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THE CHARACTERISTICS OF PATIENTS WITH VASCULITIS AT NGOERAH HOSPITAL DURING THE 2020-2024 PERIOD

Gusti Ayu Dea Dwi Apriza Dharmayani[1], Indira Dharmasamitha[2]
[1, 2]Department of Dermatology and Venereology
[1,2]Faculty of Medicine, Udayana University/Ngoerah General Hospital, Denpasar
[1]081338099408, deaapriza@gmail.com

ABSTRACT

Introduction: Vasculitis is an uncommon condition defined by inflammation of the blood vessels, which can lead to ischemia and subsequent organ damage. Although it affects individuals across all age groups, the precise clinical progression of vasculitis remains inadequately characterized. The study aims to determine the characteristics of patients with vasculitis. **Objective**: This study aims to examine the clinical characteristics of patients diagnosed with vasculitis who attended the Dermatology and Venereology Outpatient Clinic at Ngoerah Hospital between January 2020 and January 2024. The findings are expected to facilitate the identification of patient profiles, providing a valuable reference for prevention and management strategies. **Methods**: This is a retrospective, descriptive study which utilized secondary data from medical records. The sampling method used was a non-random method through total sampling. The variables considered included age, gender, classification, medical history, risk factors, supporting examinations and management strategies. Patient data will be described using descriptive statistical methods. **Results**: A total of 27 patients diagnosed with vasculitis were identified. Of these, 23 (85.19%) were female, with the 18-25-year age group being the most prevalent (40.74%). Urticarial vasculitis was the most commonly observed classification, occurring in 6 cases (22.22%). Regarding risk factors, 13 patients (48.15%) did not exhibit any known associated risk factors, while 6 patients (22.22%) had risk factors related to other conditions. In terms of medical history, 12 patients (44.44%) reported no significant prior conditions. All cases (100%) were confirmed using multiple supporting examinations and 9 patients (33.33%) received combination therapy with both oral and topical corticosteroids.. **Conclusions**: This study provides important data on the characteristics of vasculitis patients, establishing a foundation for developing effective prevention and therapeutic strategies.
Keywords: *characteristics, vasculitis, diagnosis, therapy*

INTRODUCTION

Vasculitis is a group of rare conditions characterized by inflammation of the blood vessels, leading to ischemia and organ damage. Vasculitis can affect individuals of all ages, but certain conditions show a distinct age-related tropism. Classical descriptive epidemiology can provide some clues, such as evidence of clustering or cyclical patterns of occurrences that may suggest a possible infectious etiology.[1] The clinical manifestations of vasculitis encompass a wide range of symptoms that can involve the musculoskeletal system, skin, eyes, nerves, lungs, kidneys and heart. Vasculitis demonstrates a broad spectrum of symptoms such as urticaria and purpura to serious complications such as stroke, heart infarction or kidney damage. The triggers of vasculitis remain the subject of intensive research, with genetic, infectious and environmental factors all playing a role in the development of the disease. Diagnosis of vasculitis involves a thorough evaluation, including medical history, physical examination, supporting tests and often requires tissue biopsy for more definitive confirmation.[2] The management of vasculitis includes immunosuppressive therapy to alleviate inflammation and sometimes requires a multidisciplinary approach, depending on the organs involved. While this therapy is long-term, physical rehabilitation and psychosocial support are crucial to improving the patient's quality of life.[3] Little is known about the characteristics that lead to disease progression, which is why the researcher is interested in investigating the characteristics of vasculitis patients at the Dermatology and Venereology Outpatient Clinic of Ngoerah Hospital from January 2020 to January 2024.

METHODS

This is a retrospective, descriptive study which utilized secondary data from medical records. The study was conducted by reviewing the registration data of vasculitis patients who visited the Dermatology and Venereology Outpatient Clinic at Ngoerah Hospital and by examining their medical records. The research sample was obtained from an accessible population selected based on inclusion and exclusion criteria. The sampling method used was a non-random method through total sampling. The variables considered included age, gender, classification, medical history, risk factors, supporting

examinations and management strategies. Data collection was carried out using Microsoft Excel, while data analysis was performed using the SPSS for Windows 21 program. Data on the prevalence of vasculitis patients, medical history, risk factors, supporting examinations and patient treatment will be described using descriptive statistical methods. Numerical data will be presented using mean/median and standard deviation. Nominal data will be presented in the form of proportions.

Results

The total number of vasculitis patients at the Dermatology and Venereology Outpatient Clinic of Ngoerah Hospital from January 2020 to January 2024 was 27 patients. The data was processed to assess the characteristics of age, gender, classification, medical history, risk factors, supporting examinations and management received by the patients. The characteristics of the patients can be seen in **Table 1**.

