



## PIC QUESTION OF THE WEEK: 09/19/05

**Q:** Is there a correlation between the administration of minocycline and occurrence of drug-induced lupus (DIL)?

**A:** Systemic lupus erythematosus (SLE) is a multi-system disease of unknown etiology in which cellular damage is produced by pathogenic auto-antibodies. The prevalence of SLE is 20-60 cases per 100,000 persons. The disease is typically seen in women of child-bearing age, but may involve any age group, both sexes, and all races. DIL, also known as lupus-like syndrome, is characterized by arthralgia, myalgia, pleurisy, rash, and fever in association with a variety of anti-nuclear antibodies (ANA). More serious features of SLE, such as nephritis and cerebral disease, are rare in DIL. The onset of symptoms is typically slow, ranging from months to years after initiating the suspected medication. Symptoms tend to resolve within a few months after the drug is discontinued and serologic abnormalities revert within a year. Re-challenge may produce symptoms within a few days. Lupus-like syndrome is most commonly associated with older drugs such as procainamide, hydralazine, chlorpromazine, and quinidine. The tumor necrosis factor inhibitors (infliximab and etanercept) have recently been reported as possible causes of DIL. Minocycline has also been implicated in several reports of the disorder. One case-controlled study conducted in the Netherlands concluded that the risk of developing DIL is approximately eight times greater in young acne patients using minocycline as compared to other tetracyclines. A case report describes a 15-year-old girl taking minocycline for two years who experienced joint pain, stiffness, and swelling and had positive antibody studies suggestive of DIL. Treatment with minocycline was discontinued and her symptoms improved within two months. Another case involved a 14-year-old girl who developed fever and arthralgias after two months of treatment with minocycline. The drug was discontinued, but re-challenge produced a recurrence of symptoms after two days. Eight months after discontinuing the drug, her symptoms resolved and anti-nuclear antibody studies were normal. Minocycline is now considered a well-documented cause of DIL.

### References:

- Gordon PM, White MI, Herriot R, et al. Minocycline-associated lupus erythematosus. *Br J Derm* 1995;132:120-1.
- Sturkenboom MC, Meier CR, Jick H, et al. Minocycline and lupus-like syndrome in acne patients. *Arch Intern Med* 1999;159:493-7.

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