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Acute Urticaria in Hospitalized Patients at the Dermatology Clinic for the Years 2016-2017

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Abstract

Acute urticaria is a common dermatological condition, especially among individuals with atopy. It is characterized by the appearance of hives, red, raised spots on the skin, which develop quickly and may last for minutes or hours. This study aims to examine the frequency and influencing factors of acute urticaria in the Dermatology Clinic in Prishtina during the period from January 2016 to December 2017. The analysis includes factors such as month, gender, age group, residence, season, and treatment. The results show that acute urticaria is one of the most common conditions in this clinic, with patients mainly from the Prishtina region. Furthermore, the study showed that the condition is more prevalent during the summer season. Treatment of acute urticaria requires care and patience, as symptoms often resolve on their own but may require hospital intervention for management and prevention of complications.

Keywords

Angiotensin-Converting Enzyme, Immunoglobulin E, Immunoglobulin G, Non-Steroidal Anti-Inflammatory, University Clinical Center of Kosovo.

INTRODUCTION

Acute urticaria is a prevalent dermatological condition, often resulting from allergic reactions, characterized by the sudden onset of itchy hives. These urticarial lesions, also known as exudative papules, develop rapidly and typically resolve within hours without leaving residual marks. While the condition is commonly self-limiting, its potential to cause significant discomfort warrants thorough clinical and etiological understanding.

The pathogenesis of acute urticaria is primarily mediated by histamine released from mast cells and basophils, often triggered by immune and non-immune mechanisms. Contributing factors include food allergens, medications, environmental exposures, and underlying diseases. The clinical presentation is marked by erythematous, raised wheals of varying sizes, often accompanied by pruritus or burning sensations. The transient nature of the lesions and their exudative, non-cellular nature distinguish acute urticaria from other dermatologic conditions.

This study investigates the prevalence, demographic distribution, seasonal variation, and treatment approaches for acute urticaria among patients hospitalized at the Dermatology Clinic in Prishtina from January 2016 to December 2017. The aim is to identify patterns and contributing factors to improve understanding and management of this condition. By categorizing patients based on age, gender, season, and treatment modalities, the study provides a comprehensive overview of acute urticaria in a hospital setting.

ACUTE URTICARIA: ETIOPATHOGENESIS, CLINICAL FEATURES, AND MANAGEMENT

Acute Urticaria is a common condition, mostly allergic in nature, characterized by the rapid appearance of hives accompanied by itching. It is a monomorphic dermatosis marked by the appearance of exudative papules called urticaria, which develop quickly, last for several hours, and usually disappear without a trace [1].

***Etiopathogenesis*:** The etiopathogenesis of acute urticaria can be caused by food substances, medications, environmental factors, everyday use products, insect stings, as well as diseases or pathological conditions in the body [2].

Non-allgergic: Viral infections (especially in children), stress, exposure to heat, cold or physical pressure [3].

Figure 1. Clinical appearance of a patient with Acute Urticaria

***Food Substances*:** Food substances cause around 20% of acute urticaria cases. The most commonly implicated foods are protein-rich foods, such as sausages, milk, cheese, shellfish, as well as chocolate, rice, peas, soy, strawberries, tomatoes, potatoes, apples, and carrots, along with alcoholic beverages like wine and liqueurs. The causative agents of

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acute urticaria may also include substances used for food preservation, such as salicylates, benzoates, sulfites, benzoic acid, nitrites, nitrates, antioxidants, and azo-dyes. The reaction to food proteins is usually delayed, while the reaction to food preservatives is typically rapid [1].

***Medications*:** The most common medications that cause acute urticaria include salicylates, penicillin, antipyrine, pyrazolones, insulin, and orthodontic materials [4].

***Environmental Factors*:** Environmental factors that can trigger acute urticaria include pollen, house dust, or dust in the workplace. Non-allergic factors, such as cold or hot objects, sunlight, water at any temperature, fatigue, as well as stings from bees, wasps, or hornets, can also contribute to the condition [1].

Figure 2. Acute Urticaria caused by pollen

***Everyday Use Items*:** Items that may cause acute urticaria include toothpaste, and less commonly deodorants or cosmetic products [5].

Diseases: Diseases such as dermatomycosis, candidiasis, trichomoniasis, and intestinal helminthiasis are common infectious causes of acute urticaria. The activation of the immune response, due to bacterial or parasitic infections, triggers the release of histamine from mast cells leading to the development of hives [6].

