EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 3
Issue: 5
270-272
Year: 2016

PRACTICAL APPROACH TO ANOVULATION

***Meena, **Dr. Padmsaritha K. and ***Dr. Ramesh M.**

*PG Scholar, Dept. of PG Studies in PTSR, SKAMCH & RC, Bangalore Karnataka, India.
** Lecturer, Dept. of PG Studies in PTSR, SKAMCH & RC, Bangalore Karnataka, India.
***Professor, Dept. of PG Studies in PTSR, SKAMCH & RC, Bangalore Karnataka, India.

***Corresponding Author: Dr. Meena**
PG Scholar, Dept. of PG Studies in PTSR, SKAMCH & RC, Bangalore Karnataka, India.

Article Received on 10/03/2016 **Article Revised on 31/03/2016** **Article Accepted on 22/04/2016**

ABSTRACT
In *ayurveda*, *stree* is considered as root cause for progeny. A woman suffers from many pathological conditions during her life, one among them is anovulation. Anovulation can be a cause for many gynaecological disorders ranging from oligo/amenorrhoea, infertility to DUB manifesting as menorrhagia and cystic glandular hyperplasia. Anovulation is likely to be linked with disturbed HPO axis. According to *ayurveda* all *doshas* have an impact on overall process of ovulation. *Vata* and *kapha* vitiation along with *pitta kshaya* can cause anovulation. Among four factors of *Garbha* formation; *Beeja* the most essential part has been considered as *Antahpushpa* (ovum). Ovarian factor accounts for 30-40% cases of infertility and among Ovarian factors, anovulation is commonest one. Different treatment modalities have been told in modern medicine for anovulation. In *ayurveda vatakapha hara* and *pitta vardhaka* drugs can be used for treating ovulation dysfunction. Cap Aloes compound given during first half of cycle, Tab Leptaden during second half of cycle along with *kanashatahwadi kashaya* throughout cycle has been found to induce ovulation and relief of symptoms in good number of cases who were suffering from anovulation along with oligo/amenorrhoea, *asrigdara* or infertility. Hence in present paper role of same drugs has been discussed in anovulation.

KEYWORDS: *Anovulation, Aloes compound, Leptaden, Kanashatahwadi kashaya.*

INTRODUCTION
It is the woman who procreates and propagates the human species. Physiology of female reproductive system is complex and different from her male partner to a greater extent. From menarche to menopause a woman has to pass through different physiological changes. One among them is menstrual cycle occurring in her whole reproductive life. Any sort of change in physiology of menstrual cycle makes her prone to pathological disorders. Anovulation is one such pathological condition which can manifest in form of oligo/amenorrhoea, infertility or DUB (manifesting as menorrhagia and cystic glandular hyperplasia). It is most common and potential factor (30-40%) to cause infertility.

In *ayurveda* there is no direct reference for process of ovulation. But words like *artava*, *raja beeja* or *pushpa* has been used at different places to represent ovum. In *garbhasambhava samagri*[1] four essential factors are mentioned for conception, *beeja* being important one can be considered as *antahapushpa*. According to *ayurvedic* fundamentals *tridosha* are involved in maintaining the normal physiology of body. Menstrual cycle including ovulation is also under the control of *tridosha*. Hence Imbalanced *dosha* specially *vata kapha prakopa* and *pitta kshaya* can disrupt the normal process of ovulation and can cause anovulation.

It has been clinically observed that *Ayurveda* helps in case of anovulation associated disorders. It seems to help by not only treating the diseases but also by strengthening the reproductive system. Hence an attempt has been made here to understand the Anovulation and the role of Aloes compound, Tab Leptaden and *kanashatahwadi kashaya* in anovulation.

Disease review
Ovulation is the phase of menstrual cycle in which a mature egg is released from the ovarian follicles into the oviduct and is available to be fertilized. Following[2] ovulation the follicle is changed to corpus luteum. The ovum is picked up into the fallopian tube and undergoes either degeneration or further maturation, if fertilization occurs.

