

VIEWS AND REVIEWS**369 Introduction: Uterine adenomyosis, another enigmatic disease of our time**

J. Donnez, O. Donnez, and M.-M. Dolmans
Brussels, Belgium; and Avignon, France

From pathogenesis to therapy, uterine adenomyosis is an enigmatic disease.

371 Pathogenesis of uterine adenomyosis: invagination or metaplasia?

J. García-Solares, J. Donnez, O. Donnez,
and M.-M. Dolmans
Brussels, Belgium; and Avignon, France

Both invagination of the endometrial basalis and de novo formation of the lesions can explain the origin of adenomyosis.

380 Symptoms and classification of uterine adenomyosis, including the place of hysteroscopy in diagnosis

S. Gordts, G. Grimbizis, and R. Campo
Leuven, Belgium; and Thessaloniki, Greece

Adenomyosis, now a clinical entity, has been linked to abnormal uterine bleeding, pain, and impaired reproduction. Existence of concomitant diseases makes attributing of a specific pathognomonic sign difficult.

389 Role of transvaginal sonography and magnetic resonance imaging in the diagnosis of uterine adenomyosis

M. Bazot and E. Daraï
Paris, France

Transvaginal sonography and magnetic resonance imaging allow assessment and classification of adenomyosis subtypes.

398 Role of medical therapy in the management of uterine adenomyosis

S. Vannuccini, S. Luisi, C. Tosti, F. Sorbi,
and F. Petraglia
Florence and Siena, Italy

No drug is currently labelled for adenomyosis and no specific guidelines are available for the best management; however medical treatments are effective in improving pain symptoms, bleeding, and infertility.

406 Uterine adenomyosis and adenomyoma: the surgical approach

H. Osada
Tokyo, Japan

This review of post-1990 surgical treatments for adenomyosis, including laparotomic and laparoscopic surgeries, focuses on the uterine rupture outcomes that occurred during post-adenomyomectomy pregnancies.

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INKLINGS

418 Addressing challenges in developing and implementing successful in vitro fertilization in endangered species: an opportunity for humanity to “give back”

R. J. Paulson and P. Comizzoli
Los Angeles, California; and Washington, D.C.

438 Cumulus cell gene expression as a potential biomarker for oocyte quality

C. Racowsky and D. J. Needleman
Boston and Cambridge, Massachusetts

440 Take your time

K. D. Schoyer
Milwaukee, Wisconsin

441 Overcoming barriers to providing HIV prevention for HIV serodiscordant couples desiring pregnancy

J. Brown and M. Zafer
San Francisco, California; and New York, New York

SEMINAL CONTRIBUTION

420 Gestational carrier in assisted reproductive technology

G. Murugappan, L. V. Farland, S. A. Missmer, K. F. Correia, R. M. Anchan, and E. S. Ginsburg
Stanford, California; Boston, Massachusetts; and Grand Rapids, Michigan

Live birth rates are higher in gestational carriers compared with non-gestational carriers' in vitro fertilization cycles.

443 Ovarian tissue cryopreservation: still experimental?

E. J. Forman
New York, New York

445 Predicting the recurrence of endometrial polyps: a commentary

M. E. Pavone
Chicago, Illinois

446 Beyond decreased ovarian reserve: considering reproductive comorbidities in female cancer survivors

H. I. Su
La Jolla, California

448 Ovarian reserve in polycystic ovary syndrome: more, but for how long?

D. de Ziegler, P. Pirtea, R. Fanchin, and J. M. Ayoubi
Suresnes, France

450 Continuum of polycystic ovary syndrome physiology

H. G. Huddleston
San Francisco, California

ASRM PAGES

429 The use of preimplantation genetic testing for aneuploidy (PGT-A): a committee opinion

Practice Committees of the American Society for Reproductive Medicine and the Society for Assisted Reproductive Technology
Birmingham, Alabama

Use of preimplantation genetic testing for aneuploidy (PGT-A) in select patients undergoing in vitro fertilization has been theorized to allow for higher live-birth rates when increased elective single-embryo transfer is used. PGT-A testing reliability has recently come under scrutiny. The impact of mosaicism on testing reliability and embryo damage from the biopsy still need to be determined.

