



## Gynecological Disorders vis-s vis Mental Health Disorders of Adolescent Females – An Integrated Approach

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### ABSTRACT

Adolescence is the phase of life between childhood and adulthood. In Adolescent years fast physical, cognitive and psychosocial growth is seen. India has the largest adolescent population of 253 million in the world. Adolescent girls make 10% of total population and 20% of female population. During their practice Gynecologists & Obstetricians may observe various mental health disorders which can affect female's reproductive health like disturbances in H-P-O axis, menstrual disorders, unsafe sexual behaviors and STI etc. Similarly physical, sexual, psychological changes along with various gynecological disorders affect their mental health causing emotional,

behavioral, eating disorders and suicide, self-harm & risk taking tendencies.

**KEYWORDS:** Adolescent females, Gynecological disorders, Mental health, Ayurveda, Yoga

### INTRODUCTION

As per WHO Adolescence is the phase of life between childhood and adulthood from age 10-19 years<sup>i</sup> which can be further divided into three sub phases- Early Adolescence (10-13 years); Middle adolescence (14-17 years) and late adolescence (17-19 years).

India has the largest adolescent population of 253 million in the world. Adolescent girls make 10% of total population and 20% of female population.<sup>ii</sup>

Different Ayurveda Acharyas have given different nomenclature to different phases of adolescence. In opinion of Dr PV Tewari - Kumari (Pre menarche or Mugdhavastha) is 10-12 years; Rajomati (menarche established) is 12-16 years and females above 16 years are termed as Yuvati.

Dosha dominance in different phases of adolescence is different. Kumari has predominance of Kapha Dosha, Rajomati of Kapha-Pitta Dosha and Yuvati of Pitta Dosha.<sup>iii</sup>

Adolescents experience rapid physical, cognitive and psychosocial growth. This is a period of change which induces fear, stress, confusion, experimentation and risk taking behaviors. Adolescent girls face a wide spectrum of gynecological problems including menstrual disorders, puberty issues, different infections and issues related to sexuality. Physical, sexual and psychological changes during adolescence also affect their mental health causing various emotional, behavioral, eating disorders and suicidal & self-harm tendencies. A meta-analysis reports that 6.5% of the community and 23.3% of school children and adolescents have psychiatric disorders.<sup>iv</sup> India has the most noteworthy youth suicide rate universally, and suicide is the driving cause of mortality in this populace.<sup>v</sup> The National Mental Health Survey (2015–2016) reported a 7% prevalence of psychiatric disorders in 13–17 years and was nearly equal among both the genders.<sup>vi</sup>

Gynecologists can observe various mental health disorders while attending reproductive and menstrual disorders of adolescent girls. If the doctor is well aware of common mental issues of this age and their vis-à-vis association with disorders, early mental illness identification, appropriate and timely referral and care coordination can be achieved which will finally ensure better quality of life and sound mental and reproductive health in adolescent females.

### AIM AND OBJECTIVES

This paper aims to understand and discuss about various gynecological and mental health disorders of adolescent females and their vis-à-vis association and impact. Further, an integrated and comprehensive probable framework will be planned for holistic management of aforesaid conditions with Ayurveda, Yoga and modern science to ensure sound mental and reproductive health of adolescent females.

**Gynecological disorders in adolescent females:**

**Puberty disorders:** Puberty is the period during which adolescents reach sexual maturity and become capable of reproduction. According to a study in India average age for thelarche, pubarche and menarche is 10.8, 11 and 12.4 years respectively.<sup>vii</sup>

If breast development occurs before the age of 8 years and menstruation begins before the age of 10 years, it is called early menstruation. Genetic, life style, dietary and environmental factors can be responsible for this.

Investigations are required in absence of thelarche by 13 years and menarche by 16 years as it is termed as delayed puberty.

