Reasons for inpatient dermatological consultation requested by other specialities: a five-year data analysis of 1,052 patients from a Portuguese tertiary teaching hospital

Dermatology is primarily an outpatient specialty in some countries of the globe, while in others, it is associated with more conservative surgical fields, involving a considerable number of inpatients, such as in German-speaking countries. Several studies have shown that, when a cross consultation is requested to assess a patient with a skin condition, the dermatologist has a significant impact on the diagnosis and management of the disorder. Those authors also observe that errors do not occur in patients with rare skin diseases, but rather those with cutaneous drug reactions, cellulitis, and allergic contact or stasis dermatitis [1-3]. In countries where dermatologists work mainly with outpatients, the involvement of a dermatologist in inpatient care can result in accurate diagnosis and prescription of appropriate treatment more promptly. Objectives: We aimed to analyse the main reasons for dermatological inpatient consultation in a tertiary centre. Materials & Methods: A retrospective analysis was performed based on clinical registries that included inpatients observed in emergency dermatology consultation between January 1st 2016 to December 31st 2020 at the Hospital de Santa Maria, a tertiary teaching hospital in Lisbon, Portugal. Results: In our dermatology emergency department, we performed 1,052 inpatient consultations during this five-year period. The most frequent diagnostic groups were infections and parasitic diseases (31.1%), inflammatory skin disorders (18.1%) and reactive erythemas (17.7%). Requests were most commonly (85.1%) made by medical specialities. Conclusion: Inpatient dermatological consultations grant access to expert management of drug-induced dermatoses, flares of chronic skin diseases, skin manifestations of systemic diseases and cutaneous infections. Prompt dermatological evaluation is essential for early diagnosis, thus enabling a better prognosis.

Key words: consultation, dermatology emergency, emergency department, inpatient, hospital, skin disease

To cite this article: Mancha D, Roda Â, Queirós C, Garrido P, Filipe P. Reasons for inpatient dermatological consultation requested by other specialities: a five-year data analysis of 1,052 patients from a Portuguese tertiary teaching hospital. Eur J Dermatol 2022; 32(2): 214-9 doi:10.1684/ejd.2022.4224
Results

During the study period, our dermatology emergency department performed 1,052 inpatient consultations. All consultations took place within 24 hours following their request. The mean number of patients seen per month was $16.8 \pm 2.2$ (standard deviation). The mean age of all patients was $59.0 \pm 23.3$ (standard deviation) years old, with ages ranging from newborn to 99 years old. Most of patients were over 18 years old, with the following distribution: paediatric age $n = 90$ (8.6%), young adults $n = 474$ (45%) and elders $n = 488$ (46.4%). This analysis included 536 (50.9%) women and 516 (49.1%) men. From 2016 to 2020, there was an increase in the number of inpatient consultations (2016: $n = 140$; 2017: $n = 203$; 2018: $n = 216$; 2019: $n = 244$; 2020: $n = 249$).

Diagnoses leading to dermatology inpatient consultation

The most frequent diagnostic groups were infections and parasitic diseases (31.1%), inflammatory skin disorders (18.1%), reactive erythemas (17.7%), skin neoplasms (5.3%) and skin signs of systemic diseases (5.1%) (table 1). Regarding gender, the male: female ratio was approximately 1:1 in all disease groups.

Considering bacterial infections, lower leg cellulitis was the most frequent diagnosis (4.9%). Herpetic infections (6.6%), such as orolabial/genital herpes virus simplex infections and herpes zoster reactivation, scabies (4.2%) and candidiasis (4.9%), were also frequent infections in this group. Potential severe bacterial infections, such as ecthyma gangrenosum (0.5%) and periorbital cellulitis (0.5%), were also reasons for dermatological consultation.

Of inflammatory skin diseases, there were 100 cases of eczema (9.5%). Most of these cases were interpreted as secondary eczema due to xerosis or aging. Atopic eczema, nummular eczema and dyshidrotic eczema were also included in this group. Vulgar psoriasis was the most frequent diagnosis in the psoriasisiform disorders group. Palmoplantar psoriasis, inverse psoriasis and pityriasis rosea were also included in the latter group.

Potentially severe dermatoses, such as Stevens-Johnson syndrome/toxic epidermal necrolysis and erythema multiforme, represented 0.7% of all cases. In reactive erythemas, the group “others” included presumptive cases of symmetrical drug-related intertriginous and flexural exanthema, DRESS syndrome, acute generalized exanthematous pustulosis, drug-fixed eruptions and acneiform drug eruptions. Non-melanoma skin neoplasms (2.1%) were the most frequent diagnosis in the skin neoplasms group. There was only one reference to a melanoma case.