***Pathogenesis*:** The pathogenesis of acute urticaria involves the activation of mast cells, leading to the release of histamine and other mediators such as leukotrienes, which cause vasodilation and increased vascular permeability [7]. Histamine, primarily produced and stored in mast cells and basophils, plays a central role in the formation of hives. In addition to histamine, other mediators involved include eosinophilic and neutrophilic chemotactic factors, platelet-activating factor, leukotrienes, serotonin, kinin, acetylcholine, prostaglandins, anaphylatoxins, substances associated with anaphylaxis, and substances that cause fibrinogen release (H-substances). Circulating antibodies (found in IgE) react with allergens, leading to the release of histamine from mast cells. Mediators may also include complement (C3a, C5a), which releases anaphylatoxins and degranulates mast cells. The non-allergic form of acute urticaria is caused by direct effects on mast cells from certain substances (proteolytic enzymes, codeine, aspirin, insect venom, nettles, and some food types, as well as physical agents). When histamine accumulates in large amounts in tissues, it causes the dilation of blood vessels and increases their permeability, allowing fluid to pass into the tissues and create visible hives. In acute urticaria, the process occurs in the upper layer of the dermis [8].

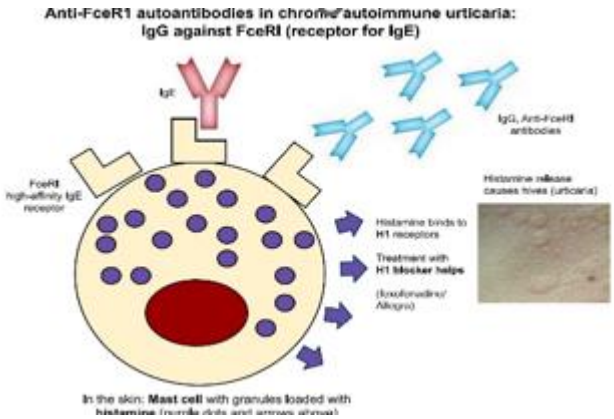

Figure 3. Schematic representation of the pathogenesis of Acute Urticaria

Clinical Signs: In acute urticaria,it is characterized by the appearance of red,itchy plaques that appear suddenly and can resolve within 24 hours [9].The characteristic sign is the appearance of urticaria (urtica—nettle, stinging). Since the process involves only the exudative component and not the cellular component, urticaria appears rapidly, within minutes, and typically lasts for several minutes or hours before subsiding. Urticaria rises above the surface of the skin, with the firmness of rubber, clear borders. It gives the impression that the skin is covered with stings. Swelling compresses the blood vessels, which is why the urticarial lesion may initially appear white, with the surface grouped like an orange peel. The size of the urticaria lesions ranges from 1-8 cm. [1]. A number of these lesions may spread over large areas of the skin. Simultaneously, several urticaria lesions are observed in the appearance phase, while others are in the disappearing phase. Due to irritation of the nerve endings, urticaria is often accompanied by intense itching, and sometimes a burning or stabbing sensation. Vesicular, bullous, or hemorrhagic forms of urticaria are rare. Urticaria does not have a typical localization. If urticaria persists for up to 30 days, it is considered an acute form of the disease. It is often hereditary and frequently linked to IgE antibodies [10]

Figure 4. Clinical appearance of a patient with acute urticaria

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***Laboratory Tests*:** "Laboratory tests, including tests for allergens (skin tests), blood tests for infections or autoimmune markers, as well as tests for specific IgE, are often used to identify allergens or possible causes of acute urticaria'' [11]. They show leukopenia and eosinophilia. Through the RAST test, a high level of IgE can be observed. Identifying the allergen as the cause of acute urticaria often fails. The application of the suspected allergen through injection,

which in positive cases gives a urticarial reaction, should be done with caution (due to the risk of anaphylactic shock). The allergen can also be identified by systematically eliminating various types of food [1].

