

MS10-4 **Paradigm shift in the treatment of rheumatoid arthritis brought by TNF antagonists**

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Rheumatoid arthritis (RA) is a chronic, systemic inflammatory disease that causes significant morbidity and mortality. TNF- α plays a crucial role in the pathogenesis, perpetuating synovial inflammation and joint destruction. At present, three TNF- α blocking biologic agents, infliximab (anti-TNF- α chimeric monoclonal antibody), adalimumab (anti-TNF- α human monoclonal antibody), and etanercept (soluble type 2 TNF receptor), as well as an IL-6 blocking agent tocilizumab (anti-IL-6 receptor humanized monoclonal antibody), are now available in our country. TNF antagonists have brought about a paradigm shift in the treatment of RA by not only improving joint manifestations and impaired physical functions, but also significantly preventing the progression of joint destruction, although serious adverse effects such as bacterial pneumonia, tuberculosis, and *Pneumocystis jirovecii* pneumonia are significant concerns. Other biologic agents that target inflammatory cytokines and cell surface molecules will be approved for use in RA. Such advance of new biologic therapy certainly improves the understanding of the disease, leading the future development of more potent drugs that can cure RA.