Anovulation
The ovarian activity is totally dependent on the gonadotropins and the normal secretion of gonadotropins depends on the pulsatile release of GnRH. Anovulation is

likely to be linked with disturbed HPO axis either primary or secondary from thyroid or adrenal dysfunction. This disturbance may also produce oligomenorrhea or even amenorrhea. Thus Anovulation may be present in otherwise normal menstrual cycle or may be associated with oligomenorrhea or amenorrhea. As there is no ovulation, there is no corpus luteum formation. In the absence of progesterone, there is no secretory endometrium in the second half of the cycle. The other features of ovulation are absent.[3]

Pathophysiology of anovulation

In an anovulatory cycle, the follicles grow without any selection of dominant follicle. The estrogen is secreted in increasing amount. There may be imbalance between estrogen and FSH or because of temporary unresponsiveness of the hypothalamus to the rising estrogen, GnRH is suppressed → no ovulation. The net effect is unopposed secretion of estrogen till the follicles exist. The endometrium remains in either proliferative or at times hyperplastic state. There is inadequate structural stromal support and the endometrium remains fragile.

When the estrogen level falls, there is asynchronus shedding of the endometrium and menstruation. The bleeding may be heavy or prolonged and irregular. This type of bleeding is mostly found during adolescence, following childbirth and abortion and in premenopausal period[4].

Ayurvedic aspect

In *ayurveda* word *Artava* has been used at different places related to menstrual cycle which can be considered as menstrual blood *(rajasrava rupa artava*), ovum (*beeja rupa artava*) or hormones (*dhatrupa artava*). Ovulation is related with *beeja rupa artava* or *Antahpushpa*. Hence anovulation can be taken as *Beejanutsarga* or *beeja upaghata*.

Normal menstruation including ovulation[5] is result of

- *Dhatuparipuranatvam* (replenishment of *Dhatu*)
- *Dosha samyata* (balanced *tridosha*)
- *Sroto anavarodhana* (clear channels)

Role of tridosha in ovulation

All three *doshas* have important and distinctive roles in physiology of female reproductive system which includes the ovarian cycle and the menstrual cycle.

Vata (vibhajana) is responsible for proliferation and division of cells (granulosa cells and theca cells), rupture of follicle releasing the matured ovum *(pravartana*) during ovarian cycle.

Pitta[6]*(Paka/Pachana*) is responsible for transformations and conversions activated by hormones and enzymes in the process of ovulation and also for the maturation of follicle due to its *paka karma*.

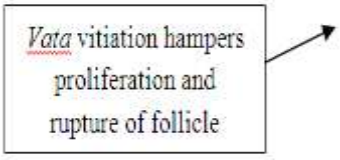
Kapha *(Tarpana*) act as a building and nutritive factor- provides nourishment for growth and development of follicles, also responsible for secretory changes and formation of tortuous coiled arteries for providing nourishment to future embryo.

Hence it can be said that when there is *vata kapha prakopa* and *pitta kshaya*, then there can be improper growth and maturation of follicle and/or hampered rupture of follicle leading to anovulation.

Apart from *dosha* vitiation; *agnimandya* leading to *ama* formation at tissue level, *srotorodha*, *avarana* of *vata* by *kapha* and *dhatukshaya* due to *poshana abhava* can also be a cause for anovulation.

Samprapti of Anovulation

Kapha vitiation→*Jatharaagnimandya*→*Ama*→increased *drava* property of *pitta* →decreased *agneya guna* of *pitta*→vitiated *pitta* hampers maturation of follicle→**Anovulation**



Jatharaagnimandya→*Rasadhatwaagnimandya*→Improp er formation of *Rasa dhatu*→ undernourished *Artava* **(Anovulation).**

Kapha and *vata* vitiation→ disrupted proliferation and division of cell, prolongation of proliferative phase (*ritukala*)→Hampers action of *pitta*, maturation and rupture of follicle→ **Anovulation.**

Drug review

Keeping all the factors in mind causing anovulation, following combination of drugs can be proposed for treating anovulation in different conditions like *asrigdara*, *artavakshya* or *vandhyatwa*:

Aloes compound during first half of menstrual cycle

Tab Letaden during second half of menstrual cycle

Kanashatahwadi Kashaya throughout the menstrual cycle

Aloes compound contains *Kumari* (Aloes vera), *Hirabol* (Balsamodendron Myrrh), *Manjith* (Rubia Cordifolia), *Hurmal* (Peganum Harmala), *Kasisa Bhasma*, *Jeevanti* (Leptadenia Reticulata) and *Kamboji* (bryenia Patens).