REFLECTIONS

437 Gestational carrier use in assisted reproductive technology: what can it tell us about the uterine role in infertility?

P. G. McGovern
Newark, New Jersey

FERTILITY AND STERILITY: 50 YEARS AGO TODAY

452 Uterine architecture: building the foundation for a healthy pregnancy

E. C. Feinberg
Chicago, Illinois

ORIGINAL ARTICLES

ANDROLOGY

453 Male sleep duration and fecundability in a North American preconception cohort study

L. A. Wise, K. J. Rothman, A. K. Wesselink, E. M. Mikkelsen, H. T. Sorensen, C. J. McKinnon, and E. E. Hatch

Boston, Massachusetts; Research Triangle Park, North Carolina; and Aarhus, Denmark

Short sleep duration in men was associated with reduced fecundability.

ASSISTED REPRODUCTION

460 Cumulus cell transcriptome profiling is not predictive of live birth after in vitro fertilization: a paired analysis of euploid sibling blastocysts

K. A. Green, J. M. Franasiak, M. D. Werner, X. Tao, J. N. Landis, R. T. Scott Jr., and N. R. Treff

Bethesda, Maryland; Basking Ridge, New Jersey; and Philadelphia, Pennsylvania

In a paired study comparing the cumulus cell transcriptome of euploid sibling blastocysts, no differentially expressed genes predictive of live birth were identified.

467 Impact of transfer time on pregnancy outcomes in frozen-embryo transfer cycles

M. S. Lee, E. R. Cardozo, A. E. Karmon, D. L. Wright, and T. L. Toth

Boston, Massachusetts; and Providence, Rhode Island

In a highly controlled uterine environment, longer embryo transfer times did not negatively affect clinical pregnancy, implantation, or live birth rates in frozen-thawed blastocyst transfers.

EPIDEMIOLOGY

473 Assessing access to assisted reproductive services for serodiscordant couples with human immunodeficiency virus infection

A. A. Leech, P. Bortolotto, C. Christiansen, M.-L. Drainoni, B. P. Linas, C. Roeca, M. Curtis, and M. Sullivan

Boston and Bedford, Massachusetts; and Seattle, Washington

Although assisted reproductive technology services for HIV-serodiscordant couples are more available than previously reported, their availability differed for "secret shopper" callers posing as patients or physicians.

FERTILITY PRESERVATION

478 Oocyte vitrification versus ovarian cortex transplantation in fertility preservation for adult women undergoing gonadotoxic treatments: a prospective cohort study

C. Diaz-Garcia, J. Domingo, J. A. Garcia-Velasco, S. Herraiz, V. Mirabet, I. Iniesta, A. Cobo, J. Remohí, and A. Pellicer

London, United Kingdom; Valencia, Gran Canarias, and Madrid, Spain; and Rome, Italy

Oocyte vitrification and ovarian cortex transplantation restore fertility after gonadotoxic treatments. The election of either method should be individualized based on the clinical characteristics of the patient.

GENETICS

486 Clinical outcomes in carriers of complex chromosomal rearrangements: a retrospective analysis of comprehensive chromosome screening results in seven cases

L. Hu, Y. Wei, K. Luo, P. Xie, F. Gong, B. Xiong, Y. Tan, G. Lu, and G. Lin

Changsha, People's Republic of China

Chances for identifying normal/balanced blastocysts in patients with complex chromosomal rearrangements are <6%, the chances for pregnancy <4%, and the greater the complexity, the fewer the transplantable embryos.

GYNECOLOGY

493 High number of endometrial polyps is a strong predictor of recurrence: findings of a prospective cohort study in reproductive-age women

F. Gu, H. Zhang, S. Ruan, J. Li, X. Liu, Y. Xu, and C. Zhou

Guangzhou, People's Republic of China

A high number of endometrial polyps has a higher risk of recurrence than a single polyp in reproductive-age women, suggesting that a high number of polyps might be attributed to a distinct etiology.