Most of the Ayurveda Acharyas have mentioned 12 years as the age of first menstruation. Acharya Kashyapa and Arundutta believe that there can be certain individual variations in this age depending on specific dietetics and health.<sup>viii</sup>

**Menstrual disorders<sup>ix</sup>:**

Menstrual disorders are the most common gynecological problems in adolescent girls all over the world. Periods in first few years after the menarche may be irregular due to anovulatory cycles that result from immature H-P-O axis. Common menstrual disorders are:

1. **Dysmenorrhoea i.e. painful menstruation:** About 50-75% complaint that their periods are painful. This is one of the leading causes of lost school days and adjustment problems.
2. **Amenorrhoea and oligomenorrhoea:** Anovulation or oligo-ovulation can lead to variable lengths of cycle in first few years after menarche. Most of time only reassurance is sufficient, but if girl had established cycles and suddenly misses her period other causes should be ruled out including pregnancy.
3. **Puberty Menorrhagia:** it is another disorder which has its cause in anovulatory cycles after menarche. But psychological disorders like anorexia nervosa, endocrine disorders like hypothyroidism, hyperprolactinemia, Cushing's syndrome and PCOS may also be the cause. Coagulation disorders, early stage of genital tuberculosis, any systemic illness, PID or pregnancy related disorders can also account for excessive bleeding during regular periods or inter- menstrual bleeding.

4. **Premenstrual Syndrome:** Some girls feel uncomfortable few days before their menstrual bleeding (luteal phase) characterized by physical, psychological and behavioral changes. Common symptoms may be bloating, weight gain, backache, headache, tiredness, lethargy and fatigue. Psychological symptoms include irritability, anxiety, depression and mood swings etc.
5. **Hyperandrogenism:** Mild symptoms of hyperandrogenism such as acne and hyperseborrhoea are frequent in adolescent girls and are often associated with irregular menses. In some these presentations can worsen and lead to Hirsutism and ovarian disorders like Polycystic Ovarian Syndrome (PCOS). The main concern in caring for adolescents with PCOS is twofold. First involves cyclic control of irregular menses and second to prevent the long term sequel associated with obesity, insulin resistance and anovulation. Hirsutism results from androgenic effect on pilosebaceous units of skin. Common sites are upper lip, chin, chest, infraumbilical region, inner thigh and lower back. Obesity and hypothyroidism can aggravate hirsutism.
6. **Infections in Adolescents:** Reproductive tract infections include sexually transmitted infections, endogenous infections caused by multiplication of priory present organisms and iatrogenic infections associated with medical conditions like induced abortions. Adolescents particularly those are sexually active are at higher risk of acquiring STDs. Other factors for increased susceptibility of adolescent girls for STI are early first sexual encounter, inconsistent use of contraception, sexual experimentation and lack of knowledge about STD. Common presentations may be unusual discharges from vagina, burning micturition or dysuria, itching and redness in genital area or sores or warts on genitals. But most of the times girls are hesitant to come to gynecologist for their STI because of fear, shame and taboo associated with sex.
7. **Pelvic pain:** This is a common problem in adolescent females. Causes may include pelvic inflammatory disease (PID), ovulation pain, adnexal torsion, mullerian anomalies and pelvic adhesions etc.
8. **Ovarian cysts or tumors:** Functional ovarian cysts are very common in adolescents due to higher incidences of anovulatory cycles. In this age group ovarian neoplasms account for 1% of all malignant tumors in girls aged 17

or below. Nonspecific ovarian enlargement may be seen as functional cysts or endometrioma. Benign tumors include teratoma, theca cell tumors, fibroma and gonadoblastoma. Most common malignant tumors in this age group are germ cell tumors.

9. **Sexuality and sexual violence:** Surge of hormones and attainment of sexuality excites and confuses girls of this age at the same time. Urge for sexual experimentation make them very prone to unsafe sex. Adolescents today are growing in modern culture in which peers, TV, movies, social media and OTT platforms transmit obvious messages that unmarried sexual relationships are common, accepted or even expected which is making the situation worst. Adolescents become sexually mature approx. 4-5 years before they reach emotional maturity, Cognitive immaturity, lack of sex education or misinformation, taboo associated with sex, substance abuse, socioeconomic status and lack of healthcare & contraception facilities predispose adolescent girls to unsafe sex, unwanted pregnancies and illegal or septic abortions.