Skin signs of systemic diseases (5.1%) were a heterogeneous group comprising, for example, cases of pruritus associated with systemic disease (e.g. chronic renal failure and liver disease), diabetic bullae, pretibial myxedema and diabetic dermopathy. The urticaria group (3.3%) comprised 23 cases of urticarial eruptions, 10 cases of insect bites and two cases of angioedema.

The chronic skin ulcer group (2.2%) comprised pressure ulcers, neuropathic diabetic ulcers, arterial ulcers and venous ulcers.

In our registries, we had reference to some primary and secondary lesions (ulcers, scars, plaques, papules and post-inflammatory hyperpigmentation) which were described without an associated presumptive diagnosis. These lesions were included in Group K (2%) (table 1). Of adnexal diseases (2.6%), milia and hidradenitis suppurativa represented disorders of eccrine and apocrine glands, acniform disorders included cases of acne vulgaris, neonatal acne and rosacea, and hair and nail disorders included cases of telogen effluvium, onychomadesis and folliculitis decalvans. Neutrophilic dermatoses (1.2%) were represented by six cases of pyoderma gangrenosum and three cases of Sweet syndrome, associated with systemic diseases (e.g. inflammatory bowel disease), and four cases of Behçet disease. None of these dermatoses were drug-induced.

Distribution of referrals according to specialty

Requests were most commonly (85.1%) made by medical specialties. Internal medicine (33.7%), haematology (9.0%), paediatrics (8.6%) and the intensive care unit (6.2%) were the predominant medical departments in need of our consultations. Surgical specialties accounted for 14.9% of all requests (table 2). Obstetrics and gynaecology (3.3%), orthopaedics (2.6%) and general surgery (2.5%) were the most frequent. Across all specialties, the main reasons motivating inpatient dermatological consultation were related to the most frequent diseases diagnosed (infections and parasitic diseases, inflammatory skin conditions and reactive erythemas).

Discussion

The dermatological conditions described in this analysis ranged from minor to life-threatening dermatoses. The mean number of patients seen per month was low compared with other similar studies. Table 3 [4-15] shows huge differences among the different health care systems. In Portugal, we believe this can be explained by the small size of the country, with smaller reference populations compared to larger countries, such as in the USA, Mexico and South Africa. In a similar retrospective review at a university hospital - Hospital de Santo António - the authors included 282 inpatient consultations carried out over a 12-month period (23.5/month) [16]. Additionally, our hospital has a dermatology ward with 15 beds (plus five supplementary beds) (mean admission: 359 patients/year) where severe dermatological diseases are managed by dermatologists. These patients were not included.

Consistent with our analysis, previous studies have highlighted that most dermatological abnormalities in hospitalized patients, leading to dermatology consultation, are common skin diseases, including skin infections, eczema, and drug eruptions (table 3) [4-15].
The high prevalence of reactive erythemas can be justified by the diversity of drugs prescribed during admissions [9, 12]. Potentially severe dermatoses such as Stevens-Johnson syndrome/toxic epidermal necrolysis represented 0.7% of all cases. Considering the overall low incidence of these diseases (one to two per million cases per year), this number of cases might reflect the reality in a tertiary hospital. Skin infections are common in inpatients, particularly in immunocompromised and elderly patients. Inflammatory skin disorders are one of the most common disorders in dermatology. Thus, these groups also represented the main reasons for inpatient consultation. Other contributors, especially for irritant contact dermatitis, are confinement to bed, sweating, antiseptics, dressings, diapers and monitoring catheters or tubes [9, 12]. In this analysis, neoplasms also led to dermatology inpatient consultation, probably due to the lack of experience about skin oncology in other specialties, and sometimes the need for a cutaneous biopsy for definitive diagnosis. Skin signs of systemic disease were also a significant group, confirming that mucocutaneous manifestations are important markers of internal organ diseases. The urticaria group included only two cases of angioedema. In our hospital, angioedema is generally managed by immunoallergology. Comparable to other studies (table 3) [4-15], internal medicine was the department that requested the most inpatient consultations (33.7%). This result may reflect the number of patients admitted to their care, polymedication, immunosuppression and multiple comorbidities [9, 12]. Other frequent requests were from haematology (9%), paediatrics (8.6%) and the intensive care unit (6.2%). Hospitalized patients with haematological malignancies are a highly specialized referral population, medically

