SERUM IMMUNOGLOBULIN ESTIMATION IN 30 CASES OF CUTANEOUS VASCULITIS

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Clinically diagnosed and histopathologically proved 30 cases of cutaneous vasculitis (CV) were collected from Dermatovenereology department. Serum immunoglobulins (Igs) estimation was done in all cases. Nineteen cases showed increased levels of Igs, 4 had decreased levels, while in 7 cases Igs levels remained normal. Seventeen had increase in IgG, 17 cases had in IgA and 10 in IgM and decrease in levels of IgM was seen in 3, and IgA in 2 cases. But the fluctuation in levels of Igs was statistically insignificant.

Key Words : Immunoglobulins, Vasculitis

Introduction

Cutaneous vasculitis (CV) refers to a group of diseases characterized clinically by the spectrum of changes ranging from erythema, urticaria to purpura, ischaemia, necrosis and infarction.[1] Immunopathogenic mechanisms are either known or strongly suspected to be the cause of lesions in all cass of CV. Sams et al have proposed that the antigen which may be a drug, Streptococcus, hepatitis B antigen or any unknown antigen, stimulates antibodies production leading to antigen-antibody complex formation, which get lodged in damaged vessels having gaps due to vasoactive factors released by aggregated platelets. Complement activation and vasoactive amines attract polymorphs (PMNL) which release lysozymes leading to necrosis of vessel wall so cause CV.[2] Deposition of Igs and complement has been demonstrated in the vessel walls.[3] Deposition of C3 frequently in association with IgG or IgA has also been demonstrated.[4] It has been reported that the types of Igs present in circulating immune complexes and in vasculitis lesions are idential.[5]

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Materials and Methods

Thirty cases of CV were selected. Detailed history was taken, general physical, systemic and dermatological examinations were conducted in all cases. Clinical diagnosis was confirmed by histopathological examination. Serum Igs estimation was done in all by Tripartigen diffusion plates supplied by Behring's Pharmaceuticals.

Results

Patients of CV exhibited both high and low levels of one or more class of Igs (Table I). Nineteen patients had increased levels, 4 had decreased levels, while 7 patients showed normal levels of serum Igs. IgA level alone was raised in one patient. Levels of IgG and IgM together were increased in 2 patients, IgM and IgA in one patient only, while IgG and IgA levels were raised in 8 patients. All the three Igs (IgG, IgM and IgA) were raised in 7 patients. On the other hand, IgM alone was decreased in 2 patients, IgA in one patient and IgM and IgA together were decreased in one patient. All three Igs were decreased in none. Seven patients showed normal levels of Igs. Increase or decrease in immunoglobulins was statistically insignificant.

Discussion

This study revealed that immunoglobulins

Table I. Serum antibodies profile in 30 cases of cutaneous vasulitis

No. of patients	Raised serum immunoglobulins								Decreased serum immunoglobulins								Normal serum immuno-globulin
	IgG	IgM	IgA	IgG & IgM	IgM & IgA	IgG & IgA	All three	Total %	IgG	IgM	IgA	IgG & IgM	IgM & IgA	IgG & IgA	All three	Total %	
30	0	0	1	2	1	8	7	63.33	0	2	1	-	1	0	0	13.33	23.33% (7 patients

in 30 cases of CV were within normal limits.

References

1. Ryan TJ. Microvascular injury. In: Major problems in dermatology. Vol 7. London: Edward Arnold, 1976: 418.
2. Sams, et al. Human necrotizing vasculitis. Immunoglobulins and complement in vessel walls of lesions and normal skin. Int J Dermatol 1975; 64:441-5.
3. Stringa, et al. Allergic vasculitis. Arch Dermatol 1967; 95:23-7.
4. Logan, et al. Periodic synopsis on vasculitis. J Am Acad Dermatol 1985; 12:716-7.
5. Wenner ND, Safai B. Circulatory immune complexes in Henoch Schonlein purpura. Int J Dermatol 1983; 22:383-5.