Incidences of sexual violence and abuse are increasing with alarming rates in India as well as all over the world. Many a times perpetrators are someone girl knows or trusts like relatives, family members and neighbors. Sexual abuse not only violates the body, mind but also kills the innocence of child with serious physical and psychological consequences. Sexual abuse may involve any form of orogenital, genital, anal contact or non-touching abuse such as exhibitionism or pornography.

### **Disorders in adolescent females according to Ayurveda:**

Although no separate chapter are given in ayurvedic texts for gynecological disorders specially for adolescent girls but there are discuss various Yonivyapda and other diseases which can be found in adolescent girls and can be managed as per principles of Ayurveda.

Mithya Aahar Vihar, Pradushta-Artava, Beeja Dosha and Daiva are causes of disorders of reproductive system in adolescent females as well. Yonivyapada like Udavartini (spasmodic dysmenorrhea), Suchimukhi (Pinhole cervix), Shandi (H-P-O axis hypofunction, primary amenorrhea with absence of secondary sexual characters), Bandhya (Nashtartava) and Prakcharana are specifically found in girls of adolescent age.



Astha-artava dushti also imply to menstrual disorders of adolescent girls as well. Puberty menorrhagia can be included under “pravrittanritavapi” mentioned under Asrigdara. Menometrorrhagia due to endometrial hyperplasia can be taken as Artava ativridhi. Some of the Jataharini explained by Acharya Kashyapa specifically deal with the problems of adolescent girls like Sushkarevati (girl doesn't get her menarche in spite of attaining age of 16 years, her arms and hips are emaciated); Katambhara (primary amenorrhea- woman dies without menstruation in her lifetime, she is emaciated and weak); Pushpaghni (women with menstruation but vritha or not fruitful, she has hairy and chubby cheeks – can be compared to features of PCOS) and Vikuti (disturbed menstrual cycles in duration and flow). Strivyapada like Varta (caused by Beejbhagadushti – Harmaphrodite) and Putipraja (Very weak girl- Beejabhagaavayavadushti) explain congenital malformations in adolescent girls<sup>x</sup>.

### **Mental health disorders in adolescent females<sup>xi</sup>:**

As per WHO globally 1 in 7 girls of 10-19 years old experience a mental disorder. Depression, anxiety and behavioral disorders are among leading causes of mental illness and disability among adolescents. Suicide is the fourth leading cause. Adolescent with mental health conditions are particularly vulnerable to social exclusion, discrimination, stigma, educational difficulties, physical ill health and human rights violations. Some common mental health issues of adolescent girls are-

### **Emotional Disorders:**

These are common among adolescents. Anxiety disorders like Generalized Anxiety Disorder, social anxiety, Panic attack, Obsessive Compulsive disorder (OCD), Post Traumatic Stress Disorder (PTSD) are common in older adolescents. It is estimated that 3.6% of 10-14 years old and 4.6% of 15-19 years old experience anxiety disorders.

Mood Disorders like adjustment disorder, major depressive disorder, bipolar disorder and premenstrual dysphoric disorders are also prevalent in adolescents. Depression estimated to occur in 1.1% of 10-14 years and 2.8% in 15-19 years adolescents.

Anxiety and Mood Disorders are two times more prevalent in female adolescents than in males.

**Behavioral Disorders:** Disorders like Attention deficit Hyperactivity Disorder (ADHD), conduct disorders, disruptive behavior disorder and oppositional defiant disorder occur more among early adolescents (10-14 years) than late (15-19 years).

**Eating Disorders:**

Eating disorders such as Anorexia Nervosa and Bulimia Nervosa emerge during adolescence and early adulthood. Eating disorders involve abnormal eating behavior and preoccupation with food accompanied in most instances by concerns about body weight and shape.

