

Upapluta Yonivyapad w.s.r. Vulvovaginitis during Pregnancy: A Survey Study

Research Article

Nilofar Shaikh^{1*}, Shivshankar Rajput¹, Meera Cholera²,
Laxmipriya Dei³, Shilpa Donga⁴

1. PG Scholar, 3. Profesor & Head, 4. Associate Profesor,
Department of Streeroga and Prasooti Tantra,
2. Microbiologist, Head, Microbiology Laboratory,
Institute for Post Graguade Teaching & Research in Ayurveda, Gujarat Ayurved University,
Jamnagar – 361008. Gujarat, India

Abstract

It is accepted by everyone that *Ayurveda* is an ancient most literature in medical world. In the early period of *Samhita* the traces of survey can be seen mainly aiming to the prevention of people suffering from various diseases. Survey is the way by which one can present the classical facts and directives in more practical manner to the current society. *Upapluta Yonivyapad* is one of the 20 *Yonivyapad* described by *Acharyas*. On the basis of the textual description *Upapluta Yonivyapad* can be compared to vulvovaginitis during pregnancy. Here, Survey study was aimed to elicit etiopathogenesis and prevalence of *Upapluta Yonivyapad* in and around Jamnagar city. The Study was conducted on 200 pregnant women attending the OPD of SRPT Dept. (I.P.G.T. & R.A.), Jamnagar, of whom 100% cooperated to give vaginal smear samples to microbiology laboratory. Organisms like gram negative bacteria and yeast were found in (92.5%) and (17.5%) of cases respectively. Etiological factors like *Vishamashana* in (49%) of cases, *Divaswapa* (day sleep) in (74.5%), excessive intake of *Madhura Rasa* in (68.5%) and *Ati-Vyavaya* (Excessive coitus) in (58%) were observed. Survey questionnaire shows that certain dietary and life style factors contribute towards occurrence of *Upapluta Yonivyapad* in maximum i.e. 56.5% of patients.

Keywords: *Upapluta Yonivyapad*, Vulvovaginitis, Pregnancy, Prevalence, Survey Study, Etiopathogenesis

Introduction:

Pregnancy is associated with specific anatomical, physiological and immunological changes that can predispose to infection and also alter the

response to the disease process. Infections in pregnancy demands prompt adequate and careful management. The disease process as well as the treatment protocol may have profound effects on the outcome of pregnancy. Some of the infections may be serious and life threatening for the mother while others may seriously jeopardize the fetus or neonate leaving the mother asymptomatic. Reported prevalence of *Chlamydia Trachomatis* in antenatal patients ranges from 2 to 30 %. *Candida* accounts for symptomatic vaginitis in 45% of pregnant patients.

*Corresponding Author:

Nilofar Shaikh

PG Scholar,
Dept. of Streeroga and Prasooti Tantra
I.P.G.T & R.A.,
Jamnagar. Gujarat- 361008
E mail: Shaikhnilofar12@gmail.com
Mob: + 9638508994

Candida albicans can be identified by culture from the vagina during pregnancy in approximately 25% of women (1). Vaginal infections occur when bacteria, fungus or other organisms grow uncontrolled and lead to symptoms of vaginal infection. Infectious organisms can also be introduced into the vagina by improper hygiene or unsafe sex. When these infections are left untreated then may gain access trans- placentally during viremic, bacteremic or parasitemic stage of maternal infections (Newton, 1999) they may also cross intact amniotic membranes. Fetal infections may develop early in pregnancy to produce obvious stigmata at birth. Alternatively, organisms may colonize and infect the fetus during labour and delivery. Infection is the most clearly recognized and more widely studied and responsible for between 20 to 40% of all cases of preterm birth and other complication likes premature rupture of membranes, Chorioamnionitis, spontaneous abortion (2) etc. According to *Maharshi Charaka* when a pregnant woman consumes diet or indulges in mode of life capable of vitiating *Kapha* and also suppresses desire of vomiting and inspiration, then her agitated or vitiated *Vayu* withholding *Kapha* reaches to *Yoni* (vagina) and produces abnormalities. Due to this, either yellowish vaginal discharge associated with pricking pain or white mucoid discharge afflicted with features of *Kapha* or *Vata* occurs, this condition is known as *Upapluta Yonivyapad* (3). There is no prevalent data of the *Upapluta Yonivyapad* is available because the disease

is not reportable and many women are self medicated for this condition. So, the present study has been designed with aims and objectives to evaluate the etiological factors and incidence of *Upapluta Yonivyapad* (vulvovaginitis during pregnancy) in and around Jamnagar.

