Hong Kong J. Dermatol. Venereol. (2019) **27**, 3-4

Editorial

Rituximab for chronic GVHD: an emerging treatment option

Chronic graft versus host disease (GVHD) after bone marrow transplantation (BMT) is due to the reaction of genetically different cells from the donor marrow against the host tissues. It is characterised by skin rash which may vary from maculopapular rash to toxic epidermal necrolysis. The rash may be accompanied by oral mucosal lesions. Apart from the skin, the liver, eyes, lungs and gastrointestinal tract may also be affected. Graft-versus-host disease classified as chronic GVHD if it occurs over 100 days after BMT and can be treated by topical steroids, PUVA, extracorporeal photophoresis or immunosuppressants such as systemic steroids, cyclosporine or mycophenolate mofetil. However, chronic GVHD can be resistant to treatment and can eventually result in severe morbidity from sclerodermoid contractures, corneal ulcers and blindness. Progressive disease is a poor prognostic indicator.

Previously chronic GVHD was considered to be a T cell-mediated condition. However, T-cell depletion has not been associated with a decreased incidence of chronic GVHD.[1] On the other hand, there is increasing evidence that B-cells are also involved in its pathogenesis.[2] in view of this, rituximab which is a monoclonal anti-CD20 antibody that was initially used to treat lymphoma and rheumatoid arthritis, has been used in chronic GVHD with increasing reports of success.[3] In this issue, Namdaroglu et al discuss the use of rituximab in chronic GVHD. Thus, rituximab provides another treatment option for resistant chronic GVHD.

Apart from chronic GVHD, rituximab has other novel applications in dermatology. For example, there have been increasing reports for its effectiveness in resistant cases of pemphigus vulgaris, bullous pemphigoid, atopic dermatitis, connective tissue diseases such as dermatomyositis and systemic sclerosis.[4] In these conditions, B cells are either involved in the pathogenesis or B cell depletion has been shown to be efficacious. There is therefore a potential for expanding the range of conditions treatable with rituximab. However, rituximab is not without side-effects. For example, tumour lysis syndrome, renal toxicity hypersensitivity reaction, and rarely progressive multifocal leukoencephalopathy (PML) are just some of the side effects that have been reported with rituximab. As the use of rituximab in these conditions is on a novel basis, constant monitoring for side-effects is essential.

Rituximab is only one example of new indications for existing therapeutic agents. Another example is oral ivermectin. Oral ivermectin was originally used to treat parasitic infections such as river blindness (onchocerciasis). It was later discovered to be effective for treating scabies.[5] This can be used for scabies cases not responding to topical treatments such as benzyl benzoate emulsion. Another example is propranolol, which has become the recommended treatment for infantile haemangioma.[6] This has the advantage of being relatively safe and non-

invasive as long the necessary measures such as blood pressure, heart rate and blood glucose are monitored.

These reflect the changing therapeutic strategies in dermatology. However, adverse effects associated with these new agents or new uses may not be immediately apparent. This is illustrated by the case of efalizumab for the treatment of psoriasis which was withdrawn in 2009 due to a potential risk of PML.[7] Therefore, in the wake of new therapeutic applications for existing therapeutic agents, constant vigilance for adverse effects is crucial for ensuring the best outcomes for our patients.

CK Ho
何正綱

References

1. Pavletic SZ, Carter SL, Kernan NA, Henslee-Downey J, Mendizabal AM, Papadopoulos E, et al. Influence of T-cell depletion on chronic graft-versus-host disease: results of a multicenter randomized trial in unrelated marrow donor transplantation. Blood 2005;106:3308-13.
2. Miklos DB, Kim HT, Miller KH, Guo L, Zorn E, Lee SJ, et al. Antibody responses to H-Y minor histocompatibility antigens correlate with chronic graft-versus-host disease and disease remission. Blood 2005;105:2973-8.
3. Cutler C, Miklos D, Kim HT, Treister N, Woo SB, Bienfang D, et al. Rituximab for steroid-refractory chronic graft-versus-host disease. Blood 2006;108:756-62.
4. Bandari PR, Pai VV. Novel applications of Rituximab in dermatological disorders. Indian Dermatol Online J 2014; 5:250-9.
5. Dourmishev A, Serafimova D, Dourmishev L. Efficacy and tolerance of oral ivermectin in scabies. J Eur Acad Dermatol Venereol 1998;11:247-51.
6. Aletaha M, Salour H, Bagheri A, Raffati N, Amouhashemi N. Oral propranolol for treatment of pediatric capillary hemangiomas. J Ophthalmic Vis Res 2012;7:130-3.
7. Kothary N, Diak IL, Brinker A, Bezabeh S, Avigan M, Dal Pan G. Progressive multifocal leukoencephalopathy associated with efalizumab use in psoriasis patients. J Am Acad Dermatol 2011;65:546-51.

Acknowledgement

The Editorial Board would like to thank the following who have reviewed original or review articles or who have contributed articles to our Views and Practice section of the Hong Kong Journal of Dermatology and Venereology in 2018:

EE Calıkoğlu, SSW Cheng, GJ Cho, EY Jung, A Kaptanoğlu, HJ Kim, H Kim, JS Kim, JU Kim, IFM Lo, HM Luk, S Maden, SH Moon, D Mullaaziz, DK Park, SH Park, JY Roh, JE Seol