

TORCH Infection and Ayurveda Treatment: A Blessing to Infertility

Research Article

Ashwini Dhananjay Sonalkar¹, Dipa Ashok Jain¹, Jayshree V Changade^{2*}

1. PG scholar, 2. Professor & HOD, Department of Dravyaguna (Ayurvedic Materia Medica & Pharmacology),
Dr. D. Y. Patil College of Ayurved and Research Center,
Dr. D. Y. Patil Vidyapeeth (Deemed to be University) Pimpri, Pune, India.

Abstract

Pregnancy and childbirth are the most important phases of a woman's life. In India, approximately 15% of couples are affected by infertility. There are many reasons contributing to infertility and bad obstetric history (BOH), among which TORCH infection is most common. The overall TORCH infection rate was 61.1%, while 32% of neonatal mortality was associated with multiple TORCH infections. Women who have the ability to get pregnant but are unable to continue their pregnancy may also be considered infertile. According to Ayurveda, at the time of the formation of the foetus (*Garbha*), due to vitiated blood (*Shonita*), the product of conception expels repeatedly before attaining viability, which is known as *Putraghni Yonivyapad*. So it is important to achieve a full-term pregnancy with healthy progeny. It is evident that maternal infections play a vital role in the loss of pregnancy. In this article, a 28-year-old patient with two abortions earlier and a TORCH IgG positive was treated with pure herbal medicine for 4 months. The patient conceived after that and attended a full-term pregnancy. During the whole duration of pregnancy, Ayurveda medication for healthy growth and full-term delivery was also continued. Thus, this article represents an example of successful management of TORCH infection through Ayurveda and also emphasises the potential of herbal management in TORCH infection with medicines like *dalachini churna*, *kuberaksha vati*, *sariva-manjistha phant*, and *Shatavari churna*.

Keywords: TORCH infection, BOH, Herbal management, Pregnancy, *Garbha*, *Ayurveda*.

Introduction

Although a full-term pregnancy is ideal, there are numerous reasons for early termination of pregnancy, including abortion. (1) Women's physical and mental health is also impacted by abortion. One of the current causes of miscarriage or delayed foetal growth and maturation is TORCH infection. In India, the incidence of TORCH infection is 61.1% (2), accounting for 2 to 3% of all birth abnormalities or congenital disorders. The TORCH test, which falls under IDAT (infectious-illness antibody tests), counts antibodies against a certain infectious group to determine the blood concentration of that infectious disease. The infections on the TORCH panel are: (3) Herpes simplex virus (HSV), cytomegalovirus (CMV), rubella, and toxoplasmosis. (4) Torch infections have serious implications for your baby because they don't have a strong immune system. This infection can impair foetal development and cause recurrent miscarriages due to uterine infections; it must be treated appropriately. The foetus's resistance to external agents is restricted throughout the intrauterine phase, and its immune

system is unable to stop the spread of pathogenic microorganisms. *Harita* has defined *vandhyatva* as failure to achieve a child rather than pregnancy; he has introduced the concept of *garbhastravi* (having repeated abortions). (5) Thus, TORCH infections need to be evaluated properly and treated accordingly.

Case report

Patient information

On 5 February, 2021, a 28-year-old female patient arrived at the Aaddya Ayurvedic Clinic. The patient arrived with a history of two spontaneous abortions. Her menstrual cycle is regular. The patient was informed about the infection and potential consequences, particularly those related to frequent abortion and BOH. Patient has faith in Ayurveda from earlier so she directly approached Ayurveda. The patient presented with a previous ultrasound report dated on 3/02/2021 that showed no cardiac activity in the foetus.

- Past medical history - Patient has no any major illness.
- Family history - No any history of major illness.
- Addictions - No any
- Menstrual History
 - Menarche at – 13 Years of age
 - Menstrual Cycle - 4-5/28-30days
 - No of Pads/Day – 1-2 pads/Day
 - Colour of menstrual flow- brownish
 - Nature of bleeding- clotted bleeding on the day first

* Corresponding Author:

Jayshree V Changade

Professor & HOD, Department of Dravyaguna,
Dr. D. Y. Patil College of Ayurved and Research
Center, Dr. D. Y. Patil Vidyapeeth (Deemed to be
University) Pimpri, Pune, India.
Email Id: jayshreeulemale28@gmail.com

Obstetric Score - G3P0L0A2D0
 G1 A1 - 1 month Spontaneous Abortion
 G2 A2 - 1 and half month spontaneous abortion

Findings

General Examination

Pulse-76/min; Blood pressure - 126/82 mmHg;
 Respiration rate 20/min; Height - 162 cm ; Weight-64 kg;
 BMI - 24.61; Temperature-98.6; Body Built - Average;
 No Pallor/ Edema/ Icterus/ Cyanosis/ Clubbing/ Lymphadenopathy

Systemic Examination RS / CVS / CNS - normal

Ashavidha pariksha

Jivha (Toungue)-Ishat Sama (Slightly coated);
Mala-once a day; *Mutra*- 8-11 times a day, once at night;
Shabda- Avishesha; *Sparsha*- Anushna Sheeta;
Drik- Avishesha; *Akriti*- Madhyama.

Dashvidha pariksha

Prakriti- Vata Pittaja; *Sara*- Madhyama; *Vikriti*-
 Madhyama; *Bala*- Madhyama; *Samhanana*-
 Madhyama; *Satmya*- Vyamishra; *Satva*- Madhyama;
Pramana- Madhyama; *Ahara Shakti*- Madhyama;
Jarana Shakti- Madhyama; *Vyayama Shakti*-madhyam;
Vaya- Madhyama.

P/A - Soft, No tender.