### Table 1. Disease groups presented in descending order of frequency from A–N.

| Group of diseases                      | Total (Total consultations) |
|----------------------------------------|------------------------------|
| A - Infections and parasitic diseases  | 317 (30.1%)                  |
| Bacterial infections                   | 93 (8.8%)                    |
| Lower leg cellulitis                   | 52 (4.9%)                    |
| Folliculitis                           | 11 (1.0%)                    |
| Ectyma gangrenosum                     | 5 (0.5%)                     |
| Abscess                                | 5 (0.5%)                     |
| Impetigo                               | 5 (0.5%)                     |
| Periorbital cellulitis                 | 5 (0.5%)                     |
| Others                                 | 10 (1.0%)                    |
| Viral infections                       | 90 (8.6%)                    |
| Oropharyngeal and genital HSV infections, eczema herpeticum | 36 (3.4%) |
| Varicella & herpes zoster reactivation | 34 (3.2%)                    |
| Others                                 | 20 (1.9%)                    |
| Fungal infections                      | 80 (7.6%)                    |
| Candidiasis                            | 52 (4.9%)                    |
| Dermatophytosis                        | 51 (4.9%)                    |
| Others                                 | 14 (1.3%)                    |
| Parasitic infections                   | 47 (4.5%)                    |
| Scabies                                | 44 (4.2%)                    |
| Pediculosis                            | 3 (0.3%)                     |
| Sexually-transmitted infections        | 7 (0.7%)                     |
| B - Inflammatory skin disorders        | 190 (18.1%)                  |
| Eczema                                 | 100 (9.5%)                   |
| Psoriasiform disorders                 | 27 (2.6%)                    |
| Irritant and allergic contact dermatitis | 25 (2.4%)                 |
| Stasis dermatitis                      | 21 (2.0%)                    |
| Seborrheic dermatitis                  | 17 (1.6%)                    |
| C - Reactive erythemas                 | 186 (17.7%)                  |
| Maculopapular drug eruption            | 152 (14.4%)                  |
| Other drug eruptions                   | 24 (2.4%)                    |
| Stevens–Johnson Syndrome and Toxic Epidermal Necrolysis | 7 (0.7%) |
| Erythema multiforme                    | 3 (0.3%)                     |
| D - Skin neoplasms                     | 56 (5.3%)                    |
| Non-melanoma skin cancers              | 22 (2.1%)                    |
| Benign neoplasms                       | 19 (1.8%)                    |
| Lymphoma and related diseases          | 14 (1.3%)                    |
| Melanoma                               | 1 (0.1%)                     |
| E - Skin signs of systemic disease*     | 54 (5.1%)                    |
| F - Vascular diseases                  | 48 (4.6%)                    |
| Vasculitis                             | 39 (3.7%)                    |
| Acral dry gangrene                     | 6 (0.6%)                     |
| Capillaritis                           | 3 (0.3%)                     |
| G - Urticaria                          | 35 (3.3%)                    |
| H - Adnexial diseases                  | 27 (2.6%)                    |
| Disorders of eccrine and apocrine glands | 14 (1.3%)                 |
| Acniform disorders                     | 7 (0.7%)                     |
| Hair and nail disorders                | 6 (0.6%)                     |
| I - Disorders due to physical agents*   | 26 (2.5%)                    |
| J - Chronic skin ulcers*               | 23 (2.2%)                    |
| K - Primary and secondary lesions*     | 21 (2.0%)                    |
| L - Vesiculobullous dermatoses         | 13 (1.2%)                    |
| Bullous pemphigoid                     | 11 (1.0%)                    |
| Pemphigus                              | 2 (0.2%)                     |
| M - Neutrophilic dermatoses            | 13 (1.2%)                    |
| Pyoderma gangrenosum                   | 6 (0.6%)                     |
| Behçet’s disease                       | 4 (0.4%)                     |
| Sweet syndrome                         | 3 (0.3%)                     |
| N - Other dermatoses                   | 43 (4.1%)                    |
| Prurigo nodularis                      | 13 (1.3%)                    |
| Panniculitis                           | 9 (0.9%)                     |
| Connective tissue diseases             | 7 (0.7%)                     |
| Pregnancy dermatoses                   | 5 (0.5%)                     |
| Graft-versus-host disease              | 5 (0.5%)                     |
| Genodermatosis                         | 4 (0.4%)                     |