**Self-Harm and Suicide:**

Suicide is the second leading cause of death in young people aged 15– 24 years, with a rate of 13.9 deaths by suicide in this population per day; the rate of suicide attempts is 100–200 times higher than that of completions. Risk factors for suicide are substance use, abuse in childhood, stigma against seeking help and access to means of suicide.

**Borderline Personality Disorder:**

Borderline personality disorder affects 1–3% of adolescents and young adults, mostly females. Often not diagnosed before 18 years, the beginning usually takes place in teen years. Personality disorders are limited by anger, depression and frequent anxiety, lasting for hours.

**Risk Taking Behavior:**

These behaviors can be a strategy by adolescent to cope with emotional difficulties and can negatively impact their physical and mental health.

**Association and impact of gynecological and mental health disorders**

During practice Gynecologists may observe various mental health disorders which can affect girl in understanding and manage her health concerns. Some mental health issues and their treatment can affect the H-P-O axis causing anovulatory cycles and menstrual disturbances like AUB or amenorrhea. Adolescents with mental illnesses often start substance abuse which increases risk for unsafe sex, STI and unwanted pregnancies. Adolescents with anxiety disorders may present with dysmenorrhea, chronic pelvic pain, dizziness, syncope, disturbed sleep and appetite levels. OCD girls may present with vulvo-vaginitis from excessive attention to perineal hygiene and undue concerns about length, frequency and amount of bleeding in menstrual cycle. PTSD patients may have excessive fear

of gynecological examination often due to history of sexual abuse or assault. Adolescents with mood disorders show irritability, engage in substance abuse or self- medications and are at risk for unsafe sex and STI. Girls with psychiatric disorders may be taking psychopharmacological agents like antianxiety, antidepressants, mood stabilizers and antipsychotic drugs that can cause menstrual dysfunctions and galactorrhoea.<sup>xii</sup>

Physical and sexual changes in girls due to puberty and menarche can arise various body image and self-esteem issues. Most of the girls feel dissatisfied with their physical appearance due to “image of beauty” created by media and press. Image concerns may include being overweight or underweight, tall or short, small or large breast size, complexion, acne, body hair and wearing spectacles. At times attempt to acquire model image become pathological and manifest as psychosomatic disorders like anorexia nervosa and Bulimia Nervosa. Menstruation and issues related to it can cause anxiety, fear, stress and guilt in adolescent girls. Low confidence levels, fear of staining, effect on studies due to dysmenorrhea and menorrhagia can negatively hamper the mental health of a girl. Sexual abuse or violence can become a major cause for adjustment disorders, depression, self-harm and suicidal tendencies during adolescent years. Early or delayed menarche, disturbances in menstrual cycle length, flow, primary or secondary amenorrhoea and vaginal discharges can create a fear in girls that they are not “Normal” which can lead to anxiety disorders, mood disorders and depression. Abuse by sexual partner, unwanted pregnancies and illegal abortions can cause significant damage to the physical, reproductive and mental health of the girl. Emotional wounds she develops at this time can affect her future life and relationships. Psychosis, depression, self-harm tendencies and suicide can also be manifested out of these circumstances.

### **Holistic and integrated approach**

To address mental and gynecological issues of adolescent girls a holistic approach is required with a core package of Counseling, curative, and preventive & promotive services.

#### **Counseling:**

#### **Menstrual issues:**

Talk to adolescent girls about anatomy and physiology of menstruation, puberty and prepare them mentally and psychologically for menarche. They should



be told that menstruation is a normal body function and right age of menarche has a wide range. They should be educated about normal duration, days of flow, character of bleeding, gap between periods and symptoms associated with menstruation. What is the acceptable range for variation in normal and when they should consult a doctor and what are the common menstrual disorders they can face. It should be conveyed clearly that for 1-2 years after menarche their cycles can be irregular or disturbed. What are the menstrual hygiene options available to them and how to use and dispose them? Girls should be taught how to maintain a menstrual diary. All the myths about the menstruation should be busted and discussed openly.