Table 1. Characteristics of Gender, Age, Classification, Medical History, Risk Factors, Supporting Examinations and Management

No	Characteristics	Total (n)	Percentage (%)
1.	**Gender**		
	Male	4	14.814%
	Female	23	85.185%
2.	**Age**		
	< 18 years	0	0%
	18-25 years	11	40.740%
	25-45 years	7	25.930%
	>45 years	9	33.333%
3.	**Classification**		
	Bacterial Vasculitis	3	11.111%
	Nodular Vasculitis	2	7.407%
	Urticarial Vasculitis	6	22.222%
	Primary Vasculitis	1	3.703%
	Obliterans Vasculitis	1	3.703%
	Unclassified	4	14.814%
	Long Standing Vasculitis	1	3.703%
	Leucocytoclastic Vasculitis	5	18.518%
	Pigmented Purpuric	1	3.703%
	Granulomatous	1	3.703%
	Erythema Purpura	1	3.703%
4.	**Medical History**		
	Systemic Lupus Erythematosus (SLE)	5	18.518%
	Diabetes Mellitus	3	11.111%
	Infection	4	14.814%
	Non Systemic	3	11.111%
	Unclassified	12	44.444%
5.	**Risk Factors**		
	Infection	5	18.518%
	Medication	2	7.407%
	Other Diseases	6	22.222%
	Unclassified	13	48.148%
6	**Supporting Examinations**		
	Complete Blood Count (CBC)		
	Inflammatory Markers (CRP)		
	Erythrocyte Sedimentation Rate (ESR)		
	Epidermal Growth Rate (eGFR)		
	Basal Membrane Anti Glomerular Antibody Serology Test		
	More Than One Test (e.g., CBC,	27	100%

	SGOT, CRP, ASTO, PA, etc)		
7	**Management**		
	Combination Corticosteroids	9	33.333%
	Oral Corticosteroids	5	18.518%
	Topical Corticosteroids	2	7.407%
	Immunosuppressants	2	7.407%
	Antibiotics	1	3.703%
	Non Corticosteroids	2	7.407%
	Observation	6	22.222%
	Total	27	100%

DISCUSSION

Vasculitis affects individuals regardless of gender, age or ethnicity.[3,4] Understanding disease patterns is fundamental for planning healthcare services and epidemiological or seasonal evidence may be important for understanding pathogenesis and the role of infectious and environmental factors. Furthermore, comparing the incidence of vasculitis between different populations can help understand genetic risk factors.[5] These diseases have similar microscopic pathology, but they have quite different epidemiology, vascular distribution and genetics.[6] However, epidemiological tendencies, including genetics, are not strong enough to completely exclude the diagnosis of certain forms of vasculitis in an individual and exceptions to typical epidemiology occur regularly.[7] This approach emphasizes the importance of always seeking the underlying cause in patients with vasculitis.[8] A total of 27 outpatient cases were recorded at the Dermatology and Venereology Outpatient Clinic of Ngoerah Hospital between January 2020 and January 2024. Among these, 23 cases (85.19%) occurred in females and 11 cases (40.74%) were predominantly within the 18-25-year age group.

Urticarial vasculitis is a rare clinicopathological entity characterized by episodes of chronic or recurrent urticarial lesions. Its skin manifestations can be challenging to differentiate from chronic idiopathic urticaria; however, lesions persisting for 24 hours or more, often leaving hyperpigmentation, aid in its distinction. Due to the condition's rarity, its exact prevalence remains unclear.[3,9] In this study, urticarial vasculitis was the most common classification, accounting for 6 cases (22.22%).

The etiology of vasculitis is complex and multifactorial, involving various triggers and underlying factors. Typically, vasculitis is categorized as either primary (idiopathic) or secondary, with each form having distinct etiological considerations.[10] Several infections, viral, bacterial and fungal have been associated with the development of vasculitis; for instance, hepatitis B and C infections are known contributors.[11] Autoimmune mechanisms are also significant, as the immune system may erroneously attack blood vessels, leading to inflammation and damage. Additionally, genetic predisposition is observed in certain types, such as granulomatosis with polyangiitis (GPA) and microscopic polyangiitis (MPA), where specific genetic factors may increase susceptibility.[12] Environmental exposures, including chemicals, pollutants and toxins are considered potential contributing factors, especially in individuals with higher susceptibility.[13,14] Analysis based on risk factors revealed that 13 cases (48.15%) had no identifiable risk factors, whereas 6 cases (22.22%) presented with risk factors related to other diseases. Regarding medical history, 12 cases (44.44%) reported no significant prior conditions.