***Diagnosis*:** The diagnosis of acute urticaria is based on the medical history, clinical signs, and laboratory tests.

***Differential Diagnosis*:** Erythema multiforme presents with lesions that last several days, on photo-exposed surfaces, and do not itch. Other conditions that may resemble acute urticaria include insect bites, erythema annulare centrifugum, erythema chronicum migrans, drug-induced exanthems, and systemic mastocytosis. [10]

Treatment: The patient should avoid alcohol, aspirin, heat, excessive fatigue, and emotional stress. If the causative factor is identified (which happens in only 25% of cases), and if it is avoided, acute urticaria will resolve. Pharmacological treatment is done with antihistamines. For acute cases, first-generation H1-histamine receptor blockers (antagonists) are preferred: diphenhydramine, hydroxyzine, doxepin, chlorpheniramine, and cyproheptadine. Some antihistamines such as fexofenadine (Telfast) 180 mg once a day, desloratadine (Neoclarityn) 5 mg once daily, cetirizine (Zirtek) 10 mg per day, or acrivastine (Semprex) 8 mg once a day are also used. In cases of anaphylactic shock, subcutaneous adrenaline (0.2 – 1.0 mg) or intravenous (0.5-1 ml of 1/1000) is administered. The dose is repeated every 15 minutes if necessary, up to a maximum of 3 doses. An antihistamine such as chlorpheniramine (Piriton) 10-20 mg, given via slow intravenous injection, is a useful supplement. Corticosteroids (methylprednisolone, dexamethasone), Vitamin C, and diet are also recommended. [1]

METHODOLOGY

A retrospective method was used for the research. The study objects were patients hospitalized at the Dermatology Clinic in Prishtina. Data were collected from the protocols of patients who were hospitalized at the Dermatology Clinic in Prishtina from January 2016 to December 2017. After the data collection, statistical processing was performed, and the results were extracted. The data were presented in the form of graphs and tables using Microsoft Excel. The data were grouped by: months, gender, age group, residence, season, and therapy. The types of literature used in this work are scientific books by well-known Albanian and foreign authors.

RESULTS

The research was conducted at QKUK – Dermatology Clinic. The study sample consisted of 332 patients admitted to the Dermatology Clinic with a diagnosis of acute urticaria during the two-year period from January 2016 to December 2017.

Table 1. Number of hospitalized patients in the dermatology clinic with acute urticaria, categorized by months for the period January 2016 – December 2017

Month	Female Gender	Male Gender	Patients Hospitalized with Acute Urticaria (2016)	Patients Hospitalized with Acute Urticaria (2017)	Total Hospitalized Patients	Percentage of Hospitalized Patients (%)
January	22	13	22	14	36	11%
February	8	12	13	8	21	6%
March	10	16	16	11	27	8%
April	9	13	11	12	23	7%
May	18	14	21	12	33	10%
June	15	17	16	17	33	10%
July	16	17	14	18	32	10%
August	20	28	25	16	41	12%
September	8	14	11	8	19	6%
October	10	14	9	17	26	8%
November	9	6	6	10	16	5%
December	13	12	7	18	25	8%
Total	156	176	171	161	332	100%
%	46.98%	53.01%	51.50%	48.49%	100%	

According to the data in Table 1, the month of August shows the highest number of patients with acute urticaria, with 41 patients, representing 12% of all patients in the period from January 2016 to December 2017. Of these, 20 are females and 28 are males. This is followed by the month of January with 36 patients, representing 11%, with 22 females and 13 males. The month with the fewest patients, based on the table, is November, with 16 patients, representing 5%.

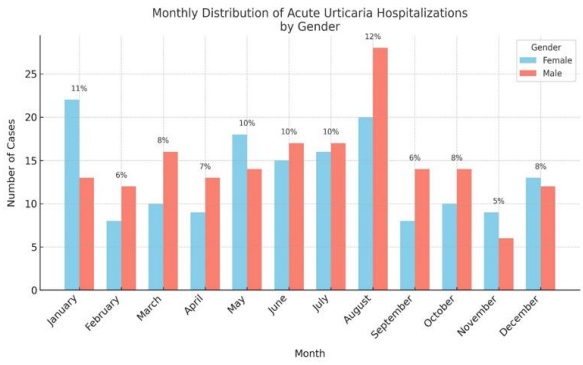

Figure 5. Number of hospitalized patients with acute urticaria at the Dermatology Clinic for the years January 2016 – December 2017, divided by months and expressed as a percentage

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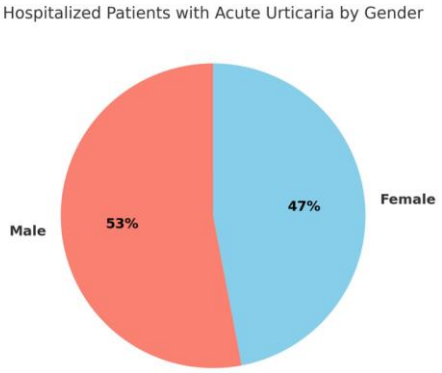

Figure 6. Number of hospitalized patients with Acute Urticaria by gender at the Dermatology Clinic for the period January 2016 – December 2017, expressed as a percentage

In Table 2, it is observed that of the 332 patients affected by acute urticaria during January 2016 – December 2017, the age group most frequently affected is 0 – 10 years, with a total of 134 cases, representing 40%. Acute urticaria cases between the ages of 11 – 20 account for 54 cases or 16%, indicating a decrease in the incidence of acute urticaria with age. In the age group 21 – 30 years, the decline continues, with 45 patients hospitalized, or 14%. As age increases, there is a further decrease in the incidence of acute urticaria, with only 2 cases observed in the 91 – 100 years age group.