Materials and Methods:

Total 200 antenatal patients between 19- 40 years age group attending the Out Patient Dept. of Streeroga and Prasooti Tantra, Institute for Post Graduate Teaching & Research (I.P.G.T. &R.A.) in Ayurveda, Gujarat Ayurved University, Jamnagar fulfilling the clinical criteria of pregnancy based on detail history according to both *Ayurvedic* and Modern parameters were registered in this study. The patients below 19 years and above 40 years, having complicated pregnancy were excluded from the study. The study had a due clearance from the Institutional Ethics Committee and CTRI registration was done. **(CTRI Number: Ref/2014/10/007836)** and informed consent was taken. Subjects were screened for any vaginal infections, special questionnaire in the form of Performa were prepared for same & filled accordingly. Microbiological investigation like wet vaginal smear was done in Microbiology laboratory, I.P.G.T. &R.A., Jamnagar. Gram stain and KOH stain were done for microscopic examination. pH meter was used to detect pH of vaginal samples.

Observations and results:

The demographic data reveals that maximum no. of patients (50%) belonged to the 25-30 years age group. Maximum patients i.e. (81%) were Hindu; Housewives (87%); secondary level of education was found in (26.5%) of patients; (59.5%) from lower middle class; (72%) belonged to joint family and (80%) from urban area.

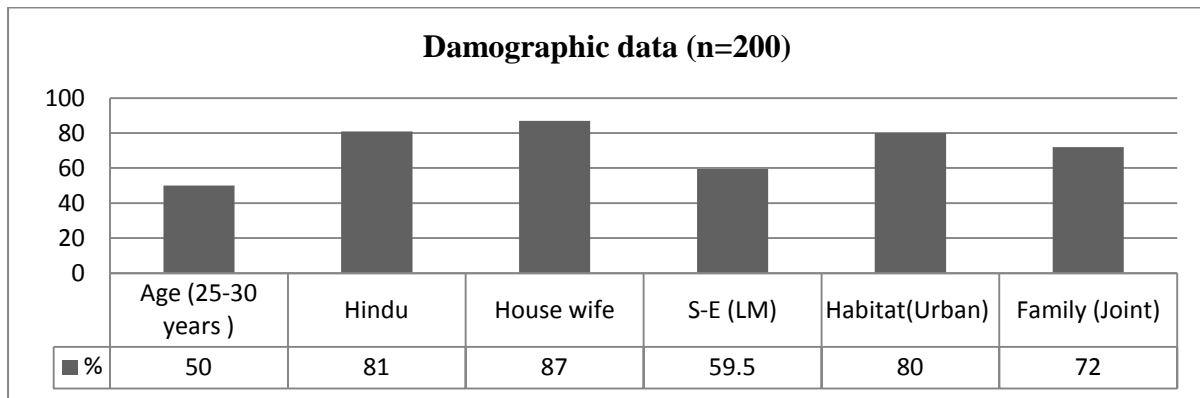


Figure -1 Showing general observation

In the present study, maximum number of patients' i.e. (66%) had active marriage life up to 5 years, followed by (26.5%) had 6-10 years. Maximum numbers of patients i.e. (59.5%) were of second trimester while 20.5% and 20% patients were of third and first trimester respectively. Maximum numbers of patients selected for the present study were vegetarian i.e.(74%); Dominancy of Rasa wise distribution shows maximum i.e.(68.5%) of patients were consuming *Madhura Rasa* (sweet) while (62%) were consuming *Katu Rasa* (pungent).Majority of the patients' i.e. (35.5%) had Vishamagni while (29%) had Mandagni. (49%) were having Vishamashana (untimely diet) dietetic habit, (24.5%) were having Samshana (taking wholesome and unwholesome diet together) and (21.5%) were having Adhyashana (repeated eating at short interval). (59%) were having moderate appetite; (31.5%) of patients addicted to tea while (9.5%) had addiction of tobacco. *Divaswapa* (day sleep) was observed in (74.5%); (58%) had the history of intercourse 1-2 times /week. *Chhardi Nigrahana* (suppression of vomiting) was observed in (45%) and disturbed sleep pattern was observed in (23.5%).