HSV: herpes simplex virus. *This subgroup includes common warts, palmar and plantar warts and molluscum contagiosum. O Vulgar psoriasis was the most frequent diagnosis in the psoriasiform disorders group. Palmoplantar pustular psoriasis, inverse psoriasis, and pityriasis rosea were also included. *Examples included pruritus associated with systemic disease, diabetic bullae, pretibial myxedema and diabetic dermopathy. *Erythema ab igne, radiation dermatitis, and collases. *Chronic pressure ulcers, neuropathic diabetic ulcers, arterial ulcers and venous ulcers. *Ulcers, scars, plaques, papules and post-inflammatory hyperpigmentation. This group included primary and secondary lesions described in our registries without an associated presumptive diagnosis.
Table 2. Distribution according to specialty.

| Medical specialties          | Surgical specialties         |
|-----------------------------|-----------------------------|
| Internal medicine           | Obstetrics & Gynaecology    |
| 355 (33.7 %)                | 35 (3.3 %)                  |
| Haematology                 | Orthopaedics                |
| 95 (9.0 %)                  | 27 (2.6 %)                  |
| Paediatrics                 | General Surgery             |
| 90 (8.6 %)                  | 26 (2.5 %)                  |
| Intensive care unit         | Vascular Surgery            |
| 65 (6.2 %)                  | 18 (1.7 %)                  |
| Gastroenterology            | Neurosurgery                |
| 51 (4.8 %)                  | 16 (1.5 %)                  |
| Nephrology                  | Otorhinolaryngology         |
| 44 (4.2 %)                  | 14 (1.3 %)                  |
| Infectious diseases         | Cardiothoracic Surgery      |
| 36 (3.4 %)                  | 9 (0.9 %)                   |
| Pulmonology                 | Urology                     |
| 33 (3.1 %)                  | 8 (0.8 %)                   |
| Neurology                   | Other surgical specialties† |
| 33 (3.1 %)                  | 4 (0.4 %)                   |
| Psychiatry                  | Total - Surgical Specialties|
| 26 (2.5 %)                  | 157 (14.9 %)                |
| Cardiology                  |                            |
| 25 (2.4 %)                  |                            |
| Other medical specialties * | 42 (4.0 %)                  |
| Total - medical specialties | 895 (85.1 %)                |

n: number. *Rheumatology, oncology, immunodallergology, palliative medicine, radiotherapy, occupational medicine, endocrinology, burn unit. †Ophthalmology, plastic surgery, stomatology.

complex and profoundly immunocompromised [17]. They frequently develop clinically important skin diseases as well as cutaneous manifestations of systemic disease. Moreover, common cutaneous infections can present atypical or severe morphologies in immunosuppressed patients, and opportunistic infections can disseminate rapidly [1]. Paediatrics was the third specialty that most frequently requested dermatology consultations. Our results may reflect the skin manifestations associated with infections (viral exanthemas) and the development of fungal and bacterial infections secondary to immunosuppression. Intensive care units are known to accommodate complex patients. The skin is a highly interdisciplinary organ and an important marker of internal disease [18]. It is no surprise that this specialty is in the top five requesting departments. As confirmed by this analysis, there is a trend for medical departments, rather than surgical departments, to request more dermatological consultations.

The number of outpatients in our dermatology emergency department decreased in 2020. The impact of COVID-19 on health systems and fear in the population hindering access to health care institutions might have resulted in reduced access to outpatient dermatology consultations or emergency rooms. Interestingly, during the five-years period, involving only COVID-free patients, there was an increasing number of inpatient dermatological consultations per year, including in 2020, a pandemic year. In our hospital, the presence of dermatological symptoms of any severity is sufficient to justify a clinical evaluation by a dermatologist. This was true before and after COVID-19, and it would appear that our inpatient emergency service was requested in a similar pattern during 2020.

The main limitation of this study is that it is a retrospective study based on clinical records, without analysis of variables such as: differential diagnoses provided by the referral specialties, severity of disease, diagnostic procedures, changes in the course of treatment and follow-up. In our hospital, requesting specialties usually don’t have a diagnostic hypothesis. Dermatologic evaluation is requested to provide a presumptive/definite diagnosis and treatment recommendation. Thus, in this retrospective analysis, due to the lack of corresponding data, it is not possible to accurately determine severity of the disease and quantify the impact of our consultation on changing the diagnosis, treatment, or admission length. Prospective studies including the analysis of such data are needed to document the impact of dermatology inpatient consultation on hospital wards.

