IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Pregnancy – A Journey Of Incredible Changes Through Ayurvedic And Modern Perspective

Dr.Soumya Benachanamardi[1*], Dr.P.K.Rawal[2], Dr.Sunita Shiraguppi[3], Dr.Savitri P Samaje[4]

Dr.Nisha A Bharati[5]

[1,4,5] P. G. Scholar, Dept. of Prasuti Tantra and Stree Roga, SDMT's Ayurvedic Medical College Terdal, Karnataka, India.

[2] HOD & Professor, Dept. of Prasuti Tantra and Stree Roga, SDMT's Ayurvedic Medical College Terdal, Karnataka, India.

[3] Assistant Professor, Dept. of Prasuti Tantra and Stree Roga, SDMT's Ayurvedic Medical College Terdal, Karnataka, India.

(Dr.Soumya Benachanamardi, Orcid id: https://orcid.org/0009-0004-7165-9344)

ABSTRACT

Pregnancy is a physiological state in which a woman carries a growing fetus in the uterus for a period of 9 months ± 7 days. In order to support the Pregnancy, a woman's body adapts various changes. During Pregnancy there is progressive anatomical, physiological and biochemical changes, not only confined to the genital organs but also to all systems of the body. This is principally a phenomenon of maternal adaptation to the increasing demands of the growing fetus. In *Ayurveda*, the context of Pregnancy is explained under the concept of *Garbha*[1] and the changes take place during pregnancy are mentioned under *Sadhyo Graheeta Garbha Lakshana* and *Vyaktha Garbha Lakshana*. The physiological changes during pregnancy are crucial adaptations that allow a woman's body to nurture a growing fetus, endure the demands of childbirth, and prepare for lactation. Physiological Changes are normal, healthy adaptations that occur during pregnancy to support the mother and fetus. Unless well understood, these physiological adaptations of normal Pregnancy can be misinterpreted as pathological. Pregnancy causes many changes in a woman's body, many of the changes are temporary and return to a pre-pregnancy state within days or weeks after delivery. However, women who develop a health issue or complication during Pregnancy may have symptoms that are not normal changes from Pregnancy. So it becomes the responsibility of the physician to carefully distinguish the two. When considered, not all the pregnancies are safer and easier. Due to which there is marked Maternal mortality and morbidity. So, these changes during Pregnancy should be closely monitored and assessed.

KEYWORDS: Pregnancy, *Garbha*, *Ayurveda*, Modern, Physiology, *Sadhyo Graheeta Garbha Lakshana*, *Vyakhta Garbha Lakshana*.

INTRODUCTION

Pregnancy is an extraordinary period of transformation, marked by significant physical and emotional shifts within a woman's body as it nurtures a new life. These changes, driven by hormonal fluctuations and the growing demands of the fetus, impact nearly every organ system, from the cardiovascular to the respiratory, musculoskeletal, and even the nervous system. While many changes during Pregnancy are normal and temporary, some symptoms warrant prompt medical attention. Pregnancy brings about numerous physical and emotional changes due to hormonal fluctuations and the body's adaptation to support a growing fetus. This physiological change during Pregnancy favours the growth of the foetus in the uterus. The symptoms during Pregnancy may be either physiological or due to some underlying pathology. Regular prenatal check-ups are essential throughout Pregnancy to monitor both maternal and fetal health and ensure a safe and healthy delivery.

AIMS AND OBJECTIVES

To understand the changes during Pregnancy from Ayurvedic and Modern perspective, necessary to differentiate between normal and potentially abnormal Pregnancy.To discuss the potential impact of physiological changes occurring in pregnancy on various aspects of a woman's health, including musculoskeletal, respiratory, and cardiovascular system etc., and to explain the trimester-wise predominance of doshas and their governing role in producing these physiological adaptations.

MATERIALS AND METHODS

Relevant data is gathered using *Ayurveda Samhita*, Modern texts, Journals, Websites, Internet etc.

AYURVEDIC REVIEW

"Garbho Garbha Lakshanam". *Ayurveda* explains changes during the Pregnancy is exhibited by *Garbha* itself, through the mother in the form of sign and symptoms[2]. These signs and symptoms are explained under the umbrella terms, *Sadhyograheeta Garbha Lakshana* and *Vyakta Garbha lakshana*

Many *Ayurvedacharyas* shared their views on this topic.

Sadhyograheeta Garbha Lakshana

Signs and Symptoms of early pregnancy that indicate a successful conception and the establishment of the fetus within the womb

Acharya Charaka mentions, *Nishtivika, Gaurav, Angasada, Tandra, Praharsha, Hrudaya Vyata, Trupti Bijagrahan Cha Yoni*[3]

Acharya Shusruta mentions, *Shrama, Glani, Pipasa, Saktisadana, Shukra Shonitayora Banda, Spurana*[4]

Acharya Vagbhata mentions, that the union of gametes exhibits immediate signs of conception such as *Yonya Bijagrahana, Trupti, Gurutwa, Spurana, Shukra Asra Anubanda, Hrudayasya Spandana, Tandra, Pipasa, Glani, Lomaharsha*[5].

Acharya Bhavamisra mentions *Shrama, Sakti Sada, Pipasa, Glani, Spoortirbhage*[6]

Vyakta Garbha lakshana

Signs and Symptoms exhibited by the Pregnant woman that indicates the presence of developing foetus.

Acharya Charaka mentions, *Arthava Adarsha, Aasyasamaravana, Annannabhikasha, Chardi, Arochaka, Amlakamata, Shradhapranayanava, Gurugatra, Chakshurglani, Sthana Kashya, Ostha Kashya, Sthana Mandala Kashya Atyartha, Pada Shwayatu, Romarajya*[7]

Acharya Shusruta mentions, *Sthanayomukha Krshna, Romarajya, Akshipakshma, Chardi, Gandha Dvijate, Praseka, Sadana*[8]

Acharya Vagbhata mentions, that gradually with Pregnancy, *Kuski Gurutva, Gatra Gurutva, Netra Kshama, Swara Kshama, Roma Samlulana, Nidra, Jramba, Murcha, Chardi, Aruchi, Pada Shopha, Amla Abhilasa, Krshna Ostha, Krshna Chuchuka*. Gradually as the *Garbha* grows there is increase in weight and diversion of nutrients towards foetus causing *Balakshaya* (depletion in strength) in Mother[9]

Acharya Bhavamisra mentions, *Sthana Mukha Krshna, Romarajya, Akshi Pakshma Samhilana, Chardayeta Pathyabhukte, Gandha Dvijate, Praseka, Sadhana*[10].

MODERN REVIEW[11,12,13]

CHANGES DURING PREGNANCY

GENITALS

VULVA:

Vulva becomes more vascular, oedematous and superficial varicosities may appear especially in multipara.

Labia minora are pigmented and hypertrophied.

VAGINA:

Vaginal walls become hypertrophied, oedematous and more vascular.

JACQUEMIER'S SIGN: Increased blood supply of the venous plexus surrounding the walls gives the bluish coloration of the vaginal mucosa.

The length of the anterior vaginal wall is increased.

VAGINAL SECRETION:

The secretion becomes copious, thin and curdy white due to marked exfoliated cells and bacteria.

The pH becomes acidic (3.5–6) due to more conversion of glycogen into lactic acid by the Lactobacillus acidophilus consequent on high estrogen level.

UTERUS

There is enormous growth of the uterus during Pregnancy

ENTITIES	NON-PREGNANT UTERUS	PREGNANT UTERUS
Weight	60 gm	900–1,000 gm
Volume	5–10 mL	500–1,000 time
Length	7.5 cm	35 cm

CHANGES IN THE MUSCLES:

TIME PERIOD	CHANGES	CAUSE
Up to 12 weeks	Hypertrophy and hyperplasia of uterine muscles	Estrogen and Progesterone
Beyond 20 weeks	Stretching	Distension by the growing fetus

VASCULAR SYSTEM

In the non-pregnant state, the blood supply to the uterus is mainly through the uterine and least through the ovarian but, in the pregnant state, the latter carries as much the blood as the former. There is marked spiralling of the arteries, reaching the maximum at 20 weeks; thereafter, they straighten out.

SHAPE OF UTERUS

GESTATIONAL AGE	SHAPE
Early months	Pyriform
12 weeks	Globular
28 weeks	Pyriform or ovoid
36th week	Spherical

POSITION OF UTERUS

Normal anteverted position is exaggerated up to 8 weeks

⬇

Later becomes erect, the long axis of the uterus conforms more or less to the axis of the inlet

⬇

As the term approaches, especially in multiparae with lax abdominal wall, there is a tendency of anteversion. In Primigravidae, it is held firmly against the maternal spine

LATERAL OBLIQUITY:

As the uterus enlarges to occupy the abdominal cavity, it usually rotates on its long axis to the right (Dextrorotation). The cervix as a result, is deviated to the left side (Levorotation) bringing it closer to the ureter

BRAXTON-HICKS CONTRACTIONS:

From the very early weeks of Pregnancy, the uterus undergoes spontaneous contraction. The contractions are irregular, infrequent, spasmodic and painless without any effect on dilatation of the cervix. The patient is not conscious about the contractions. Intrauterine pressure remains below 8 mm Hg.

ENDOMETRIUM:

The endometrium of the non-pregnant uterus changes into decidua of Pregnancy.

CERVIX

STROMA:

There are hypertrophy and hyperplasia of the elastic and connective tissues. Fluids accumulate inside and in between the fibers. Vascularity is increased especially beneath the squamous epithelium of the portio vaginalis which is responsible for its bluish coloration. There are marked hypertrophy and hyperplasia of the glands which occupy about half the bulk of the cervix. All these lead to marked softening of the cervix (**Goodell's sign**) which is evident as early as 6 weeks

EPITHELIUM:

There is marked proliferation of the endocervical mucosa with downward extension beyond the squamocolumnar junction.

CERVICAL SECRETION:

The secretion is copious and tenacious - **Physiological leucorrhoea of Pregnancy**

BREASTS

The changes in the breasts are best evident in a primigravida.

SIZE:

Increased size of the breasts becomes evident even in early weeks. This is due to marked hypertrophy and proliferation of the ducts (estrogen) and the alveoli (estrogen and progesterone) which are marked in the peripheral lobules.

VASCULARITY:

Vascularity is increased which results in appearance of bluish veins running under the skin. Quite often, the "axillary tail" (prolongation of the breast tissue under cover of the pectoralis major) becomes enlarged and painfull.

NIPPLES AND AREOLA:

The nipples become larger, erectile and deeply pigmented.

Montgomery's tubercles: Variable number of sebaceous glands (5–15) which remain invisible in the non - pregnant state in the areola, become hypertrophied and are called **Montgomery's tubercles**. Those are placed surrounding the nipples. Their secretion keeps the nipple and the areola moist and healthy. An outer zone of less marked and irregular pigmented area appears in second trimester and is called secondary areola

SECRETION:

Secretion (colostrum) can be squeezed out of the breast

CUTANEOUS CHANGES

PIGMENTATION: The distribution of pigmentary changes is selective

CHLOASMA GRAVIDARUM OR PREGNANCY MASK:

Sites: Cheeks, forehead and around the eyes.

It may be patchy or diffuse; disappears spontaneously after delivery

LINEA NIGRA:

Site: Abdomen

It is a brownish black pigmented area in the midline stretching from the Xiphisternum to the symphysis pubis. The pigmentary changes are probably due to melanocyte stimulating hormone from the anterior pituitary

STRIAE GRAVIDARUM:

Sites: Found on the abdominal wall below the umbilicus, sometimes over the thighs and breasts.

Causes and Factors: Mechanical stretching and Hormonal changes

STRIAE ALBICANS:

Sites: Abdomen, breasts, hips, thighs, and buttocks

Appearance: As Striae gravidarum mature and become Striae albicans, they fade to a silvery-white or lighter color and may become thinner and more indented.

Formation: Hormonal changes and mechanical stress can lead to reduced elastin and fibrillin in the dermis, contributing to stretch mark formation.

WEIGHT GAIN

In normal Pregnancy, variable amount of weight gain is a constant phenomenon. The total weight gain during the course of a singleton Pregnancy for a healthy woman averages 11 kg (24 lb).

DISTRIBUTION OF WEIGHT:

1st Trimester	2nd Trimester	3rd Trimester
1kg	5kg	5kg

IMPORTANCE OF WEIGHT CHECKING:

Rapid gain in weight of more than 0.5 kg (1 lb) a week or more than 2 kg (4 lb) a month in later months of Pregnancy may be the early manifestation of preeclampsia and need for careful supervision

Stationary or falling weight may suggest intrauterine growth retardation or intrauterine death of fetus.

BODY WATER METABOLISM

During Pregnancy, the amount of water retained at term is about 6.5 liters. The water content of the fetus, placenta and amniotic fluid is about 3.5 liters. Pregnancy is a state of hypervolemia. There is active retention of sodium (900 mEq), potassium (300 mEq) and water.

HAEMATOLOGICAL SYSTEM

BLOOD VOLUME:

During Pregnancy, there is increased vascularity of the enlarging uterus with the interposition of uteroplacental circulation. The activities of all the systems are increased. Blood volume is markedly raised during Pregnancy. The blood volume starts to increase from about 6th week, expands rapidly thereafter to maximum 40–50% above the nonpregnant level at 30–34 weeks. The level remains almost static till delivery

PLASMA VOLUME:

It starts to increase by 6 weeks and it plateaus at 30 weeks of gestation. The rate of increase almost parallels to that of blood volume but the maximum is reached to the extent of 50%. Total plasma volume increases to the extent of 1.25 liters

RBC AND HEMOGLOBIN:

The RBC mass is increased to the extent of 20–30%. The total increase in volume is about 350 mL. This increase is regulated by the increased demand of oxygen transport during Pregnancy. The disproportionate increase in plasma and RBC volume produces a state of hemodilution (fall in hematocrit) during Pregnancy

The Advantages of relative Hemodilution are:

Diminished blood viscosity ensures optimum gaseous exchange between the maternal and fetal circulation. This is facilitated by lowered oxygen affinity of maternal red cells observed in later half of Pregnancy.

It protects the woman against the adverse effects of supine and erect posture.

Protection of the mother against the adverse effects of blood loss during delivery.

LEUKOCYTES:

Neutrophilic leukocytosis occurs to the extent of 8,000/mm3 and even to 20,000/mm3 in labor. The increase may be due to rise in the levels of estrogen and cortisol.

TOTAL PROTEIN:

Total plasma protein increases from the normal 180 g (nonpregnant) to 230 g at term. However, due to hemodilution, the plasma protein concentration falls from 7 g% to 6 g%. the normal albumin:globulin ratio of 1.7:1 is diminished to 1:1

BLOOD COAGULATION FACTORS:

Pregnancy is a hypercoagulable state. Fibrinogen level is raised by 50% from 200–400 mg/dL in nonpregnant to 300–600 mg/dL in Pregnancy. As a result of rise in fibrinogen and globulin level and diminished blood viscosity, erythrocyte sedimentation rate (ESR) gives a much higher value (fourfold increase) during Pregnancy. As such, ESR has got little diagnostic value in Pregnancy. Gestational thrombocytopenia may be due to hemodilution and increased platelet consumption.

CARDIOVASCULAR SYSTEM

ANATOMICAL CHANGES:

Due to elevation of the diaphragm consequent to the enlarged uterus, the heart is pushed upward and outward with slight rotation to left. The displacement may, at times, be responsible for palpitation.

The apex beat is shifted to the 4th intercostal space about 2.5 cm outside the midclavicular line. Pulse rate is slightly raised, often with extrasystoles.

Mammary Murmur - A systolic murmur may be audible in the apical or pulmonary area. This is due to decreased blood viscosity and torsion of the great vessels. A continuous hissing murmur may be audible over the tricuspid area in the left second and third intercostal spaces called the "mammary murmur". It is due to increased blood flow through the internal mammary vessels.

CARDIAC OUTPUT:

The cardiac output (CO) starts to increase from 5th week of Pregnancy and reaches its peak 40–50% at about 30–34 weeks.

METABOLIC CHANGES

GENERAL METABOLIC CHANGES:

Total metabolism is increased due to the needs of the growing fetus and the uterus. Basal metabolic rate is increased to the extent of 30% higher than that of the average for the non - pregnant women

PROTEIN METABOLISM:

There is a positive nitrogenous balance throughout Pregnancy. At term, the fetus and the placenta contain about 500 g of protein and the maternal gain is also about 500 g chiefly distributed in the uterus, breasts and the maternal blood. As the breakdown of amino acid to urea is suppressed, the blood urea level falls to 15–20 mg%. Blood uric acid and creatinine level, however, either remain unchanged or fall slightly. Amino acids are actively transported across the placenta to the fetus. Pregnancy is an anabolic state

CARBOHYDRATE METABOLISM:

Transfer of increased amount of glucose from mother to the fetus is needed throughout Pregnancy. Insulin secretion is increased in response to glucose and amino acids. There is hyperplasia and hypertrophy of beta cells of pancreas.

FAT METABOLISM:

An average of 3–4 kg of fat is stored during Pregnancy mostly in the abdominal wall, breasts, hips and thighs. Plasma lipids and lipoproteins increase appreciably during the latter half of Pregnancy due to increased estrogen, progesterone, hPL and leptin levels

IRON METABOLISM:

Iron is absorbed in ferrous form from duodenum and jejunum and is released into the circulation as transferrin.

Iron is transported actively across the placenta to the fetus. Iron requirement during Pregnancy is considerable and is mostly limited to the second half of the Pregnancy especially to the last 12 weeks. Total iron requirement during Pregnancy is estimated approximately 1,000 mg.

IMPORTANCE OF IRON SUPPLEMENTATION IN PREGNANCY:

In the absence of iron supplementation, there is drop in hemoglobin, serum iron and serum ferritin concentration at term Pregnancy. Thus, **Pregnancy is an inevitable iron deficiency state**. However, placenta transfers adequate iron to the fetus, despite severe maternal iron deficiency. Thus, there is no correlation of hemoglobin concentrations between mother and fetus

RESPIRATORY SYSTEM

ANATOMICAL CHANGES

With the enlargement of the uterus, especially in the later months, there is elevation of the diaphragm by 4 cm.

Total lung capacity is reduced by 5% due to this elevation. However, diaphragmatic excursion is increased by 1–2 cm and breathing becomes diaphragmatic.

The subcostal angle increases from 68° to 103°, the transverse diameter of the chest expands by 2 cm and the chest circumference increases by 5–7 cm.

PHYSIOLOGICAL CHANGES

A state of hyperventilation occurs during Pregnancy leading to increase in tidal volume and therefore respiratory minute volume by 40%. It is probably due to progesterone acting on the respiratory center and also to increase in sensitivity of the center to CO_2. The woman feels shortness of breath.

ACID BASE BALANCE

The hyperventilation causes changes in the acid base balance. The arterial PaCO2 falls 38–32 mm Hg and PaO2 rises 95–105 mm Hg. These facilitate transfer of CO_2 from fetus to mother and O_2 from mother to fetus

The pH rises in order of 0.02 unit and there is a base excess of 2 mEq/L. Thus, Pregnancy is in a state of respiratory alkalosis

ALIMENTARY SYSTEM

The gums become congested and spongy and may bleed to touch.

Muscle tone and motility of the entire gastrointestinal tract are diminished due to high progesterone level. Cardiac sphincter is relaxed and regurgitation of acid gastric content into the esophagus may produce chemical esophagitis and heart burn. Dyspepsia is common.

There is diminished gastric secretion and delayed emptying time of the stomach. Risk of peptic ulcer disease is reduced.

Atonicity of the gut leads to constipation, while diminished peristalsis facilitates more absorption of food materials.

LIVER AND GALLBLADDER

LIVER

Although there is no histological change in the liver cells, but the functions are depressed.

With the exception of raised alkaline phosphatase levels, other liver function tests (serum levels of bilirubin, AST, ALT, CPK, LDH) are unchanged. There is mild cholestasis (estrogen effect).

GALL BLADDER

There is marked atonicity of the gallbladder (progesterone effect). This, together with high blood cholesterol level during Pregnancy, favors stone formation.

URINARY SYSTEM

KIDNEY

There is dilatation of the ureters, renal pelvis and the calyces.

The kidneys enlarge in length by 1 cm.

Renal plasma flow is increased by 50–75%, maximum by the 16 weeks and is maintained until 34 weeks. Thereafter it falls by 25%. Glomerular filtration rate (GFR) is increased by 50% all throughout Pregnancy. Increased GFR causes reduction in maternal plasma levels of creatinine, blood urea nitrogen (BUN) and uric acid. Renal tubules fail to reabsorb glucose, uric acid, amino acids and water soluble vitamins completely.

URETER

Ureters become atonic due to high progesterone level.

BLADDER

There is marked congestion with hypertrophy of the muscles and elastic tissues of the wall. Stress incontinence may be observed in late Pregnancy due to urethral sphincter weakness.

IMMUNE SYSTEM

Marked T helper 1 (Th1) suppression is a key immunological feature of a normal, healthy pregnancy. The body shifts its immune balance to a T helper 2 (Th2) dominant state to tolerate the fetus, which is recognized as a semi-foreign entity. A suppressed T-helper (Th) 1 response is essential for pregnancy continuation primarily during midpregnancy to prevent the maternal immune system from attacking the fetus. An unsuppressed or dominant Th1 response during this phase is incompatible with successful pregnancy and can lead to complications such as miscarriage or preeclampsia.

The importance of Th1 suppression must be viewed within the context of the different phases of pregnancy:

Early pregnancy is pro-inflammatory. During implantation and placentation, the immune environment is rich in Th1-associated cytokines like interferon-gamma (IFN-γ) and tumor necrosis factor-alpha (TNF-α). This controlled, low-level Th1 activity is required for successful implantation, uterine remodeling, and debris removal. However, a systemic or exaggerated Th1 response at this stage can be detrimental.

Midpregnancy is anti-inflammatory. After implantation, the immune system shifts to a Th2-dominant, anti-inflammatory state to create an environment of tolerance for the rapidly growing fetus. During this phase, the suppression of the Th1 response is critical. The cytokines produced by Th1 cells—such as IL-2, IFN-γ, and TNF-β—can be cytotoxic and would otherwise attack the "foreign" fetal tissue.

Late pregnancy (parturition) is inflammatory. At the end of pregnancy, the immune environment shifts back toward a pro-inflammatory state. This renewed inflammatory process, with an influx of immune cells and Th1 activity, promotes the uterine contractions necessary for labor and the rejection of the placenta.

OCULAR SYSTEM

Intraocular pressure decreases during pregnancy and is attrib uted in part to increased vitreous outflow (Sunness, 1988). Corneal sensitivity is decreased, and the greatest changes are late in gestation. Most pregnant women demonstrate a measurable but slight increase in corneal thickness, thought to be due to edema. Consequently, they may have difficulty with previously comfortable contact lenses. Brownish-red opacities on the poste-rior surface of the cornea Krukenberg spindles have also been observed with a higher than expected frequency during pregnancy. Hormonal effects similar to those observed for skin lesions are postulated to cause this increased pigmentation.

DISCUSSION

Pregnancy induces profound physiological changes in a woman's body, aimed at supporting fetal development and preparing for childbirth. From an Ayurvedic perspective, these changes are intricately linked to the balance and dynamics of the three *Doshas—Vata, Pitta,* and *Kapha* - which govern bodily functions and health.

Physiological Changes and *Dosha* Dynamics

During pregnancy, the *Kapha Dosha* generally increases, especially in the first trimester, contributing to the development and nourishment of the fetus. This manifests as increased body fluids, weight gain, and a sense of grounding or stability in the mother. Ayurveda describes this phase as crucial for building Ojas, the vital energy essential for both mother and child.

As pregnancy progresses, Pitta dosha, responsible for metabolism and transformation, may elevate, facilitating enzymatic and hormonal changes necessary for fetal growth and maternal adaptation. However, excessive Pitta can lead to symptoms such as heartburn or inflammation, indicating the need for careful dietary and lifestyle management.

Towards the later stages, Vata dosha, associated with movement and nervous system regulation, becomes dominant. This shift prepares the body for labor by promoting uterine contractions and facilitating the birthing process. An imbalance in Vata at this stage can result in complications such as preterm labor or discomfort, emphasizing the importance of maintaining Vata balance through Ayurvedic therapies.

Integration with Modern Medical Understanding

Modern obstetrics recognizes hormonal changes—like increased levels of progesterone and estrogen—that support uterine growth, cardiovascular adaptation, and metabolic shifts. These physiological phenomena correlate well with Ayurvedic concepts; for instance, the rise in Kapha aligns with increased blood volume and fluid retention, while Pitta reflects the heightened metabolic state and Vata in later stage that is near term prepares the maternal body for labor. At term, eliminates the pregnancy by initiating the uterine contraction resulting in the expulsion of the viable fetus.

Ayurveda's holistic approach extends beyond physical changes to encompass emotional and mental wellbeing, acknowledging the psychological shifts common during pregnancy. This comprehensive view encourages personalized care, including diet, herbal supplements, and routines to harmonize the Doshas.

Sadhyograhita Garbha Lakshana (Signs of a Viable Pregnancy)

In Ayurveda, early recognition of pregnancy viability is essential for ensuring maternal and fetal health. Sadhyograhita Garbha Lakshana refers to the initial signs indicating a successfully conceived and viable fetus. These include symptoms such as a consistent absence of menstruation (Amenorrhea), morning sickness (Nausea and vomiting), breast tenderness, and increased appetite. These manifestations correspond with the stabilization of the fetal conceptus and indicate the body's positive acceptance of the pregnancy.

From a physiological standpoint, these early symptoms align with hormonal changes, particularly rising levels of human chorionic gonadotropin (hCG) and progesterone, which prepare the endometrium for implantation and reduce uterine contractions to maintain pregnancy. Ayurveda emphasizes nurturing the mother during this phase to strengthen Kapha dosha and build Ojas, which are critical for sustaining early pregnancy and preventing miscarriage.

Vyakta Garbha Lakshana (Manifested Fetal Signs)

As the pregnancy progresses, Vyakta Garbha Lakshana are the overt signs indicating fetal growth and development. These include the palpable movement of the fetus (quickening), abdominal enlargement, changes in skin and complexion, and alterations in the mother's emotional and physical state.

These observable signs align with the second and third trimesters, where the fetus undergoes rapid growth, and maternal physiology adapts significantly. In Ayurvedic terms, the increase in Pitta dosha during this phase supports metabolic activity necessary for fetal tissue formation and maternal nourishment. The prominence of Vata dosha prepares the body for delivery, promoting uterine contractions and neural development of the fetus.

Understanding these stages from both Ayurvedic and modern perspectives allows practitioners to tailor interventions that promote maternal-fetal wellbeing.

The symptoms during Pregnancy may be either physiological or due to some underlying pathology. So it becomes the responsibility of the physician to carefully distinguish between Normal and Abnormal Pregnancy. And promoting timely intervention and optimal Pregnancy outcomes. While some Pregnancy-related physiological changes are transient and resolve postpartum, others, especially those associated with complications such as gestational diabetes or preeclampsia, can have long-term implications for maternal health. Therefore, postpartum follow-up and continued monitoring are essential for optimizing the long-term well-being of women after Pregnancy.

CONCLUSION

Pregnancy is a profound and transformative experience for a woman's body, representing the remarkable strength, resilience, and beauty of the female form. It's a time of immense physical and emotional changes as the body adapts to nurture and grow a new life within. Changes during Pregnancy are a complex and interconnected series of adaptations across all body systems, driven by hormonal shifts and the demands of a growing fetus. These changes are essential for supporting fetal development, preparing the mother for labor and delivery, and ensuring both maternal and fetal well-being. Understanding these changes is essential for accurate interpretation of physiological and laboratory parameters during Pregnancy. Knowledge of expected changes helps in identifying potential complications and tailoring appropriate care plans. For women with pre-existing conditions, these adaptations can exacerbate existing health issues or unmask previously asymptomatic diseases. Physiological changes can also affect how medications are metabolized and utilized during Pregnancy. It is crucial for clinicians and pregnant individuals to understand these normal physiological changes to differentiate them from potential pathological conditions. While most changes resolve postpartum, some may require ongoing management.

REFERENCE

1. Acharya Yadhavji Trikamji editor. Caraka-samhitā of Agniveśa: elaborated by Caraka & Drdhabala; with the Ayurvedadīpikā commentary by Śrī Cakrapanidatta. Purvardh Sharira Sthana Mahatigarbhavakranti Sharira. Varanasi : Chaukhamba Surbharati Prakasha; 2023. p.316, Verse 5
2. Kaviraj Datta Shastri A, commentator. Sushruta Samhita: Ayurveda Tatva Sandipika Hindi Vyakha. In: Mehta PM, editor. Purvardh, Sutra Sthan, Dosha Dhatu Mala Kshaya Vruddhi Vijnaninya Adhyaya. Varanasi: Choukhamba Sanskrit Sansthan; 2011. p. 75, Verse 9.
3. Acharya Yadhavji Trikamji editor. Caraka-samhitā of Agniveśa: elaborated by Caraka & Drdhabala; with the Ayurvedadīpikā commentary by Śrī Cakrapanidatta. Purvardh Sharira Sthana Atulyagotriya Sharira. Varanasi : Chaukhamba Surbharati Prakasha; 2023. p.304, Verse 23
4. Kaviraj Datta Shastri A, commentator. Sushruta Samhita: Ayurveda Tatva Sandipika Hindi Vyakha. In: Mehta PM, editor. Purvardh, Sharira Sthan, Garbhavakranti Shariram Adhyaya. Varanasi: Choukhamba Sanskrit Sansthan; 2011. p. 28, Verse 11.
5. Prof. K.R.Shrikantha Murthy, translator. Astanga hrdayam of Vagbhata. Reprint ed. Varanasi: Chowkhamba Krishnadas Academy; 2018. p. 366, Verse 35-37
6. Prof. K.R.Shrikantha Murthy, translator. Bhavaprakasa of Bhavamisra. Reprint 2016 ed. Varanasi: Chowkhamba Krishnadas Academy; 2016. Purva Khanda, Prathama Bhaga, p. 24, Verse 42

7. Acharya Yadhavji Trikamji editor. Caraka-samhitā of Agniveśa: elaborated by Caraka & Drdhabala; with the Ayurvedadīpikā commentary by Śrī Cakrapanidatta. Purvardh Sharira Sthana Mahatigarbhavakranti Sharira. Varanasi : Chaukhamba Surbharati Prakasha; 2023. p.320, Verse 16
8. Kaviraj Datta Shastri A, commentator. Sushruta Samhita: Ayurveda Tatva Sandipika Hindi Vyakha. In: Mehta PM, editor. Purvardh, Sharira Sthan, Garbhavakranti Shariram Adhyaya. Varanasi: Choukhamba Sanskrit Sansthan; 2011. p. 28, Verse 12.
9. Prof. K.R.Shrikantha Murthy, translator. Astanga hrdayam of Vagbhata. Reprint ed. Varanasi: Chowkhamba Krishnadas Academy; 2018. p. 369, Verse 50-51
10. Prof. K.R.Shrikantha Murthy, translator. Bhavaprakasa of Bhavamisra. Reprint 2016 ed. Varanasi: Chowkhamba Krishnadas Academy; 2016. Purva Khanda, Prathama Bhaga, p. 24, Verse 43-44
11. Konar Hiralal. Physiological changes during pregnancy. In: Konar Hiralal. D C Dutta's Textbook of Obstetrics, 8th ed. Jaypee Brothers Medical Publishers; 2015. p. 52-64.
12. Konar Hiralal. Endocrinology in relation to reproduction. In: Konar Hiralal. D C Dutta's Textbook of Obstetrics, 8th ed. Jaypee Brothers Medical Publishers; 2015. p. 70-72.
13. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, et al., editors. Maternal physiology. In: Williams obstetrics. 24th ed. New York: McGraw-Hill Education; 2014. p. 56&72.