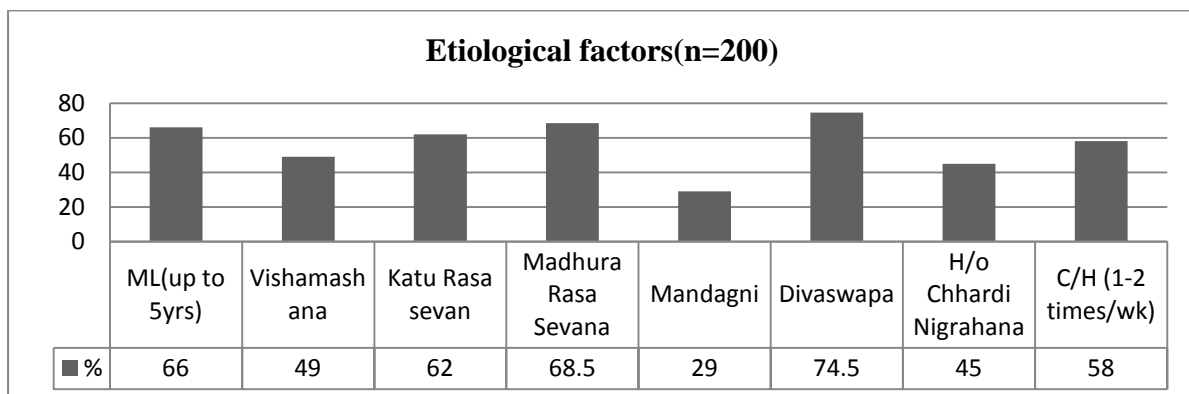


Figure -2 Showing observed etiological factors of *Upapluta Yonivyapad*

Among the chief complaints, maximum i.e. (89.5%) of patients had been suffering from Yoni Srava (vaginal discharge); (32.5%) from Yoni Kandu (itching vulva); (15%) from Yoni Vedana (pain in vagina) and only (07%) from Yoni Daha (burning sensation in vagina). Pandu Pichchhila Yonitah Srava (white mucoid) was present in maximum no. of patients i.e. (49%); *Jaliya Yonitah Srava* (Watery discharge) in (22%); *Dadhivat Yonitah Srava* (Curdy discharge) in (18%) and *Sarakta Yonitah Srava* (blood stained) was present in (0.5%) of patients. Among the associated complaints, (40.5%) patients had been suffering from *Katishula* (backache); (33%) from *Daurbalya* (weakness); (24%) from *Mutradaha* (burning urination) while (23%) from *Udarashula* (abdominal pain).