Table 2. Tabular Representation of the Classification of Hospitalized Patients with Acute Urticaria at the Dermatology Clinic by Age for the period January 2016 – December 2017

Age	Female	Male	Total	%
0 – 10 years	56	78	134	40%
11 – 20 years	20	34	54	16%
21 – 30 years	20	25	45	14%
31 – 40 years	10	9	19	6%
41 – 50 years	11	3	14	4%
51 – 60 years	15	10	25	8%
61 – 70 years	13	7	20	6%
71 – 80 years	7	8	15	5%
81 – 90 years	2	2	4	1%
91 – 100 years	2	0	2	1%
Total	156	176	332	100%

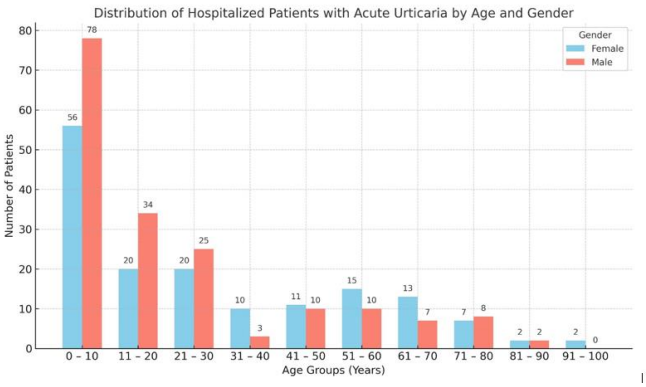

Figure 7. Classification of hospitalized patients with Acute Urticaria at the Dermatology Clinic by Age for the period January 2016 – December 2017

Table 3. Tabular Representation of the Classification of Hospitalized Patients with Acute Urticaria at the Dermatology Clinic by Residence for the period January 2016 – December 2017.

Komuna	Nr. i pacientëve të hospitalizuar	Nr. i pacientëve të hospitalizuar i shprehur në %
Prishtinë	138	41.57%
Prizren	14	4.22%
Pejë	5	1.51%
Fushë Kosovë	18	5.42%
Ferizaj	14	4.22%
Lipjan	23	6.93%
Drenas	14	4.22%
Podujevë	36	10.84%
Obiliq	11	3.31%
Malishevë	11	3.31%
Shtime	5	1.51%
Suharekë	3	0.90%
Skenderaj	6	1.81%
Gjilan	2	0.60%
Kaqanik	2	0.60%
Kamenicë	2	0.60%
Mitrovicë	5	1.51%
Klinë	5	1.51%
Viti	5	1.51%
Deqan	3	0.90%
Vushtri	10	3.01%
Totali	332	100%

Table 3. shows that a total of 332 patients with acute urticaria were hospitalized at the Dermatology Clinic from January 2016 to December 2017, with the majority from Prishtina (138 cases or 41.57%). Podujevë accounts for 36 patients, and Lipjan has 23 patients, or 6.93%, with acute urticaria. Lower incidence rates are noted for patients from other municipalities.

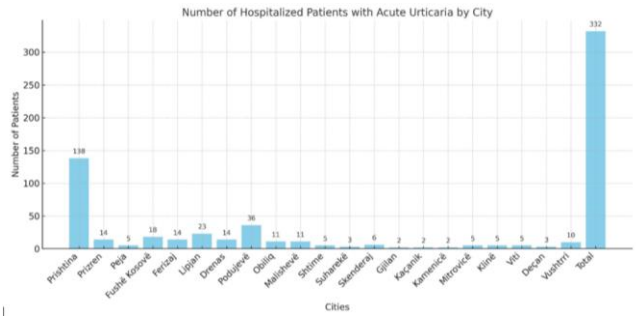

Figure 8. Classification of hospitalized patients with Acute Urticaria at the Dermatology Clinic by Residence for the period January 2016 – December 2017.