For diagnostic purposes, all 27 cases (100%) were evaluated using multiple supporting examinations, such as complete blood counts, inflammatory markers, epidermal growth assessments and histopathological analyses. Although no single laboratory test can definitively diagnose vasculitis, these tests are essential in the overall evaluation.[15,16] Selected serological tests may help determine the underlying etiology; however, they are complementary and should not replace biopsy, particularly when skin lesions are readily accessible.[4,16]

Screening for kidney disease is critical when assessing patients with suspected vasculitis, as renal involvement is common and may remain asymptomatic until end-stage failure. Urinalysis, including dipstick and microscopic examinations should be performed on all suspected cases and repeated for patients with vasculitis affecting small or medium sized vessels in other organs. Serum creatinine measurement is vital for estimating the glomerular filtration rate (GFR), as even minor changes in creatinine within the normal range can indicate early decreases in GFR. Both urinalysis and serum creatinine are complementary tests; neither alone is sufficient to rule out kidney disease. Liver function tests may offer early indications of hepatitis B or C infections associated with vasculitis, though they do not replace serological testing and normal results do not exclude infection. A complete blood count is also recommended, as many patients with active vasculitis exhibit anemia or thrombocytosis findings that are common in various inflammatory conditions. Severe anemia may suggest significant gastrointestinal involvement, while total and differential white blood cell counts can indicate infection or hematologic malignancies. It is important to note that leukocytosis is typically nonspecific and may result from glucocorticoid therapy.[4]

Autoantibody testing is crucial for identifying the specific type of vasculitis, yet serological tests should always be interpreted alongside clinical assessment. For patients presenting with pulmonary hemorrhage or acute kidney insufficiency accompanied by active urinary

sediment, testing for ANCA, anti-glomerular basement membrane (GBM) antibodies and antinuclear antibodies (ANA) is recommended.[4] Inflammatory markers such as C-reactive protein (CRP) identified 1 case (3.70%) of long standing vasculitis and 1 case (3.70%) of leukocytoclastic vasculitis. Although CRP testing is necessary for patients with leukocytoclastic vasculitis, it is insufficient when systemic involvement is present. The erythrocyte sedimentation rate (ESR) was elevated in 2 cases (7.41%) of urticarial vasculitis, 1 case (3.70%) of primary vasculitis, 1 case (3.70%) of unclassified vasculitis and 1 case (3.70%) of long standing vasculitis; an increased ESR is the most common laboratory abnormality in urticarial vasculitis. Additionally, kidney function as measured by the estimated glomerular filtration rate (eGFR) was abnormal in 1 case (3.70%) of primary vasculitis.

When formulating a treatment regimen, the severity of the current presentation, the potential for disease progression and the likelihood of relapse must be considered. Cases of vasculitis with a prolonged course or severe manifestations generally require a two phase treatment approach: induction of remission followed by maintenance therapy.[17] Induction typically involves high-dose glucocorticoids, maintained at a stable dose in combination with short-term (3-6 months) treatment using potent, fast-acting immunosuppressive agents. Vasculitis often develops rapidly and many forms have a high relapse rate.[4,17] Glucocorticoids remain the cornerstone of therapy due to their rapid action, reliable response and the extensive clinical experience regarding their dosing and side effects. However, additional agents are frequently prescribed when glucocorticoids alone are insufficient to achieve disease control or when the required high doses lead to significant toxicity. The acute and chronic toxicities associated with prolonged glucocorticoid use, as well as the potential for cumulative damage, should not be underestimated.[16,17] Furthermore, studies indicate that prednisolone is commonly used in maintenance therapy for patients with more extensive or severe skin involvement. The typical dosage is 0.5-1.0 mg/kg/day until improvement of skin lesions is observed, followed by a gradual taper over several weeks to months.[18] Various additional immunosuppressive agents are used for the treatment of vasculitis.[19] Antihistamines may also be administered to alleviate swelling and pain associated with skin lesions.[20] According to the study's therapy variables, 9 cases (33.33%) received a combination of oral and topical corticosteroids, 5 cases (18.52%) were treated with oral corticosteroids alone and 2 cases (7.41%) were managed with immunosuppressive agents.

CONCLUSIONS

In this case, a total of 27 vasculitis cases were recorded from patients who sought treatment at the Dermatology and Venereology Outpatient Clinic, Ngoerah Hospital, from January 2020 to January 2024. Among these, 23 patients (85.19%) were female. The majority of cases (40.74%) were in the 18-25 age group. The most common type of vasculitis was urticarial vasculitis, with 6 cases (22.22%). Twelve cases (44.44%) had no previous history of disease. Thirteen cases (48.15%) showed no association with risk factors for vasculitis. A total of 27 cases (100%) underwent more than one supportive test to establish the diagnosis of vasculitis. Nine cases (33.33%) were treated with a combination of oral and topical corticosteroids, 5 cases (18.52%) were given oral corticosteroids and 2 cases (7.41%) were treated with immunosuppressive agents.

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