We believe that this is a valuable review of 1,052 patients, being among the largest series reported to date. The similarities to other studies suggest our results may be generalizable to other analogous hospitals. Inpatient dermatological consultations grant access to expert management of drug-induced dermatoses, flares of chronic skin diseases, skin manifestations of systemic diseases and cutaneous infections.

Acknowledgments and disclosures. Acknowledgments: none. Financial support: none. Conflicts of interest: none.
Table 3. Literature review.

| Reference             | Institution/country                        | Total | Study period months | Departments with the greatest demand | Most frequent diagnoses                                                                 |
|-----------------------|--------------------------------------------|-------|---------------------|---------------------------------------|-----------------------------------------------------------------------------------------|
| Sheretz et al. 1984   | Gainesville Hospital, Florida, USA         | 705   | 12                  | Not available                         | Systemic diseases manifestations 9.4% Drug reaction/dermatitis 9.2% Superficial dermatophyte/Candida 9.1% |
| Hardwick et al. 1986  | Groote Schuur Hospital Cape observatory, South Africa | 500   | 16                  | Internal medicine 45.6 % General surgery 10.6 % Obstetrics and gynaecology 4.8 % | Skin signs of systemic disease 23.5 % Dermatitis 17.1 % Drug reaction 10.5% Superficial fungal infections 7.0% |
| Falanga et al. 1994   | University of Miami, USA                   | 591   | 8                   | Internal medicine 39 % Emergency department 16 % Paediatrics 14 %               | Drug eruption 8.8 % Atopic dermatitis 5.1 % Herpes simplex 5.1 % Dermatophyte infection 3.2 % Contact dermatitis 3.2% |
| Fischer et al. 2004   | University Hospital Martin-Luther, Halle, Germany | 2390  | 17                  | Internal medicine 42.8 % Paediatrics 11.7 % Neurology 9.9 % Cardiothoracic surgery 5.7 % | Infectious diseases 24.4% Candidiasis 23.9 % Allergic dermatitis 9.2 % Eczema 12.4 % |
| Antic et al. 2004     | Kantonsspital, Aarau, Switzerland          | 1290  | 36                  | Internal medicine and subspecialties                                          | Infection-related dermatoses 20.5% Eczema 12.6% Malignant cutaneous tumours and malignan visceral conditions 11.2% |
| Peñate et al. 2009    | Hospital Insular, Las Palmas, Spain        | 3144  | 84                  | Internal medicine 21.5 % Paediatrics 11.4 % Neurology 8.3 % Infectious diseases 6.2% | Contact dermatitis 8.9 % Drug eruption 7.4 % Candidiasis 7.1 % Seborrhoeic dermatitis 5.3% |
| Maza et al. 2009      | CHU Timone, CHU Sainte-Marguerite, CHU Nord; Hôpital militaire (HIA) Laveran | 336   | 3                   | Medical specialties 60.8 % Emergency service 11.6 % General surgery 10.5 % | Elementary lesions, symptoms, or non-specific eruptions 56 % Recommendations for treating infectious skin diseases 17 % Inflammatory diseases 7 % Skin cancer 5 % Recommendations for nursing care 14 % |
| Ahmad et al. 2009     | Multicentric                               | 703   | 60                  | Not specified                                                        | Skin infections 22 % Atopic dermatitis 12 % Psoriasis 8 % Drug reactions 8 % |
| Mancusi et al. 2010   | Hospital das Clinicas FMUSP; São Paulo, Brazil | 313   | 4                   | Internal medicine 24 % Neurology 12 % Cardiology 11 % Infectious diseases 8 % Paediatrics 8 % | Infectious and parasitic diseases 25.8 % Eczematous diseases 16.6 % Drug reactions 14 % |
| Lorente et al. 2012   | Hospital Universitario Virgen dell Rocio, Spain | 429   | 12                  | Internal medicine 27 % Haematology 15 % General surgery 12 %               | Inflammatory skin conditions 36.2% Infectious skin diseases 26.5% Autoimmune diseases 10.10 % |
| Galimberti et al. 2016| Cleveland Clinic, Cleveland, OH, USA       | 691   | 12                  | Internal medicine 45 % Surgery 12% Haematology/ oncology 9 % Paediatrics 7 % | Simple conditions (59.5%): contact dermatitis (59 cases), herpes simplex virus/varicella zoster virus infection (40 cases), atopic dermatitis (18 cases), and seborrhoeic keratosis (15 cases); Complex conditions (40.5%): adverse drug reactions (90 cases), connective tissue disease (36 cases), and graft-versus-host disease (17 cases) |
| Chavez-Alvarez et al. 2019 | Hospital Dr. Jose Eleuterio Gonzalez, Monterrey, Mexico | 1059  | 36                  | Internal medicine 75 % Neurosurgery 6.4 % General surgery 5.8 % Psychiatry 4.6 % Obstetrics and gynaecology 3.3%Orthopaedics and traumatology 1.7% | Drug eruption (138 patients) Adnexal diseases (126 patients) Viral dermatoses (106 patients) |
| Present analysis      | Hospital de Santa Maria, Lisboa, Portugal   | 1052  | 60                  | Internal medicine 33.8 % Haematology 9 % Paediatrics 8.6 % Intensive care unit 6.2 % | Infections, infestations, and bites 29.9 % Infectious skin disorders 17.9% Reactive erythemas 17.1 % Systemic and metabolic diseases 5.6 % Skin neoplasms 5.6 % |
References