Table 4. Tabular Representation of the Classification of Hospitalized Patients with Acute Urticaria at the Dermatology Clinic by Season for the period January 2016 – December 2017

Season	Number of Patients	Percentage (%)
Spring	95	29%
Summer	101	30%
Autumn	51	15%
Winter	85	26%
Total	**332**	**100%**

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According to the data in Table 4, the Summer season shows the highest number of hospitalized patients with Acute Urticaria, with 101 cases or 30% during the period January 2016 – December 2017. Following Summer, Spring has 95 cases or 29% of the patients. In Winter, there is a decrease, with 85 patients, while the fewest patients were hospitalized in Autumn, with 51 cases or 15%.

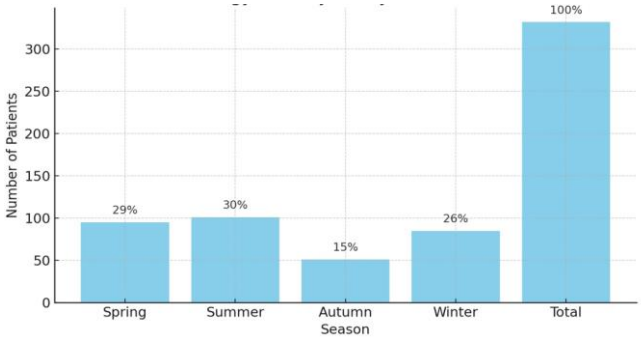

Figure 9. Classification of hospitalized patients with Acute Urticaria at the Dermatology Clinic by Season for the period January 2016 – December 2017.

Table 5. Tabular Representation of the Classification of Hospitalized Patients with Acute Urticaria at the Dermatology Clinic by the most frequently used medications in systemic treatment for the period January 2016 – December 2017.

Bari i aplikuar	Nr i rasteve	Nr. Rasteve me %
Fenkarol tab.	163	49.09%
Flonidan sir.	7	2.10%
Synopen amp.	32	9.63%
Loratadin tab.	13	3.91%
Hitrizin sir.	1	0.30%
Cetirizina sir.	4	1.20%
Dsloratadin sir.	5	1.50%
Diomex	1	0.30%
Nyripan amp.	141	42.46%
Dexason amp.	46	13.85%
Soldesan gtt.	21	6.32%
Pronison tab.	5	1.50%
Urbason amp.	2	0.60%
Prednal tab.	6	1.80%
Acidophylus	1	0.30%
Erythromycin tab.	26	7.83%
Klarythromycin tab.	16	4.81%
Amoxiclav tab.	16	44.83%
Penicillin tab.	3	0.90%
Cefaloxin tab.	2	0.60%
Ciprofliksacin tab.	3	0.90%
Doxycilin tab.	1	0.30%
Cefaclor	2	0.60%
Vitamina C	95	28.61%
Gentamicin tab.	10	3.01%
Nistatin tab.	2	0.60%
Metronidazol tab	3	0.90%
Omeprozol tab	5	1.50%
Ranital	12	3.61%
Preparate te Ca	110	33.13%
Vit B- Complex	13	3.91%
Vermox	7	2.10%

Based on the data In Fenkarol tablets are the most frequently used medication among systemic treatments for Acute Urticaria, applied in 163 cases or 49.09%. This is followed by Nyripan ampules with 141 cases or 42.46%, Calcium preparations in 110 cases or 33.13%, and so on.

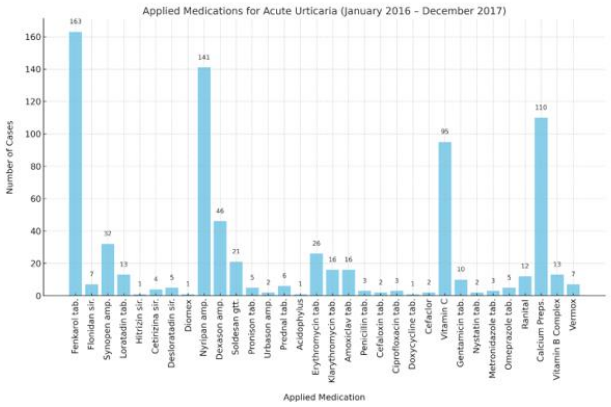

Figure 10. Graphic Representation of Systemic Therapy Application in Hospitalized Patients with Acute Urticaria at the Dermatology Clinic for the period January 2016 – December 2017.

