

Effect of Oral Contraceptives on Rheumatoid Arthritis in Korean Menopausal Women: A Nationwide Study

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Objective: Rheumatoid arthritis(RA) is a chronic autoimmune inflammatory disease with a multifactorial etiology. Hormonal factors, ethnicity and their interactions may result in the observed differences in the increase of RA. We investigated the effects of oral contraceptives(OC) on RA in Korean menopausal women using nationwide data. **Methods:** Data were collected from the 2008-2012 Korea National Health and Nutrition Examination Surveys. A total of 17,890 eligible participants were included. To balance the distribution of baseline characteristics between the participants using OC and those not using OC, we used propensity score matching to adjust for differences. We calculated the odds ratios(ORs) and 95% confidence intervals(CIs) of the use of OCs on the incidence of RA. **Results:** The incidence of RA in Korean women rapidly increased at perimenopausal periods and the peak incidence was at 75-79 years of age. After propensity score matching, taking OCs was not associated with RA(OR 1.19, 95% CI 0.95-1.48, $p=0.13$). Late menopause significantly decreased the incidence of RA(OR 0.98, 95% CI 0.96-0.99, $p=0.04$). **Conclusion:** Menopause is associated with the incidence of RA in Korean women. Although the use of OCs did not show a significant association with the incidence of RA, our findings suggest that hormonal factors could be an influence.

Effects of oral contraceptives on rheumatoid arthritis

Variables	Crude			After Propensity Score -matching		
	OR	95% CI	P for trend	OR	95% CI	P for trend
Age	1.20	1.19-1.20	<0.001	1.02	1.01-1.04	<0.001
Low weight	1.00			1.00		
Normal weight	0.79	0.78-0.80	<0.001	0.99	0.43-2.31	0.99
Obese	0.67	0.66-0.67	<0.001	0.83	0.36-1.94	0.67
Menarche age	1.02	1.02-1.02	<0.001	1.04	0.98-1.10	0.18
Menopausal age	0.99	0.99-0.99	<0.001	0.98	0.96-0.99	0.04
First delivery age	0.97	0.97-0.97	<0.001	0.96	0.93-0.99	0.01
Oral contraceptives	1.23	1.22-1.23	<0.001	1.19	0.95-1.48	0.13

Mechanic's hands: A helpful hand in diagnosis of anti-synthetase syndrome

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Introduction: Anti-synthetase syndrome (ASS) is a rare disease entity with polyarthritis, inflammatory myopathy, fever, interstitial lung disease (ILD), mechanic's hands (MH) and presence of auto-antibodies to aminoacyl-tRNA synthetases. MH is relatively rare symptom, but can be a diagnostic clue to ASS, as showing in our case. **Case:** A 57-year-old man, without other comorbidity, was referred to hepatology with liver function test (LFT) elevation. Before visiting our hospital, he had a 1-month history of fever and was treated with antibiotics for two weeks in primary clinic. On physical examination, he had a mild fever (37.8°C) and tenderness in both wrist and knee joints, but no muscle weakness was noted. Laboratory test showed AST/ALT 320/192 IU/L, CRP 1.43 mg/dL and hepatitis viral markers were all negative. Chest X-ray revealed left costo-phrenic angle blunting. Despite using hepatotonics for 5 days, there was no change in LFT and he was consulted to rheumatology for polyarthritis. MH was detected (Fig. 1-A), and anti Jo-1 antibody were newly shown. **Results:** of EMG, thigh MRI and muscle biopsy (Fig. 1-B) were accordance with inflammatory myositis. Chest CT revealed organizing pneumonia patterns in both lower lobes, suggesting ILD (Fig. 1-C). He met criteria for ASS. High dose steroid was commenced and his symptoms including fever, polyarthritis and LFT improved after 1 month. **Conclusion:** Early recognition of MH might help in early detection of ILD and myositis in patients with ASS, leading to better outcome.



Figure 1-A
Hyperkeratosis and fissuring of the skin on the palmar surface of the upper extremity digits, compatible with mechanic's hands

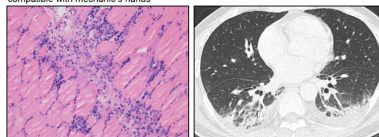


Figure 1-B
Endomyxial lymphocytic infiltration shown in thigh muscle biopsy accordance with inflammatory myositis

Figure 1-C
Chest CT finding of ground glass opacity and patch consolidation in both lower lobes, suggesting ILD