**Issues related to sexuality:**

There is lack of information, guidance and access to health care in this regard. Adolescent girls have no clue how to talk about sex. Girls should be educated in a safe and secure environment that what is reproduction, anatomy and physiology of male and female genitals, how a girl can conceive and what are the methods by which pregnancy can be prevented and what is the right way to use them and where they can get help about these issues whenever they want. It should be clearly explained in simple words that after menarche they have attained the ability to get pregnant and any unsafe sexual encounter can lead to sexually transmitted infections and pregnancy, including any sexual abuse if they were facing it prior. Girls should be educated if they face any kind of sexual abuse who are the people they can inform without fear and are there any helpline numbers for this. They should be educated about their legal rights in case of any sexual abuse or assault and girls should be motivated to speak up against it as it is abuser's fault and not their's. In case of any unwanted pregnancy they can seek help without fear and what are the safe and legal methods of termination, so they should not opt for any illegal ways of abortion which can lead to life threatening conditions for them.

**Body image issues:**

Adolescent girls should be told that their age is age of transition, so they can look different for some time. They should be told what the real meaning of beauty is and what inner beauty is. Teenage pictures of their beauty idols should be shown to them to reassure them. All the changes which will occur during puberty should be discussed and any myths and apprehensions must be adequately addressed.

All these issues can be discussed in schools, social media platforms or at community levels. Expert lectures can be arranged for adolescents at regular intervals.

**Professional counseling for mental health disorders:**

Counseling should always be provided by a licensed professional counselor. It can be in the form of individual, family, group, trauma or experimental therapy (art, music, play, adventure). Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Mindfulness and motivational interviewing are some of the techniques for teen counseling. Counseling can help in better emotional regulations, healing from trauma, growing self-worth and esteem and gaining healthy coping skills.

**Curative approach with Ayurveda:**

Swasthavritta Palana, Satvika Aahar and Vihar can prevent early menarche. Deha and Manas Prakriti assessment can help in screening of girls who can attain early menarche. Delayed menarche should be properly investigated at appropriate time. Treatable conditions should be promptly treated with medical or surgical interventions. Non treatable cases should be sympathetically counseled and options available to them for better quality of life are explained.

Udavartini Yonivyapada can be very effectively managed with Ayurveda. Snehapana, Anuvasana basti, swedana, dughdhabasti, vatanulomaka and artavapravartaka chikitsa will help. In Prakcharana Yoni vatashamaka aushadhi, uttarbasti with jeevaniya taila, aasthapana and anuvasana basti with vataghna taila and use of utkarika are beneficial. Suchimukhi yoni can be dilated (vardhana) after Snehana and Swedana with all Vatashamaka Chikitsa.

Shandi is considered Asadhya in Ayurveda. Puberty menorrhagia (Asrigdara) can be treated after due consideration of association of Dosha diagnosed on basis of color and smell of menstrual blood with chikitsa of adhograktapitta, raktarsha and garbhasrava. Virechana and Basti will also be beneficial. In Artavavridhhi such Shodhana, Shamana and Aahar- Vihar should be used which inspite of decreasing the increased Dosha or Dhatu will not influence (positively or negatively) other balanced dosha or dhatu of body. Artavakshaya (Hypo and oligo-menorrhoea) can be treated with Samshodhana (preferably Vamana) and use of Agneya Dravya like tila, masha, sura and shukta etc. in Nashtartava and Anartava artavajanana & pittavardhaka chikitsa along with

shatavari shatapushpa lasuna kalpa and basti proyaga are curative<sup>xiii</sup>. In dealing with adolescent girls with PCOS holistic approach with swathavritta, Yoga, life style modification, weight reduction, sthauyahara chikitsa, artavajanana and Vatakaphashamaka Aushadhi will give better results. Basti will also prove beneficial. Use of Rajahpravartaka, Vatanulomaka drugs and Medhya Rasayana can also reduce the severity of premenstrual symptoms.