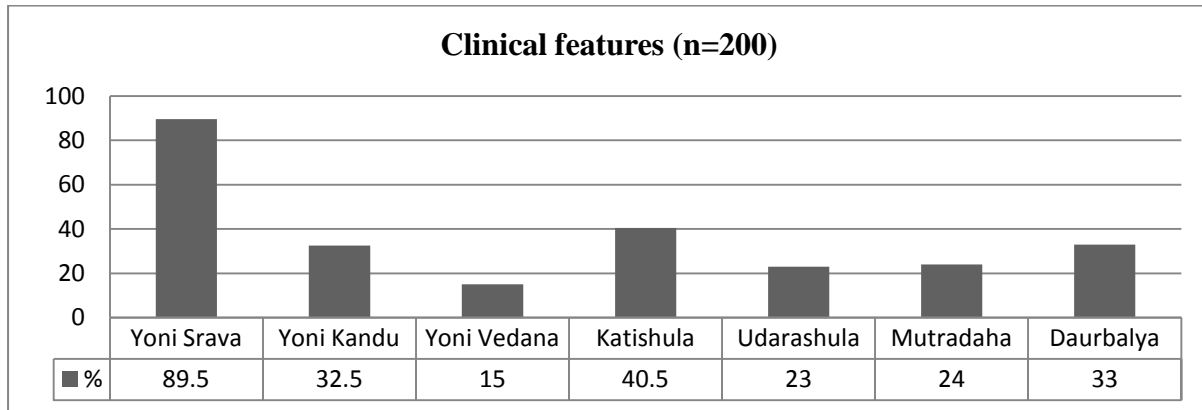


Figure -3 Showing observed clinical features of *Upapluta Yonivyapad*

On the basis of per speculum examination, Vaginitis was seen in (31.5%) of patients; Vulvitis in (23.5%) and Cervicitis in (08 %). In vaginal pH test, maximum number of vaginal samples i.e. (34%) indicated vaginal pH (6) followed by (20.5%), (18.5%), (14.5%), (11%), (1.5%) of vaginal samples indicated 7,4,5,3 and 8 respectively. On the basis of wet vaginal smear examination, it was observed that the causative factors of vulvovaginitis were as gram negative bacteria in (92.5%) of patients, fungal hyphae in (17.5 %) and pus cells in (100%). Occasional fungal hyphae were present in (2.5%) of vaginal smear, few fungal hyphae were in (10%) and many fungal hyphae were in (05%). Many gram negative bacteria were present in (90%) of vaginal smear and few negative bacteria were present in (2.5%) of vaginal smear. 0-5/hpf pus cells were observed in (70.5%) of vaginal smear, 6-25/hpf were in (27%), 26-50/hpf were in (1.5%) and 51-100/ hpf were in (1%) were observed.

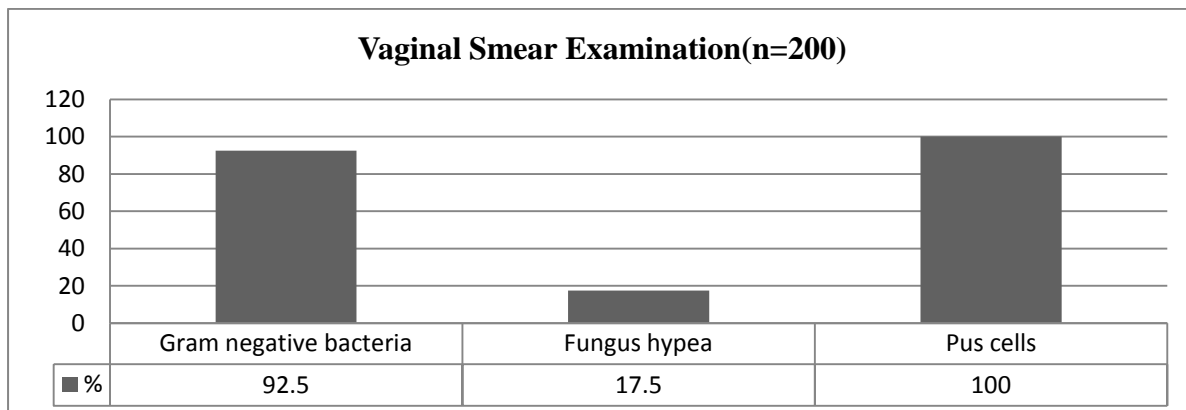


Figure -4 Findings of vaginal smear examination

Discussion:

Discussion on Disease:

From *Vedic* period the Indian physicians were well aware of the presence of the microorganisms but they gave prime importance to soil and not to seed. Here the seed (microorganism) is omnipresent and its entry in the body

cannot

be checked (4). *Acharya Chakrapani* has also said that in body *Sahaja* and *Vaikarika Krimis* are present (5). In bacteriology many microorganisms are described as normal flora of the body. These microorganisms remain present in various parts of the body but produce disease only when the resistance of body

(soil) breaks down. So it can be concluded that ancient *Acharyas* had very deep knowledge of microorganisms. There is normally lowering of immunity in pregnancy, which leads to over growth of microorganisms like *Candida albicans*, bacterial parasites, *T.vaginalis* etc. in vagina (6). The lower genital tract of the pregnant woman harbours many fungi, bacteria as the commensals, which survive without producing any symptomatic illness (7). *Upapluta Yonivyapad* is one of 20 *Yonivyapad* which is caused by vitiation of Vata and Kapha Dosha and *Acharya Charaka* has clearly mentioned that it is only a disease of the pregnant woman so in present study only pregnant women were selected. On the basis of all clinical features and principles of treatment, *Upapluta Yonivyapad* seems to be nearer to vulvovaginitis during pregnancy.

Discussion on observations:

It was observed that (50%) were from the age group of 25 to 30 years. This indicates that this disease is a common problem of active reproductive life (8). (81%) of patients were Hindu, while (19%) of patients were Muslim. It does not seem to have any relation between the living habits of different religion and *Upapluta Yonivyapad* rather due to geographical dominance of Hindu people in this region (Jamnagar). Most of the ladies were house wives and they were busy in house hold works and remained indifferent towards their hygiene and their own well being. When the genital area is not kept clean or hygienic, the number of infectious microorganism increases, making vulvovaginal infections more likely (9). From obtained data, it was noticed that majority of patients were from urban area. This may be due to geographical location of the hospital in urban area. Most of patients from lower middle class these people cannot get proper diet and hygienic environment. So the chances of malnutrition are higher in lower class. Poverty, poor hygiene and bad

sanitation are also important factors for vulvovaginal infection. Being a Government Hospital, patients attending the OPD predominantly belong to lower and lower middle class. In the present study (59.5%) patients were of second trimester, decreased immunity causes decreased local defence mechanism which is also responsible for growth of microorganism. According to *Acharya Charaka*, 5th month onwards *Garbhini* becomes emaciated, suffers from loss of strength and feels excessively exhausted (10). This physiological status, with the progress of pregnancy makes her prone to disease. Maximum number of patients' had active married life up to 5 years this is the state of when excessive coitus is one of the predisposing factors which may have induced minute laceration in vagina, leading to damage in protective mucous membrane. These lacerated sites provide entry to microorganism (11). (74%) of patients were vegetarian, the predominance of vegetarianism only reflects the dietary habit of this region. So, it will not be rational to conclude that the vegetarians are susceptible to this disease. Maximum numbers of patients (49%) were having *Vishamashana* dietetic habit and (21.5%) were having *Adhyashana*. According to *Acharya Charaka* *Adhyashana* leads to *Agnimandya* and produces *Ama* which is identical to Kapha. It can be aggravated and after getting localized in *Yoni*, produces the disease. Excessive use of unwholesome edibles or unhygienic diet may initiate nutritional deficiency (12) and it lowers the body resistance for infection. Dominancy of *Rasa* wise distribution shows (68.5%) of patients were consuming *Madhura Rasa* and (62%) were consuming *Katu Rasa*. Thus from the above observations it can be interpreted that excessive intake of *Katu* and *Madhura Rasa* can vitiate Kapha and Vata which is the define cause of the disease. In present study (35.5 %) patients had *Vishamagni* while (29%) had *Mandagni*. Due to *Vishamagni* or

Mandagni, Ahara is not properly digested and Ama is produced. Upapluta Yonivyapad is caused mainly due to vitiated *Kapha Dosha*. Vitiated Kapha and Amavastha are very common due to *Mandagni*. (58.5%) were having moderate appetite due to pregnancy and family pressure women are under the belief that they have to eat constantly for the growing foetus. So, moderate appetite was found in maximum numbers. (31.5%) were habituated to tea while (9.5%) had the addiction of tobacco. Tea and coffee decreases the appetite which in turn affects the growth of foetus by causing poor nutrition. Disturbed sleep was observed in (23.5%) may vitiate Vata and *Divaswapa* was observed in (74.5%) of patients which provokes the *Kapha Dosha* and ultimately may lead to the disease. *Chhardi Nigrahana* was observed in (45%) which is one of the *Vishista Nidana* of *Upapluta Yonivyapad*. On considering the data of sexual history, (58%) had frequency of intercourse 1- 2times/week, it is mentioned in Ayurvedic classics that *Atimathuna* (excessive sexual intercourse) is one of the very important causative factor for all Yonivyapad and during pregnancy prohibited by *Acharayas*(13)(14). Excessive sexual excitement leads to local irritation and lower genital tract infection may be preceded by disturbance of normal vaginal flora, which may be caused by infected male partner.

Among the chief complaints, (89.5%) of patients had been suffering from Yoni Srava, (32.5%) from Yoni Kandu and (15%) from Yoni Vedana. Here, it may be predicted that due to Kapha dominance in their (during pregnancy according to Ghanekara) body, & due to excessive intake of *Kaphakara Ahara- Vihara*, Kapha is vitiate and involvement of Kapha Dosha in Samprapti, gives the cardinal symptoms like Yoni Srava, Yoni Kandu and Yoni Pichchilata. Excessive discharge causes irritation in vagina, which causes itching.

Yoni Daha was seen in most of patients, it may be due to vitiated *Vata* causing *Ashayapakarsha* of *Pitta* (15) and according to modern view excoriation of vagina due to itching is the possible cause of Yoni Daha. *Yonishula* is due to active involvement of *Vata Dosha*. In modern view, during pregnancy physiologically lowered immunity leads to growth of microorganisms in excess and causes infection of lower genital tract producing excessive discharge, itching, foul smelling and burning sensation etc.(16). Pandu Pichchhila Yonitah Srava was present in (49%) of patients, *Jaliya Yonitah Srava* was present in (22%), *Dadhivat Yonitah Srava* was present in (18%).According to modern science, mucoid vaginal discharge is found in the infection or inflammation which is generally caused by pyogenic bacteria/ cocci any microorganism in any part of reproductive organs (17). Curdy discharge is found in fungal infection and due to hormonal influence normal watery discharge is found. According to *Ayurveda* Pandu Pichchhila and *Dadhivat Srava* occur due vitiation of Kapha. *Chhardi Nigrahana* and *Dhatu Kshaya* lead to *Vata Dosha Prakopa*. According to *Acharya Charaka* main *Sthana* of *Vata* is *Kati* and *Pakvashaya* (18). Hence, *Katishula* is the main feature of *Vata Prakopa* and found in (40.5%) of cases. Also according to modern science, during pregnancy (19), UTI and constipation are the probable cause of backache. Among the other associated complaints, (33%) patients had been suffering from *Daurbalya* and (24%) from *Mutradaha* while (23%) from *Udarashula*. Due to short urethra and less distance between urethral meatus and vagina, infection reaches easily to urethra. Vaginal infection may lead to premature contraction of uterus that is the probable cause of *Udarashula*.

In vaginal pH test, maximum number of vaginal samples i.e. (34%) indicated vaginal pH 6 followed by (20.5%),(18.5%),(14.5%),(11%),(1.5%) of vaginal samples indicated 7,4,5,3,8

respectively. Under the influence of oestrogen, the vaginal epithelium contains glycogen, which favours colonization by large gram positive rods and other acid-tolerant bacteria, which metabolize glycogen to form lactic acid (20). The resulting pH of less than 4.5 suppresses the growth of potential pathogens. Bacterial vaginosis is the most common cause of vaginal discharge among women in reproductive age (21). It is characterized by an increased vaginal pH and the replacement of vaginal lactobacilli (particularly those that produce hydrogen peroxide) with *Gardnerella vaginalis* and anaerobic Gram negative rods. Present study also supports this statement. The vaginal flora plays a critical role in vaginal defence mechanism by maintaining the normal and abnormal changes in the vagina. There are normally 5 to 15 different bacterial species (i.e. group B Streptococcus, E. Coli etc.) both aerobic & anaerobic that inhabits the vagina. Other bacteria commonly present in large numbers (approx. 10^7 /ml vaginal fluid) include anaerobic and non beta haemolytic streptococci, diphtheroids (*Coryne bacterium* spp.) and coagulase negative staphylococci. Other organisms, for example coli forms, anaerobic gram negative rods and *Gardnerella vaginalis* are often present in low numbers. On the basis of wet vaginal smear examination, it was observed that the causative factors of vulvovaginitis are as gram negative bacteria in (92.5%) of patients. During pregnancy due to increased glycogen content and increased secretions, vaginal area becomes warm and moist and the vaginal pH falls that helps in the development of yeast cells. So in the present study (17.5%) fungal hyphae were seen in wet vaginal smear. Due to natural process of phagocytosis pus cells were found in (100%) of patients.

Conclusion:

After scrutinizing the study regarding *Upapluta Yonivyapad*

(Vulvovaginitis during pregnancy) following conclusions can be drawn:

- *Kapha-Vata Dosha* provoking *Ahara-Vihara* and *Chhardi Nigrahana* are the main etiological factors of *Upapluta Yonivyapad* described by *Acharya Charaka*. Here, *Madhura Rasa* dominant diet was found in (68.5%), *Divaswapa* in (74.5%), *Chhardi Nigrahana* in (45%), *Ati-Vyavaya* (Excessive coitus) in (58%) etc. findings support this statement.
- *Pandu Pichchhila Yonitah Srava* (white mucoid) and *Toda* (pricking vaginal pain) are cardinal symptoms of *Upapluta Yonivyapad* described by *Acharya Charaka*. In present study *Pandu Pichchhila Yonitah Srava* (white mucoid) was found in (49%) of patients and *Yoni Vedana* (pain in vagina) was found in (15%) of cases.
- Survey questionnaire shows that certain dietary and life style factors contribute towards occurrence of *Upapluta Yonivyapad* in maximum i.e. 56.5% of Antenatal patients attending the OPD of SRPT Dept, IPGT & RA, GAU, Jamnagar.
- Prevalence of *Upapluta Yonivyapad* (Vulvovaginitis during pregnancy) is noticeable in Jamnagar. So, early detection and screening of infection is necessary to avoid complications like PROM, Pre-term delivery etc.

References:

1. F. Gary Cunningham, Williams Obstetricus, 23 editions, USA, Mc Graw Hill companies, 1246 p.
2. Das Gupta, Recent adv. In Obs. & Gyn.-8, New Delhi, Jaypee Brother Medical Publishers (P) Ltd., 2008, 46 p.
3. Charaka, Charaka Samhita, ed. by Satyanarayana Shastri, Edition, Reprint- 2003 Varanashi, Chaukhambha Bharati Academy, 2003, Ch.Chi.30/21-22.

4. Sushruta, Sushruta Samhita, Krimi Pratishedha Adhyaya edited by Yadavji Trikamji Acharya, 7th ed. Varanasi, Chaukhambha Orientalia, 2002, 773 p.
5. Rajesh K, Ajita D, Medical Parasitology, Kolkatta, Arunaben Sen Book and allied (P) Ltd., Jan 2003,122 p.
6. www.buzzel.com. on 17/2/ 2011 at 12.52 pm.
7. Padubidri VG, Shirish N Daftary, Disease of the Vagina in Howkins and Bourne Shaw's Textbook of Gynaecology, 13th edition, Noida, printed Godsons Papers Ltd., 2005-121 p.
8. Padubidri VG, Shirish N Daftary, Disease of the Vagina in Howkins and Bourne Shaw's Textbook of Gynaecology, 13th edition, Noida, printed Gopsons Papers Ltd., 2005 125-127 p.
9. www.my.clevelandclinic.org on 1/23/2011 at 6.30 am.
10. Charaka, Charaka Samhita, Ed. By Satyanarayana Shastri, Edition, Reprint- 2003 Varanashi, Chaukhambha Bharati Academy; 2003, Ch.Sha.4/21,22,23.
11. Padubidri VG, Shirisha N Daftary, Disease of the Vagina in Howkins and Bourne Shaw's Textbook of Gynaecology, 13th edition, Noida, printed Gopsons Papers Ltd.,2005, 125-129 p.
12. V. N. K. Usha, A Text Book of Streeroga-Vijyana, 1st edition, Delhi, Chaukhambha Sanskrit Pratishthana, 2010, 180 p.
13. Charak, Charaka Samhita, Ed. By Satyanarayana Shastri, Edition,Reprint- 2003 Varanashi, Chaukhambha Bharati Academy; 2003, Ch.Su. 25/40.
14. Sushruta, Sushruta Samhita, eds. Ambica D. Shastri, Edition, Reprint-2005, Varanashi: Chaukhambha Bharati Academy; 2005, Su. Sha 3/16.
15. Charak, Charaka Samhita, Ed. by Satyanarayana Shastri, Edition,Reprint- 2003 Varanashi: Chaukhambha Bharati Academy; 2003, Ch.Su.17.
16. www.buzzel.com. 17/2/2011 at 12.52 pm.
17. Tiwari Premavati, Ayurvediya Prasuti-Tantra & Stri-Roga Vol. 2, 2nd edition, Varanashi, Chaukhamba Orientalia, 2009, 257 p.
18. Charak, Charaka Samhita, ed. by Satyanarayana Shastri, Edition, Reprint- 2003, Varanashi, Chaukhambha Bharati Academy; 2003, Ch.Su.20/8.
19. Macsween KF, Ridgway GL., The Laboratory Investigation of Vaginal Discharge. 1998; 51:564-7p.
20. Dutta D.C., The Text Book of Obstetrics, 5th edition, Kolkata, New central book Agency (P) LTD., 2008,102 p.
21. Padubidri VG, Shirisha N Daftary, Disease of the Vagina in Howkins and Bourne Shaw's Textbook of Gynaecology, 13th edition, Noida, printed Godsons Papers Ltd., 2005 121 p.