Table 6. Tabular Representation of the Classification of Hospitalized Patients with Acute Urticaria at the Dermatology Clinic by Local Therapy for the period January 2016 – December 2017

Local Therapy	Number of Cases	Percentage (%)
Rosomed cream	2	0.60%
Chloramphenicol cream	7	2.10%
Fluidem cream	3	0.90%
Belogen cream	2	0.60%
Coderm cream	5	1.50%
Triamcinolone cream	1	0.30%
Compresses	3	0.90%
Panthenol ointment	3	0.90%
Travazol cream	2	0.60%
Salicylic Acid	1	0.30%

Shows the types of local therapy used, with Chloramphenicol cream being the most commonly applied, used in 7 cases or 2.10%.

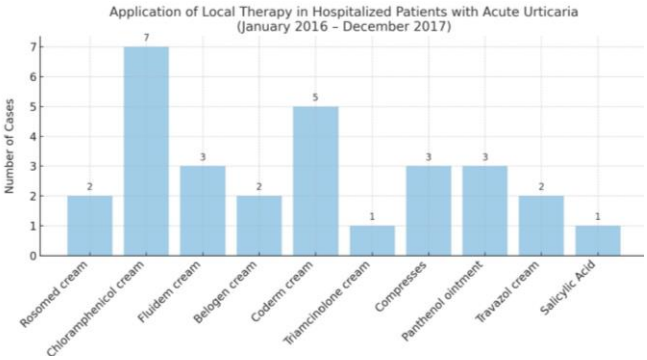

Figure 11. Graphic Representation of Local Therapy Application in Hospitalized Patients with Acute Urticaria at the Dermatology Clinic for the period January 2016 – December 2017

DISCUSSION

Acute urticaria is one of the most common diseases at the Dermatology Clinic in Prishtina. The monthly analysis shows that the highest number of patients is in August, with 41 patients or 12%, of which 20 are female and 21 are male,

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followed by January with 36 patients or 11%, where 22 are female and 13 are male.

According to the study conducted on hospitalized patients at the Dermatology Clinic in Prishtina over the period January 2016 to December 2017, the total number of patients affected by acute urticaria is 332, with a male dominance of 176 cases (53.01%) compared to 156 female cases (46.99%).

In the years 2016-2017, the age group most affected by acute urticaria is 0–10 years, with a total of 134 cases or 40% of the 332 total cases over these two years. Cases of acute urticaria among patients aged 11–20 make up 54 cases or 16%, showing a decrease in the incidence of acute urticaria as age increases. With further increases in age groups, there is a significant decrease in the incidence, with only 2 cases (1%) of acute urticaria in the 91–100 age group.

During the study conducted at the Dermatology Clinic from January 2016 to December 2017, the largest number of patients came from Prishtina, with 138 cases (41.57%), followed by Podujevë with 36 cases (10.84%) and Lipjan with 23 cases (6.93%).

The highest number of hospitalized cases with acute urticaria occurred in summer, with 101 cases or 30%, followed by spring with 95 cases or 29%. There is a decrease in hospitalized cases in winter, with 51 cases or 26%.

According to the data, Fenkarol tablets are the most commonly used systemic medication for the treatment of acute urticaria, applied in 163 cases or 49.09%. This is followed by Nyripan ampules with 141 cases or 42.46%, Calcium preparations with 110 cases or 33.03%, and so on.

Among local therapies, Chloramphenicol cream is the most used, with 7 cases or 2.10%.

CONCLUSION

Considering that acute urticaria is a common disease and often requires hospital treatment, we observed that there were many cases at the Dermatology Clinic in Prishtina. This disease requires dedication, patience, and increased care for recovery.

The total number of hospitalized patients at the Dermatology Clinic over these two years (January 2016 – December 2017) was 332, with male patients dominating with 176 cases or 53.01%, compared to 156 female cases or 46.98%.

This retrospective study indicates that the age group 0–10 years or 40% had the highest number of cases, while there was a decrease in cases among older age groups.

According to the study, the majority of acute urticaria cases are from Prishtina, with 138 cases or 41.57%.

In the summer season, the highest number of hospitalized patients with acute urticaria was observed, with 101 cases or 30%.

According to the data, Fenkarol tablets are the most commonly used systemic medication for acute urticaria treatment, applied in 163 cases or 49.09%. Following are Nyripan ampules with 141 cases or 42.46%, Calcium preparations with 110 cases or 33.03%, and so on.

The most frequently used local therapy is Chloramphenicol cream with 7 cases or 2.10%.

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