



Gynecological Endocrinology >

Volume 34, 2018 - [Issue 2](#)

537 | 92

Views | CrossRef citations to date | Altmetric | 0

PCOS: PAB and Inflammatory Cytokines

Evaluation of pro-oxidant-antioxidant balance (PAB) and its association with inflammatory cytokines in polycystic ovary syndrome (PCOS)

T. Artimani , J. Karimi, M. Mehdizadeh, M. Yavangi, E. Khanlarzadeh, M. Ghorbani,
... show all

Pages 148-152 | Received 22 Feb 2017, Accepted 22 Aug 2017, Published online: 04 Sep 2017

Cite this article <https://doi.org/10.1080/09513590.2017.1371691>



Sample our
Medicine, Dentistry, Nursing
& Allied Health Journals
>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

Abstract

Chronic low-grade inflammation has been suggested as a key contributor of the pathogenesis and development of polycystic ovary syndrome (PCOS). To investigate the association between oxidative stress status and inflammatory cytokines in follicular fluid of 21 PCOS women compared to 21 women with normal ovarian function who underwent intra-cytoplasmic sperm injection. Concentration of IL-6, IL-8, IL-10, and TNF- α was measured using sandwich ELISA. Oxidative stress was examined by measuring total oxidant status (TOS), malondialdehyde (MDA), total antioxidant capacity (TAC), and thiol groups. PCOS women had an elevated concentration of MDA and TOS compared to controls. Levels of TAC and thiol groups were lower in PCOS compared to controls. PCOS patients had a higher concentration of IL-6, IL-8, and TNF- α compared to

controls. Concentration of IL-10 was lower in PCOS compared to controls. Significant correlations were found between MDA and TOS concentration with TNF- α and between IL-6 and MDA, IL-8 and TAC, IL-10 and TOS levels and also between IL-10 and TAC levels. TAC and thiol groups were negatively correlated with TNF- α . Increased oxidative stress in PCOS is associated with inflammation which is closely linked. Inflammation can induce production of inflammatory cytokines in this syndrome and directly stimulates excess ovarian androgen production.

Chinese abstract

PCOS 21 PCOS 21 IL-6, IL-8, IL-10 TNF- α ELISA TOS (MDA) TAC PCOS MDA TOS, TAC PCOS IL-6, IL-8 TNF- α , IL-10 MDA TOS TNF- α IL-6 MDA IL-8 TAC IL-10 TOS, IL-10 TAC TAC TNF- α PCOS PCOS

Keywords:

Oxidative stress inflammation inflammatory cytokines follicular fluid PCOS

Acknowledgements

This work was supported by Research and Technology Deputy of Hamadan University of Medical Sciences (IR.UMSHA.REC.1395.191). We express our appreciation to the Research Center of Endometrium and Endometriosis, Hamadan University of Medical Sciences, for their clinical evaluation of patients.

The study was approved by Hamadan University of Medical Science Ethics Committee (IR.UMSHA.REC.1395.191). All subjects provided written informed consent. All procedures performed were in accordance with the ethical standards of the local research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Disclosure statement

The authors report no conflicts of interest.

Additional information

Funding

This work was supported by Research and Technology Deputy of Hamadan University of Medical Sciences. We express our appreciation to the Research Center of Endometrium and Endometriosis, Hamadan University of Medical Sciences, for their clinical evaluation of patients.

Related research

People also read

Recommended articles

Cited by
92

Information for

[Authors](#)

[R&D professionals](#)

[Editors](#)

[Librarians](#)

[Societies](#)

Opportunities

[Reprints and e-prints](#)

[Advertising solutions](#)

[Accelerated publication](#)

[Corporate access solutions](#)

Open access

[Overview](#)

[Open journals](#)

[Open Select](#)

[Dove Medical Press](#)

[F1000Research](#)

Help and information

[Help and contact](#)

[Newsroom](#)

[All journals](#)

[Books](#)

Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2025 Informa UK Limited [Privacy policy](#) [Cookies](#) [Terms & conditions](#)

[Accessibility](#)



Taylor & Francis Group
an informa business

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG