# Vibandha: A Multidimensional Review on Constipation During Pregnancy

Dr Mahendra Singh<sup>1</sup>, Dr Malika Choudhary<sup>2</sup>, Dr A. Neelima<sup>3</sup>

Post Graduate Scholar<sup>1</sup>, Assistant professor<sup>2</sup>, Professor & HOD<sup>3</sup>
Department of Stree Roga - Prasuti Tantra
Post Graduate Institute of Ayurved, Dsrrau, Jodhpur<sup>1-3</sup>
Merchant Ayurved College,Basna, Gujarat<sup>2</sup>

#### Abstract

Constipation is a condition resembling to *vibandha* described in ayurvedic texts, *Vibandha* is not described as a separate disease in our classical text, but it is mentioned with different context to *purisha* (faeces) like *baddha purisha*, *Ghana purisha/grathita purisha*, *mala avabaddhata*, *Apana vata vaigunya*, *Purisavaha Srotodusti*, *and Krura Koshtha*, in various contexts in ayurveda. Constipation is a general term used to indicate fewer or infrequent bowel movements, solidified hard stools, painful defecation, feeling of bloating and incomplete elimination of stool. Prevalence of constipation is a frequently found sign during pregnancy and up to 11-40% of pregnant women experience it at some stage of their pregnancy. Pressure from gravid uterus or any mass causes constipation in females, Hormonal modulations, stress and tendency of withholding natural urges. Stress can alter body rhythm by which gut motility reduces. In pregnancy there is Atonicity and diminished motility of the gut due to the effect of Progesterone, which has effect on GI system, by decreasing peristalsis and slow down the gastric emptying by this leads to constipation in pregnancy.

**Keywords-** *vibandha*, *Purisavaha Srotodusti*, *Apana vata vaigunya*, constipation.

#### Introduction

According to ayurveda classics, the human body (*sharir*) is composed of three core components *dosh*a, *dhatu* and *mala*. Consumed *Aahar* formed at the end of the process of digestion *saar* or *kitta bhaga*. *Purisha* and *mutra* are the waste product of *Aah*ar. The waste products are removed from the body which is brought by process called excretion. if it remains for longer time in the body have tendency to vitiate the normal *dosha* by causing *sroto sanga* called *vibandha*(constipation).<sup>2</sup>

Constipation is a condition resembling to *vibandha* described in ayurvedic texts, Vibandha is not described as a separate disease in our classical text, but it is mentioned with different context to *purisha* (faeces) like *baddha purisha*, *Ghana purisha/grathita purisha*, *mala avabaddhata* in various contexts in ayurveda. *Acharya Charaka* has mentioned *Vibandha* as *Lakshana* of *Udgaranigraha*<sup>3</sup>, and in *Vaatvyadhi*<sup>4</sup>, *Acharya Sushruta* has mentioned *Vibandha* 

VOLUME 24 : ISSUE 09 (Sep) - 2025 Page No:355

as Lakshana of Visuchika<sup>5</sup>, Lakshana of Jwara<sup>6</sup>, and Acharya Vagbhatta has mentioned Vibandha as Lakshana of Vidavratavata<sup>7</sup> and as Lakshana of Ajeerna<sup>8</sup>.

Constipation is a common complication of the digestive system that most women suffer from during pregnancy. It is defined by the presence of at least two of the following six criteria: defecation less than three times a week, tough stools, Incomplete bowel emptying, difficulty in defecation along with straining, feeling of anorectal obstruction, and trying to expel feces manually. Constipation is the second most commonly reported GI symptom in pregnancy. Earlier studies indicated that 11%–38% of pregnant people suffer from constipation. Thirteen studies were identified to determine the prevalence of constipation during pregnancy. The results show that the global prevalence of constipation throughout pregnancy is 32.4%, with the first trimester at 21.1%, the second trimester at 34%, and the third trimester at 30.3%.

The incidence of constipation and occurrence of problematic bowel habit parameters were highest in the first two trimester. <sup>12</sup>During pregnancy there are essential changes in gastrointestional system. Muscle tone and motility of the entire gastrointestinal tract are diminished due to high progesterone level. Atonicity of the gut leads to constipation, while diminished peristalsis facilitates more absorption of food materials. <sup>13</sup>

Some Gynecological diseases, stress, hormonal imbalance leads to irregular bowel habits in women. For instance, rising progesterone (relaxes smooth muscle) levels during pregnancy and reduced motilin hormone levels lead to increases in bowel transit time. Also, there is increased water absorption from the intestines, which causes stool to dry out. Decreased maternal activity and increased vitamin supplementation (e.g., iron and calcium) can further contribute to constipation. <sup>14</sup>Pregnancy appears to have a profound inhibitory effect on plasma motilin, and this may in part be responsible for the gastrointestinal hypomotility associated with pregnancy.

## AIM AND OBJECTIVE

**Aim** - To study the management of *Garbhini vibandh* (constipation in pregnancy) with ayurvedic and modern perspective.

**Objective** - To examine deeply classical ayurvedic references for pregnancy care (*Garbhini paricharya*) relevant to constipation management, emphasizing the use of mild and safe laxative(*mridu/anulomana*).

## Methodology

Based On Ayuvedic Texts, Information Related to *Vibandha* or Constipation and Its Corelation. Relevant Data Is Gathered Using Ayurvedic Samhita, *Charaka Samhita, Sushruta Samhita*, *Vagbhatt Samhita*, And *Sharangadhara Samhita* Are the Primary Ayurvedic Texts, Nighantu, Modern Texts, Journals, And Web Source.

## Constipation

At present, Functional Constipation in Pregnancy is hypothesized to arise due to mechanical stimuli, hormonal regulation, or a synergistic interaction of both mechanisms.

Constipation is defined as infrequent passage of stools or difficulty with evacuation of stools. It is associated with various symptoms including hard stools, straining, sensation of anorectal blockage, incomplete evacuation, abdominal discomfort and bloating. Rome IV criteria define

functional constipation as fulfilling at least 2 of the 6 criteria. <sup>16</sup>Functional constipation can be divided into 2 groups, slow transit constipation and outlet dysfunction. <sup>17</sup>

During Pregnancy Numerous Factors Are Responsible for The Development of Constipation. Such As Increased Level of Progesterone Thats Affects Smooth Muscles of Alimentary Canal, Use of Anti Emetic and Anti Antihistamines Drugs, Use of Vitamin and Iron Calcium Supplements, Use of Low Fiber Diet, Diminished Physical Activity and Exercise, Diminished Intake of Fluids Due To Nausea or Vomiting, High Level of Anxiety and Depression.

## Diagnosis of functional constipation

ROME IV criteria for functional constipation (must have at least 2 of 6)

- 1. Fewer than 3 bowel movement per week
- 2. Straining during >25% of the time
- 3. Lumpy or hard stools > 25% of the time
- 4. Sensation of anorectal obstruction > 25% of the time
- 5. Sensation of incomplete evacuation > 25% of the time
- 6. Manual maneuvers required to aid defecation > 25% of the time

#### Garbhini Vibandha

The condition known as *Garbhini Vibandha* is not individually classified as a disease in classical Samhita texts. But it has been mentioned in classical texts as a *Nidana* (cause), *Lakshana* (symptom), and *Upadrava* (complication) associated with multiple disorders.

#### Dosha imbalance 18

Garbhini Vibandha is primarily linked to an imbalance in dosha, particularly the Apana Vata. Pitta and Kapha doshas can also influence the condition as pregnancy advances.

Vata Imbalance<sup>19</sup>- particularly Apana Vata, is the primary Dosha involved in Garbhini Vibandha. Apana Vata governs the downward movement of energy and the elimination processes in the body, including bowel movements. During pregnancy, Vata can become aggravated due to hormonal fluctuations, increased stress, poor dietary habits, and reduced physical activity. When Vata is imbalanced, it can cause dryness, hardness, and irregularity in bowel movements, leading to constipation.

*Pitta* Imbalance - It may lead to issues like gastroesophageal reflux, irritability, and excessive thirst.

*Kapha* Imbalance - It can result in symptoms like swelling, lethargy, and excessive mucus. Contextual Reference of *Vibandha*<sup>20</sup>

As Nidana	Hikka, Swasa, Udavarta, Parikartika, Arshas
As Poorvaroopa	Arshas, Parikartika, Swasa
As Roopa	Antarvegi jwara, sannipata Jwara, vataja gulma, vatodara,
	baddhagudodara, sahaj arshas, vataja arshas, vataja atisara, anaha,
	udavarta,amashayagata vata, pakwashayagata vata
As Upadrava	Vatavaydhi, vataja arshas, vataja gulma

## Nidana/Etiology of Vibhandha

Vitiated *Apana Vata* and *Purishavaha Sroto Dusti Hetu* Are the Main Causes of *Vibandha*. intake of *Katu, Tikta, Kashaya Rasa* aggravates *vata dosha* which altered the principal function of *Apana Vata* and contributes to the development of *Vibandha*, or constipation. <sup>21</sup> *Purishavaha Sroto dusti*. <sup>22</sup> all cause responsible for vitiation of *Apana Vayu*. <sup>23</sup> *Vaman Virechana Vyapad*. <sup>24</sup> *Purishvega nigraha*. <sup>25</sup>

# Samprapti and Samprapti Ghatak <sup>26</sup>

Hetu - Agni dusti- Ama formation — Srothorodha - Apana Vayu Avaigunya -Malasanchaya - Vibandha

Dosha- Apana Vayu

Dushya- Rasa

Agni- Jataragni

Srotas - Pureeshavaha srotas, Annavaha

Srotodushti- Sanga

Udbhava Sthana - Amashaya, Pakvashaya

Sadhya/Asadhyata - Sadhya

Vyakta Sthana - Adhah- Kaya

Adhisthana- Pakvashaya

Rogamarga- Abhyantara

#### Lakshana of Vibandha

Acharya Charaka:Pakvashaya shool, shira shool, vata varchoaprvartanam.<sup>27</sup> Acharya Vagbhat:Pindikodveshtana, Pratishyaya, shiro rujha, Urdhwavayu, Parikartika, hardhayasya uprodhanam <sup>28</sup>

## Prognosis of Vibandha

If left unaddressed, this condition may progress into a series of distressing complications like like *Arsha*, *Pakvashaya shoola*, *Udavarta*, *Anaha*, *Adhyamana*, *Antravraddhi*, *Bhagandara* (fistula in ano), *Parikartika*(fissure in ano), *Sanniruddha* -guda (anal stenosis).

## **Limitations of Modern Treatment**

While laxatives may offer temporary relief, habitual and excessive use can lead to a cascade of negative health effects including dependency, symptom Aggravation (abdominal cramps, bloating and discomfort) develop resistance to laxative through excessive use, Diarrhea, metabolic imbalances, hypovolemia, Interference with the absorption of co-administered drugs may result from structural alterations in the gastrointestinal mucosa.

## Ayurvedic Review in Management of Garbhini Vibandha

the Ayurvedic approach to functional constipation emphasizes restoring internal equilibrium through *Dosha* balancing (*Vatanulomana*) and enhancement of *Agni* (*Agni Deepana*). In *Charaka Samhita*, it is mentioned that, the pregnant women should be treated just like a vessel filled with oil, requiring balanced, cautious and gentle management throughout gestation to ensure maternal and fetal well-being. The diseases of the pregnant women should be treated with the use of *mrudu*, *madhura*, *shishira*, *sukumara aushadha*, *aahara* and *upachara*.

Acharya Harita, in Harita Samhita Tritiya Khanda, has emphasized the use of Haritaki, Shunthi, and Guda (jaggery) administered with Triphala Kwatha as a therapeutic intervention for managing Garbhini Vibandha. <sup>29</sup>Acharya vagbhata mentioned that due to udavarta in pregnancy vibandha will occur, that can be treated with vatahara, snigdha annapana. <sup>30</sup>While explaining Garbhini paricharya in 8th month, Acharya Sushruta mentioned as Madhura aushadha siddha Asthapana basti and Anuvasana basti for Purana Pureesha shuddhi and Vaataanulomana. <sup>31</sup> Acharya Kashyapa addressed the importance of utilizing Mrudu Virechaka or Anulomaka drugs, which are mild laxatives, starting from fourth month and beyond. The emphasis is on employing Mrudu Virya and Madhura to avoid any adverse impacts on the fetus while encouraging healthy bowel movements <sup>19</sup>.

## Management of constipation

Many individuals find relief from constipation by lifestyle modifications, such as increased dietary fibre and fluid intake, and engaging in regular physical activity. If these are ineffective, laxatives are the second line of therapy.

## **Bulk-forming agents**

Bulk-forming agents are not systemically absorbed<sup>32</sup> and have not been associated with an increased risk of congenital malformations.<sup>33</sup> These are considered safe for long-term use during pregnancy. Example psyllium husk

#### **Stool softeners**

It Stimulates net secretion of water, sodium, chloride, potassium and inhibits net absorption of glucose and bicarbonate in the jejunal segment of small intestine.<sup>34</sup> Example Docusate sodium

#### Lubricant laxatives

It is commonly administered to patients with rectal or anal obstruction, it reduces surface tension of intestinal luminal contents, allowing increased retention of fluid within the stool, facilitating easier comfortable passage and minimizes straining during defecation.<sup>35</sup> Example Mineral oil

#### **Osmotic laxatives**

It increases osmotic pressure within the intestinal lumen, promoting water retention, luminal distention, enhanced peristalsis, and subsequent stool evacuation. <sup>35</sup>Lactulose and polyethylene glycol are poorly absorbed systemically. <sup>36</sup>example salts (sodium chloride), magnesium sulphate or citrate, lactulose, sorbitol, polyethylene glycol

## Stimulant laxatives

It acts locally to enhance colonic motility and reduce water absorption in the large intestine and facilitate the evacuation of stool.<sup>37</sup> Example Bisacodyl, senna

#### **Discussion**

Constipation is a common symptom which everybody faces once in lifetime. It causes discomfort moreover to risk in pregnancy and puerperal period. constipation is physiological in pregnancy, diet and lifestyle modification is the best way to overcome this problem. Ayurveda describes the causes (nidana) and clinical features (lakshana) of Vibandha, which closely resemble the descriptions of constipation found in alternative systems of medicine. According to masanumasika garbhini paricharya ksheera, ghruta, navaneeta, plenty of fluids in the form of siddha Madhura Aushadha Ksheerapakas will definitely help in normalizing vata and prevent constipation.

#### Conclusion

Based on the *lakshnas* it was concluded that there is *Apana Vata Vaigunya*. Hence the basic line of management was *Samyak anulomana* of *Apana Vata*. Ayurvedic principle, focusing on modified diet, lifestyle, and herbal remedies, showed promise in preventing and controlling constipation during pregnancy. The first line of therapy for constipation includes increasing dietary fibre and water intake and moderate amounts of daily exercise. <sup>38</sup>If these are ineffective, laxatives are the second line of therapy. Because most laxatives are not absorbed systemically, short-term use has not been, and is not expected to be, associated with an increased risk of malformations. <sup>39</sup>

VOLUME 24 : ISSUE 09 (Sep) - 2025 Page No:360

<sup>&</sup>lt;sup>1</sup> Charaka. Charaka of Agnivesha with Charaka chandrika teeka. Dr. Brahmanand Tripathy, Editor. Chaukhamba Sanskrit Prakashan, Varanasi. 2004. Ch.su. 1/7

<sup>&</sup>lt;sup>2</sup> Shubham gupta, Pradeep s shindhe, A Conceptual Study About Etiopathogenesis of Vibandha and Role of Ayurveda in Its Management: A Review, DOI: 10.7897/2277-4343.086282

<sup>&</sup>lt;sup>3</sup> Agnivesha Charaka Samhita: Revised by Charaka and Dridhabala with Ayurveda Dipika Commentary of Chakrapanidatta. Edited by Yadavji Trikamji Acharya, Sutrasthana 7th chapter, Shloka No.18, 3rd edition. Reprint 2017. Varanasi: Chaukhambha Sanskrit sansthan

<sup>&</sup>lt;sup>4</sup> Agnivesha Charaka Samhita: Revised by Charaka and Dridhabala with Ayurveda Dipika Commentary of Chakrapanidatta. Edited by Yadavji Trikamji Acharya, chikitsasthana 28th chapter, chapter, Shloka No.70, 3rd edition. Reprint 2017. Varanasi: Chaukhambha Sanskritsansthan

<sup>&</sup>lt;sup>5</sup> Susrutha, Susruta Samhita, Nibandhasamgraha Commentary of Dalhanacharya and Nyaya Chandrika Panchika Commentary of Gayadasa, edited by Yadavji Trikamji Acharya, Chikitsasthana, 56th chapter, Verse.20, Reprint 2017, Chaukhambha Sanskrit Sansthan, Varanasi

<sup>&</sup>lt;sup>6</sup> Susrutha, Susruta Samhita, Nibandha samgraha Commentary of Dalhanacharya and Nyaya Chandrika Panchika Commentary of Gayadasa, edited by Yadavji Trikamji Acharya, uttartantra, 39th chapter, Verse.117, Reprint 2017, Chaukhambha Sanskrit Sansthan, Varanasi

<sup>&</sup>lt;sup>7</sup> Vagbhata, Ashtanga Hrudaya, Sarvangasundari commentary of Arunadatta and Ayurveda Rasayana commentary of Hemadri, edited by Bhaisayacharya Harisastri Paradkar Vaidya, Nidanasthana, 16th chapter, shloka No.40, reprinted on 2016, Chaukambha Sanskrit Sansthan, Varanasi

<sup>&</sup>lt;sup>8</sup> Vagbhata, Ashtanga Hrudaya, Sarvanga sundari commentary of Arunadatta and Ayurveda Rasayana commentary of Hemadri, edited by Bhaisayacharya Harisastri Paradkar Vaidya, Sutrasthana, 8th chapter, shloka No.31, reprinted on 2016, Chaukambha Sanskrit Sansthan, Varanasi

<sup>&</sup>lt;sup>9</sup> Nader Salari, Sakine Mohamadi, Global prevalence of constipation during pregnancy: a systematic review and meta-analysis, *BMC Pregnancy Childbirth* **24**, 836 (2024). https://doi.org/10.1186/s12884-024-07057-y

<sup>&</sup>lt;sup>10</sup>. Kuronen M, Hantunen S, Alanne L, et al. Pregnancy, puerperium and perinatal constipation - an observational hybrid survey on pregnant and postpartum women and their age-matched non-pregnant controls. BJOG 2021;128(6):1057–64.

<sup>&</sup>lt;sup>11</sup> Vazquez JC. Constipation, haemorrhoids, and heartburn in pregnancy. BMJ Clin Evid 2010; 2010:1411. <u>Google Scholar</u>

 $<sup>^{12}</sup>$  Emma J.Derbyshire  $\cdot$  Jill Davies  $\cdot$  Peter Det mar, Changes in Bowel Function: Pregnancy and the Puerperium, DOI 10.1007/s 10620-006-9538-x

<sup>&</sup>lt;sup>13</sup> Hiralal konar, Text Book of Obstetrics by D.C. Dutta's Jaypee brothers' medical publisher's 8th edition Chapter 06, Physiological Changes During Pregnancy page no-62

<sup>&</sup>lt;sup>14</sup> Rohit Tiwari1, Sucheta Ray, Varsha Jadhao, Ayurveda Management of Garbhini Vibandha W.S.R. To Constipation in Pregnancy- A Conceptual Study, ISSN: 2393-9583 (P)/ 2393-9591 (O)

<sup>&</sup>lt;sup>15</sup> N d christofies, M A ghatei, S R bloom etc. Decreased plasma motilin concentrations in pregnancy, DOI: <u>10.1136/bmj.285.6353.1453</u>

<sup>16</sup> A. Bharucha AE, Dorn SD, Lembo A, Pressman A. American Gastroenterological Association medical position statement on constipation. Gastroenterology.2013;144:211–217.

- <sup>17</sup> Drossman DA. Functional gastrointestinal disorders: Histor y, pathophysiology, clinical features and Rome IV. Gastroenterology. 2016 doi: 10.1053/j.gastro.2016.02.032. <a href="https://doi.org/10.1053/j.gastro.2016.02.032">https://doi.org/10.1053/j.gastro.2016.02.032</a>
- <sup>18</sup> Vagbhata, Ashtanga Hrudaya, Sarvangasundari commentary of Arunadatta and Ayurveda Rasayana commentary of Hemadri, edited by Bhaisayacharya Harisastri Paradkar Vaidya, Sutrasthana, 4th chapter, shloka No.3, reprinted on 2016, Chaukambha Sanskrit Sansthan, Varanasi, p53.
- <sup>19</sup> Rohit Tiwari, Sucheta Ray, Ayurveda Management of Garbhini Vibandha W.S.R. To Constipation In Pregnancy-A Conceptual Study ISSN: 2393-9583 (P)/2393-9591 (O)
- <sup>20</sup> Pooja Bhat, Nagaratna S Jartarghar, Etiopathogenesis of Vibandha W.S.R To Functional Constipation in Children, <a href="https://doi.org/10.47070/ijapr.v11i12.3057">https://doi.org/10.47070/ijapr.v11i12.3057</a>
- Pandit Kashinath Shashtri & Dr. Gorakhanath Chaturvedi, Charaka Samhita, Savimarsha Vidyotini Hindi commentary, published by Choukhambha Bharati academy, Varanasi, Reprint 2015, Part 2, Cha. Sutrsthan 1/66
  Pandit Kashinath Shashtri & Dr. Gorakhanath Chaturvedi, Charaka Samhita, Savimarsha Vidyotini Hindi
- <sup>22</sup> Pandit Kashinath Shashtri & Dr. Gorakhanath Chaturvedi, Charaka Samhita, Savimarsha Vidyotini Hindi commentary, published by Choukhambha Bharati academy, Varanasi, Reprint 2015, Part 2, Cha. vimansthan 5/21
- <sup>23</sup> Gupta Kaviraj Atridev (editor). Ashtanga Sangraha of Vagbhatta. (India, Varanasi: Chaukhambha Krishanadas Akadami), Nidaan Sthana, 16/29,30.
- <sup>24</sup> Murthy Shrikantha KR (editor). Sushruta Samhita of Sushruta. Vol. II. Reprint ed. (India, Varanasi: ChaukhambhaOrientalia), Chikista Sthana 2017, 34/20.
- <sup>25</sup> Pandit Kashinath Shashtri & Dr. Gorakhanath Chaturvedi, Charaka Samhita, Savimarsha Vidyotini Hindi commentary, published by Choukhambha Bharati academy, Varanasi, Reprint 2015, Part 2, Cha. sutrsthan 7/8
- <sup>26</sup> Rohit Tiwari, Sucheta Ray, Ayurveda Management of Garbhini Vibandha W.S.R. To Constipation in Pregnancy-A Conceptual Study ISSN: 2393-9583 (P)/ 2393-9591 (O)
- <sup>27</sup> Pandit Kashinath Shashtri & Dr. Gorakhanath Chaturvedi, Charaka Samhita, Savimarsha Vidyotini Hindi commentary, published by Choukhambha Bharati academy, Varanasi, Reprint 2015, Part 2, Cha. Sutrasthana 7th chapter, Shloka No.8
- <sup>28</sup> Vagbhata, Ashtanga Hrudaya, Sarvangasundari commentary of Arunadatta and Ayurveda Rasayana commentary of Hemadri, edited by Bhaisayacharya Harisastri Paradkar Vaidya, Sutrasthana, 4th chapter, shloka No.3, reprinted on 2016, Chaukambha Sanskrit Sansthan, Varanasi, p53.
- <sup>29</sup> Harita Samhita Hindi commentary by Vaidhya Jayminipandey, Tritiya khanda, chapter 51 shloka 10 edition 2010, Chaukambha vishwabharti, Varanasi
- <sup>30</sup> Shruthi M. Constipation A Cause of Disharmony in Pregnancy An Ayurvedic Review Wjpls 2017 Vol.3 Issue 1
- <sup>31</sup> Ambikadutt Shastri, Susrut Samhita, Sharir Sthana, Adhyay 10/4, Ayurved Tatva Sandipika, Chaukhamba Prakashan, Varanasi.
- <sup>32</sup> Cullen G, O'Donoghue D. Constipation and pregnancy. Best Pract Res Clin Gastroenterol. 2007;21(5):807–18. doi: 10.1016/j.bpg.2007.05.005 [DOI]
- <sup>33</sup> Jick H, Holmes LB, Hunter JR, Madsen S, Stergachis A. First-trimester drug use and congenital disorders. JAMA. 1981;246(4):343–6. [Google Scholar]
- <sup>34</sup> Moriarty KJ, Kelly MJ, Beetham R, Clark ML. Studies on the mechanism of action of dioctyl sodium sulphosuccinate in the human jejunum. Gut. 1985;26(10):1008–13. doi: 10.1136/gut.26.10.1008. [DOI]
- <sup>35</sup> West L, Warren J, Cutts T. Diagnosis and management of irritable bowel syndrome, constipation, and diarrhea in pregnancy. Gastroenterol Clin North Am. 1992;21(4):793–802.
- <sup>36</sup> Carulli N, Salvioli GF, Manenti F. Absorption of lactulose in man. Digestion, Wilkinson R. Polyethylene glycol 4000 as a continuously administered nonabsorbable faecal marker for metabolic balance studies in human subjects. Gut. 1971;12(8):654–60. doi: 10.1136/gut.12.8.654.

VOLUME 24 : ISSUE 09 (Sep) - 2025 Page No:362

<sup>&</sup>lt;sup>37</sup> tack J, Müller-Lissner S, Stanghellini V, Boeckxstaens G, Kamm MA, Simren M, et al. Diagnosis and treatment of chronic constipation—a European perspective. Neurogastroenterol Motil. [DOI]

<sup>&</sup>lt;sup>38</sup> Longo SA, Moore RC, Canzoneri BJ, Robichaux A. Gastrointestinal conditions during pregnancy. Clin Colon Rectal Surg. 2010;23(2):80–9. doi: 10.1055/s-0030-1254294. [DOI]

<sup>&</sup>lt;sup>39</sup> Magan Trottier, Aida Erebara, Pina Bozzo, treating constipation in during pregnancy. PMC 2012 Aug;58(8):836–838