501 Ulipristal acetate decreases transforming growth factor $\beta 3$ serum and tumor tissue concentrations in patients with uterine fibroids

M. Ciebiera, M. Włodarczyk, M. Wrzosek, A. Słabuszewska-Jóźwiak, G. Nowicka, and G. Jakiel

Warsaw, Poland

Women with uterine fibroids treated with ulipristal acetate have lower serum and tissue concentrations of transforming growth factor $\beta 3$ when compared with women who did not receive the compound.

Online Extra

REPRODUCTIVE ENDOCRINOLOGY

508 Reproductive and metabolic determinants of granulosa cell dysfunction in normal-weight women with polycystic ovary syndrome

A. A. Guedikian, A. Y. Lee, T. R. Grogan, D. H. Abbott, K. Largaespada, G. D. Chazenbalk, and D. A. Dumesic
Los Angeles, California; and Madison, Wisconsin

Estradiol hyperresponsiveness to follicle-stimulating hormone in polycystic ovary syndrome represents increased antral follicle number (AFN), while antimüllerian hormone overproduction represents opposing effects of hyperandrogenism and increased AFN versus increased adiposity.

516 Impact of cancer treatment on risk of infertility and diminished ovarian reserve in women with polycystic ovary syndrome



L. M. Shandley, A. Fothergill, J. B. Spencer, A. C. Mertens, H. N. Cottrell, and P. P. Howards
Atlanta, Georgia

Cancer survivors with polycystic ovary syndrome had higher ovarian reserve but were less likely to meet their reproductive goals compared with survivors without polycystic ovary syndrome.

526 Differential rate in decline in ovarian reserve markers in women with polycystic ovary syndrome compared with control subjects: results of a longitudinal study

A. K. Ahmad, C.-N. Kao, M. Quinn, N. Lenhart, M. Rosen, M. I. Cedars, and H. Huddleston
San Francisco, California

Polycystic ovary syndrome subjects were found to have higher baseline values for all ovarian reserve markers compared with control subjects.

532 High-molecular-weight adiponectin is inversely associated with sympathetic activity in polycystic ovary syndrome

S. Shorakae, S. K. Abell, D. S. Hiam, E. A. Lambert, N. Eikelis, E. Jona, C. I. Sari, N. K. Stepto, G. W. Lambert, B. de Courten, and H. J. Teede
Clayton and Melbourne, Victoria, Australia

Alongside insulin resistance, increased sympathetic activity modulates high-molecular-weight adiponectin, a potential mechanistic biomarker of metabolic and reproductive features, in women with polycystic ovary syndrome.

540 Association of testosterone and antimüllerian hormone with time to pregnancy and pregnancy loss in fecund women attempting pregnancy

L. A. Sjaarda, S. L. Mumford, D. L. Kuhr, T. L. Holland, R. M. Silver, T. C. Plowden, N. J. Perkins, and E. F. Schisterman
Bethesda, Maryland; and Salt Lake City, Utah

In women without polycystic ovary syndrome or infertility, the combination of higher total T and antimüllerian hormone was associated with greater sporadic anovulation but with mild effects on time to pregnancy and pregnancy loss.

REPRODUCTIVE SCIENCE

549 *Mycoplasma genitalium* can modulate the local immune response in patients with endometriosis



G. B. Campos, L. M. Marques, I. S. Rezende, M. S. Barbosa, M. S. Abrão, and J. Timenetsky
São Paulo and Vitória da Conquista, Brazil

Mycoplasma genitalium may play a key role in the immune tolerance process and, especially, the aggravation of this profile.



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Cover image provided by Jacques Donnez, M.D.: Laparoscopic observation of spontaneous human ovulation. A remarkably prominent vascular pattern was observed on the mature follicle. A small follicular area called the stigma was seen protruding like a reddish bleb from the follicular surface.