Drug	***Karma***
Kumari	*Vatakaphahara, Rasayana, deepana, pachana, artavajanana, brinhana,balya, bhedana*, increases uterine circulation.Contains phyoestrogens
Hirabol	*Vatakaphahara, ushana virya, Deepana, pachana*

Manjith	*Rasayana, deepana, pachana, artavajanana, balya, rajorodhahara*
Hurmal	Contains alkaloids harmine and harmaline
Kasisa	Contain Ferrous sulphate, *rasayana*
Jivanti	*Jivaniya, balya, rasayana, brinhana*, useful in the treatment of habitual abortion
Kamboji	Improve fertility, digestion, nutritional supplements, avoid abortification

Promotes the proper growth of follicle
Stimulates and establishes normal ovulatory menstrual cycles
Enhances: receptivity for conception upto 50% to 60%
Improves general health, induces sense of well-being.

Tab Leptaden contains *jivanti* and *kamboji*

jivanti is a *jivaniya gana dravya* having *brinhana* and *rasayana* properties may provide nutrition to growing corpus luteum, give proper progesterone support in luteal phase which is required for maintenance of embryo, to oppose the secretion of estrogen in anovular DUB. Contain Stigmasterol and lipoid fraction of the plant act as phytoestrogen.

Kamboji[7] Improve fertility, digestion, nutritional supplements, avoid abortification

***Kanashatahwadi kashaya*[8]**

Pippali, Shatahwa, Chirabilwa, Karanja, Bharangee, devdaru, hingu, rasona, tila, kulatha.

Most of the drugs are *kaphavatahara* and *pitta vardhaka, Ushnaveerya* with *Deepana*, *Pachana*, *rajorodhara*, *artavajanana* and *Rasavardhka*, properties. Due to *deepana-pachana* it corrects *agni* leading to proper *rasadhatu* formation and *Artva* formation. Due to *Ushnaveerya* are *Artavajanaka* and does *srotoshodhana*. All these properties are helpful in proper formation of graffian follicle and ovulation.

CONCLUSION

The management of anovulation associated disorders in an effective manner has always been a challenge to the gynaecologists. The conventional treatment of anovulation associated infertility includes ovulation induction with the drugs Clomiphene citrate, Aromatase Inhibitors, Gonadotropins and GnRH analogues. These drugs are very expensive, give unsatisfactory results and agonises the patients with adverse effects like nausea, vomiting, headache, multiple pregnancy and ovarian hyperstimulation. Treatment for DUB is either hormonal which is not too effective and also not devoid of side effects or surgical which makes the woman prone for menopausal syndrome.

Aloes compound, Tab Letaden and *Kanashatahwadi Kashaya* is one such combination of drugs for treating anovulation which has been found to be very effective in good number of patients suffering with oligo/amenorrhoea, infertility or DUB. Hence *Ayurveda* gives the complete cure by not only relieving the symptoms of illness but also by improving the general health of patient. But to prove this with greater confidence further studies with statistical data need to be conducted.

REFERENCES

1. Sushruta, Sushruta Samhita, Sharira Sthana, 2/33. Reprint edition. Varanasi: Surabharati Prakashana; 2003.
2. D.C. Dutta, Text book of Gynaecology including Contraception, edited by Hiralal Konar, New Central Book Agency, Calcutta,6th edition, Reprint 2013, 8th chapter, pp -686, pg-87.
3. D.C. Dutta, Text book of Gynaecology including Contraception, edited by Hiralal Konar, New Central Book Agency, Calcutta,6th edition, Reprint 2013, 16th chapter, pp -686, pg-229.
4. D.C. Dutta, Text book of Gynaecology including Contraception, edited by Hiralal Konar, New Central Book Agency, Calcutta,6th edition, Reprint 2013, 8th chapter, pp -686, pg-95.
5. Streeroga vijnan by Dr. V.N.K. Usha, reprint 2011, 2nd chapter, pp -692, pg-14.
6. Streeroga vijnan by Dr. V.N.K. Usha, reprint 2011, 2nd chapter, pp -692, pg-19.
7. www.phytochemicals.in.
8. Sahasrayogam, Gulma prakaranam.