NRI-03 Sex hormones and apoptosis and immunoglobulin production in systemic lupus erythematosus

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Background: SLE is an autoimmune disease that affects predominantly female of reproductive age. Previous studies have suggested an immunomodulatory role of sex hormones in the pathogenesis of SLE.
Objectives: To examine the effects of various sex hormones on apoptosis and immunoglobulin production by peripheral blood mononuclear cells (PBMCs) in SLE patients.
Methodology: Patients who satisfied the 1982 ACR criteria for SLE were recruited. PBMCs were obtained from patients and controls and were cultured with sex hormones at various concentrations, namely 17beta-estradiol (3 and 30 ng/ml), testosterone (3 and 30 ng/ml) or prolactin (20 and 200 ng/ml) for 48 hours. Expression of Annexin V (Anx V), a marker for apoptosis, and bcl-2, an intracellular regulator of apoptosis, was measured by flow cytometry. Supernatants from these cell cultures were examined by ELISA for immunoglobulin (Ig) production. Analysis was made according to the sex of the subjects and the menstruation status of female subjects.
Results: 17beta-estradiol (30 ng/ml) was found to induce a higher anx V expression on PBMCs in menstruating and postmenopausal SLE (1.06 $\pm$ 0.10 and 0.93 $\pm$ 0.08 respectively) (p=0.04). Testosterone, on the other hand, increased anx V expression in postmenopausal SLE and controls (1.00 $\pm$ 0.08 and 0.92 $\pm$ 0.03 respectively) (p=0.048) and reduced bcl-2 expression in menstruating SLE patients. Prolactin was found to increase Ig level in male controls and post-menopausal SLE. (291.5 $\pm$ 80.5 ng/ml and 127.3 $\pm$ 54.8 ng/ml respectively (p=0.06). Combination of prolactin and 17beta-estradiol reverses the increased Anx V expression found with 17beta-estradiol alone in menstruating SLE.
Conclusion: 17beta-estradiol was found to induce apoptosis more readily in menstruating and postmenopausal SLE patients suggesting a role in regulation of apoptosis. Testosterone, on the other hand, tended to induce higher anx V expression on PBMCs in postmenopausal SLE patients and controls. A stronger pro-inflammatory effect was observed on PBMCs from patients than controls on exposure to prolactin.

NRI-04 Antirheumatic drug prescribing pattern: a survey of Hong Kong physicians

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Objective: To describe the current anti-rheumatic drug prescribing patterns for patients with rheumatic disorders by practicing physicians in Hong Kong.
Methods: A questionnaire was sent to 1,000 randomly selected physicians in 2001. The first section covered the demographics for the responding physicians and the second section asked about the management of various conditions and prescribing patterns. 3 case-scenarios were provided at the end of the questionnaire and respondents were asked how each case should be managed. The multiple choice format was used for most questions.
Results: 342 (34.2%) physicians responded, the majority (222 [64.9%]) of whom were general practitioners while 52 (15.2%) were general internists. The mean ± SD number of years in current practice was 16.4±10.6. The physicians reported that degenerative joint disease (61.9%), inflammatory arthritis (16.0%) and soft tissue rheumatism (14.5%) were the most frequently encountered rheumatic disorders in their practice. They reported that a range of drugs were used: oral nonselective nonsteroidal anti-inflammatory drugs (NSAIDs) – 95.4%; analgesics – 80.4%; selective cyclooxygenase-2 inhibitors (Coxibs) – 80.1%; topical NSAIDs – 61.4%. Concerning the use of nonselective NSAIDs, 62.5% and 31% of the respondents cited efficacy and safety respectively as the most important factors in their choice of drugs. 92.4% reported co-prescribing gastroprotective agents (GPAs), particularly antacids (71.5%) and H2-blockers (58.3%), with nonselective NSAIDs. Either prevention for potential gastrointestinal (GI) side-effects (45.7%) or both treating GI symptoms and prevention for potential GI side-effects (51.1%) were cited as the primary reason for co-prescribing GPAs with nonselective NSAIDs. 82.3% of the physicians reported to be familiar with COX-2 inhibition. History of GI disease (97.8%), old age (50.0%) and renal impairment (34.5%) were reported to be the determining factors for the use of Coxibs over nonselective NSAIDs. 44.0% of physicians reported that they co-prescribed GPAs with Coxibs.
Conclusion: Antiinflammatory drugs were commonly used to treat rheumatic conditions in Hong Kong. While most physicians felt efficacy was important in their choice of drugs, there was an overwhelming use of GPA reflecting doctors' concerns over the GI side-effects of anti-inflammatory drugs.