1. Biesbroeck LK, Shinohara MM. Inpatient consultative dermatology. Med Clin North Am 2015; 99: 1349-64.
2. Martínez-Morán C, Borbujo J. Hospitalization of dermatologic patients: why, when, and where? Actas Dermosifiliogr (Spanish) 2017; 10: 395-9.
3. Strazzulla L, Cotliar J, Fox LP, et al. Inpatient dermatology consultation aids diagnosis of cellulitis among hospitalized patients: a multi-institutional analysis. J Am Acad Dermatol 2015; 73: 70-5.
4. Sherertz EF. Inpatient dermatology consultations at a medical center. Arch Dermatol 1984; 120: 1137.
5. Hardwick N, Saxe N. Patterns of dermatology referrals in a general hospital. Br J Dermatol 1986; 115: 167-76.
6. Falanga V, Schachner LA, Rae V, et al. Dermatologic consultations in the hospital setting. Arch Dermatol 1994; 130: 1022-5.
7. Fischer M, Bergert H, Marsch WC. The dermatologic consultation. Hautarzt (German) 2004; 55: 543-8.
8. Antic M, Conen D, Itin PH. Teaching effects of dermatological consultations on nondermatologists in the field of internal medicine. A study of 1290 inpatients. Dermatology 2004; 208: 32-7.
9. Peñate Y, Guillermo N, Melwani P, Martel R, Borrega L. Dermatologists in hospital wards: an 8-year study of dermatology consultations. Dermatology 2009; 219: 225-31.
10. Maza A, Berbis J, Gaudy-Marqueste C, et al. Evaluation of dermatology consultations in a prospective multicenter study involving a French teaching hospital. Ann Dermatol Venereol (French) 2009; 136: 241-8.
11. Ahmad K, Ramsay B. Analysis of inpatient dermatologic referrals: insight into the educational needs of trainee doctors. Ir J Med Sci 2009; 178: 69-71.
12. Mancusi S, Festa Neta C. Inpatient dermatological consultations in a university hospital. Clinics 2010; 65: 851-5.
13. Lorente-Lavirgen AL, Bernabeu-Wittel J, Pulpillo-Ruiz Á, de la Torre-García JM, Conejo-Mir J. Inpatient dermatology consultation in a Spanish tertiary care hospital: a prospective cohort study. Actas Dermosifiliogr 2013; 104: 148-55.
14. Galimberti F, Guren L, Fernandez AP, Sood A. Dermatology consultations significantly contribute quality to care of hospitalized patients: a prospective study of dermatology inpatient consults at a tertiary care center. Int J Dermatol 2016; 55: e547-51.
15. Chavez-Alvarex S, Herz-Ruelas M, Ocampo-Candiani J, Ayala-Cortes AS, Gomez-Flores M. Dermatology inpatient consultation in Latin America: 3-year experience in our University Hospital setting. Int J Dermatol 2019; 58: 1172-4.
16. Fernandes IC, Velho G, Selores M. Dermatology inpatient consultation in a Portuguese university hospital. Dermatol Online J 2012; 18: 16.
17. Tracey EH, Forrestel A, Rosenbach M, Micheletti RG. Inpatient dermatology consultation in patients with hematologic malignancies. J Am Acad Dermatol 2016; 75: 835-6.
18. Itin PH. Dermatologic consultations in the hospital ward: the skin, an interdisciplinary organ. Dermatology 2009; 219: 193-4.