardiology, however, Fernandes reported the most frequently consultation requesting service as internal medicine, from a tertiary institution in Portugal (6). According to Joseph et al, dermatology consultations were most often requested by medical teams from emergency service (7). Additionally, the most common dermatologic conditions found in the consulted patients were dermatitis and skin infections (7).

**Table 4. The distribution of histopathologic diagnosis of the patients underwent biopsy.**

Histopathologic diagnosis	n	(%)
Non- specific findings	14	(22.6%)
Basal cell carcinoma	8	(12.9%)
Maculopapular drug reaction	8	(12.9%)
Contact dermatitis	6	(9.7%)
Squamous cell carcinoma	4	(6.4%)
Steven-Johnson syndrome	3	(4.8%)
Fixed drug eruption	2	(3.2%)
Edematous inflamed minimal skin tissue	2	(3.2%)
Perforating dermatosis	2	(3.2%)
Superficial perivascular psoriasiform dermatitis	2	(3.2%)
Psoriasis vulgaris	1	(1.6%)
Dermatomyositis	1	(1.6%)
Erythema multiforme	1	(1.6%)
Gardner Diamond Syndrome	1	(1.6%)
Interphase dermatitis	1	(1.6%)
Carcinoma metastasis	1	(1.6%)
Lichenoid interface reaction pattern	1	(1.6%)
Necrosis	1	(1.6%)
Perivascular dermatitis	1	(1.6%)
Pigmented purpuric dermatosis	1	(1.6%)
Trichilemmal cyst	1	(1.6%)
<b>Total</b>	<b>62</b>	<b>(100%)</b>

According to report by Bauer et al from USA, the most common dermatologic diagnosis was dermatitis, skin infections and ulcer (8). In consistent with the prior literature, we found that the most common dermatologic diagnosis in consulted patients was contact dermatitis, followed by tinea pedis and cellulitis. However, Falanga et al reported that the most common dermatologic diagnosis was drug eruption in their study group (9).

The most common dermatologic symptoms leading the physicians ask for a consultation was skin rash according to the report by Chojer et al (10). Consistently, we found that the most common dermatologic symptoms leading the physicians ask for a consultation were rashes, erythematous lesions and wounds. Additionally, the mean age of consulted patients was  $62 \pm 17$  (1-95) years and only 5 patients were referred from department of pediatrics. Çiçek et al reported that 3.57% percent of consulted patients required biopsy (11), however, 62 (14.7%) patients required biopsy in this study group.

## CONCLUSION

The perspective of interdisciplinary approach leads physicians request dermatology consultations frequently for inpatients particularly having systemic diseases. Although current literature includes many studies focusing on reviewing consultations of various services, reviewing and reporting the features of consulted patients periodically might provide a satisfactory contribution to the current literature.

## ACKNOWLEDGEMENT

### Conflict of Interest

The authors declare that they have no conflict of interests regarding content of this article..

### Financial Support

The Authors report no financial support regarding content of this article.

### Ethical Declaration

Ethical permission was obtained from Balıkesir University, Clinical / Human Research Ethics Committee for this study with date 2022 and number 71, and Helsinki Declaration rules were followed to conduct this study.

### Authorship Contributions

Concept: PH, Design: PH, Supervising: FAK, Financing and equipment: MES, Data collection and entry: MES, Analysis and interpretation: PH, MES, Literature search: PH Writing: PH, Critical review: FAK.

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