Management of mental disorders with Ayurveda includes a combination of Yuktivyapashraya, Daivavyapashrya and satvavjaya chikitsa. Yuktivyapashraya includes use of medhyarasan, vatashamaka drugs and procedures like Nasya and Shirodhara. Daivavyapashrya is done by use of mantra, mani, upahara, hom, niyam, prayaschita and upavasa as a mean of boosting self-esteem and mental strength of the individual. Satvavjaya gives control on emotions, thoughts and feeling of mind resulting in better emotional management and positive coping mechanisms. Adolescent girls can be guided to use Medhyarasan, mantra chanting, daily prayers, visit to religious places, Vrata, Upavasa and techniques to have better control on their emotions and thoughts.<sup>xiv</sup>

### **Preventive and Promotive Approach:**

Prevention is better than cure. Aim is to develop a sensitive and adolescent friendly society and health care system. Concept of healthy body, mind and soul should be instilled in minds of children from very early age at home and school.

### **Swasthavritta :**

Ritucharya, dincharya, swasthavritta and sadvritta should be part of curriculum of every child before they attain puberty. Rajaswalacharya should be told to every menstruating girl with practical approach.

Yoga, Pranayama and Dhyana (Meditation): Yoga has been found to benefit all components of health viz. physical, mental, social and spiritual wellbeing. Yoga includes practice of pranayama which regulates respiration through variety of exercises. Asana are physical exercises and postures in a highly coordinated manner integrated with systemic breathing. They bring positive biochemical and hormonal changes by eliminating stress and installing sense of discipline. Better endocrine system leads to timely milestone including pubarche and menarche. Meditation helps in decreasing anxiety, melancholia, irritability and moodiness and improved learning ability and memory, increased emotional stability,

concentration, focus and attention which will prevent adolescents from all kind of mental illness.

**Media:**

Print and electronic media should take the responsibility not to create false perfect body images just to sell products and increase TRPs. Governments should also frame strict laws in this regard. Positive messages should be made more attractive, credible and interesting to appeal teenagers. Changing adolescent's role models from negative to positive like smokers or eve teasers to sports person or achievers is the key to change psyche of budding minds.

**Health Care System:**

Understanding, friendliness and personal touch are expectations of adolescents from their physician. Attitude of the health care personnel should be professional, relaxed, open, supportive, responsible and confidential. This is the responsibility of governments to provide adolescent friendly clinics with policies and attributes that attract them provide a comfortable and appropriate setting for serving them and all their issues should be addressed under same roof. Schools should be directed to provide similar basic facilities at their campuses also.

**CONCLUSION**

1. Adolescent girls experience rapid physical, cognitive and psychosocial growth resulting in various gynecological and mental health disorders.
2. Mental illness and gynecological issues may coexist, associate and affect each other.
3. Gynecologists attending adolescent girls if vigilant can identify mental illness early so that specialized care can be provided to them.
4. Gynecological disorders can be very effectively managed with Ayurveda. Mental health disorders may need an integrated approach with Counseling, modern psychiatry, Ayurveda and Yoga.
5. Schools, community and media should initiate programmes to educate and counsel girls about issues related to menstruation, reproduction, sexuality, sexual abuse and body image issues.
6. Yoga, Pranayama, Dhyana, Ritucharya, Dincharya, Rajaswalacharya, Swasthviritta and Sadviritta should be part of curriculum of every girl child before they attain puberty.

7. An integrated and holistic approach to address the issues of adolescent girls is need of the day.
8. A Sensitive and adolescent friendly society and health care system with an inclusive approach with Ayurveda, Yoga, Modern medicine and counseling should be adopted at the earliest.
9. An integrated and holistic approach to address the issues of adolescent girls is need of the day.
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