P/V examination: Uterus- anteverted and anteflexed
 Normal size uterus; Fornices - Free; Tenderness-
 absent; Os- Nulliparous

Investigation

Previous USG scan dated on 3/02/2021, reported absence of foetal cardiac activity cause's fatal demise.

Patients TORCH report positive dated on 8/02/2021. Values of TORCH are as follow,

Table 1: Showing values of TORCH before starting treatment

TORCH TEST (dated 08/02/2021)	IgG	IgM
Toxoplasmosis	0.03	0.003
Rubella	25.552	0.552
Cytomegalo virus	676.404	0.284
Herpes simplex 1	327.006	0.309
Herpes simplex 2	7.189	0.008

TORCH test repeated after 4 months on 08/06/2021 values are as follows:

Table 2: TORCH test values after 4 months of treatment

TORCH TEST (dated 08/06/2021)	IgG	IgM
Toxoplasmosis	0.17	0.10
Rubella	29.31	0.39
Cytomegalo virus	137.83	0.2
Herpes simplex 1	75.43	1.31
Herpes simplex 2	4.29	0.03

Image 1: TORCH report on 08/02/2021

Image 1: TORCH report on 08/02/2021

DIAGNOPLUS PATHOLOGY LABORATORY

7559263061 / 7875337164
 Diagnoplus.path@gmail.com

PUN0007592

TEST REPORT

Reg.No : PUN0007592
 Name : [REDACTED]
 Age/Sex : 28 Years/Female
 Referred By : DIAGNOPLUS PATH LAB (KP)
 Referral Dr : [REDACTED]

Reg.Date : 08-Feb-2021 /17:23
 Collection : 08-Feb-2021 /17:24
 Received : 08-Feb-2021 /17:23
 Report : 08-Feb-2021 /16:59
 Barcode : 000008130025

Special Serology
TORCH PROFILE (10 PARAMETERS)

TEST NAME	OBSERVED VALUE	UNITS	BIOLOGICAL REF. RANGE
* Toxoplasma Gondi IgG Method:CLIA	0.03	IU/mL	Non Reactive: < 0.8 Equival: 0.8 - 1.2 Reactive: > 1.2
* Toxoplasma Gondi IgM Method:CLIA	0.003	AU/mL	Non Reactive: < 6 Equival: 6 - 10 Reactive: > 10
Rubella IgG Method:C.I.I.A	25.552	IU/mL	Non reactive: < 5 Equival: 5-10 Reactive: >10
Rubella IgM Method:CLIA	0.552	AU/mL	Non reactive: < 5 Equival: 5-8 Reactive: >8
C M V IgG Method:C.I.I.A	676.404	AU/mL	Non reactive: <10 Equival: 10-14 Reactive: >14
C M V IgM Method:CLIA	0.284	AU/mL	Non reactive: < 8 Equival: 8-12 Reactive: >12
H S V I IgG Method:CLIA	327.006	AU/mL	Negative: <14 Equival: 14-19 Positive: >19
* H S V II IgG Method:C.I.I.A	0.309	AU/mL	Negative: < 9 Equival: 9-13 Positive: >13
H S V I IgM Method:CLIA	7.189	AU/mL	Negative: < 6 Equival: 6-10 Positive: >10
H S V II IgM Method:CLIA	0.008	AU/mL	Negative: < 6 Equival: 6-10 Positive: >10

NOTE: Presence of IgG antibodies to Rubella and CMV indicates immunity.
 Sample Type : Serum
 Please Correlate With Clinical Findings If Necessary Discuss
 * This is an Electronically Authenticated Report *

M.S. (MBD) MICROBIOLOGY

Page 3 of 3

Image 2: TORCH report after 4 months of treatment

Image 2: TORCH report after 4 months of treatment

DIAGNOPLUS PATHOLOGY LABORATORY

7559263061 / 7875337164
 Diagnoplus.path@gmail.com

PUN0021309

TEST REPORT

Reg.No : PUN0021309
 Name : [REDACTED]
 Age/Sex : 28 Years/Female
 Referred By : DIAGNOPLUS PATH LAB (KP)
 Referral Dr : [REDACTED]

Reg.Date : 08-Jun-2021 /14:24
 Collection : 08-Jun-2021 /14:26
 Received : 08-Jun-2021 /14:29
 Report : 08-Jun-2021 /17:05
 Barcode : 000856968600

Special Serology
TORCH PROFILE (10 PARAMETERS)

TEST NAME	OBSERVED VALUE	UNITS	BIOLOGICAL REF. RANGE
* Toxoplasma Gondi IgG Method:CLIA	0.17	IU/mL	Non Reactive: < 0.8 Equival: 0.8 - 1.2 Reactive: > 1.2
* Toxoplasma Gondi IgM Method:CLIA	0.10	AU/mL	Non Reactive: < 6 Equival: 6 - 10 Reactive: > 10
Rubella IgG Method:C.I.I.A	29.31	IU/mL	Non reactive: < 5 Equival: 5-10 Reactive: >10
Rubella IgM Method:CLIA	0.39	AU/mL	Non reactive: < 5 Equival: 5-8 Reactive: >8
C M V IgG Method:C.I.I.A	137.83	AU/mL	Non reactive: <10 Equival: 10-14 Reactive: >14
C M V IgM Method:CLIA	0.2	AU/mL	Non reactive: < 8 Equival: 8-12 Reactive: >12
H S V I IgG Method:CLIA	75.43	AU/mL	Negative: <14 Equival: 14-19 Positive: >19
* H S V II IgG Method:C.I.I.A	1.31	AU/mL	Negative: < 9 Equival: 9-13 Positive: >13
H S V I IgM Method:CLIA	4.29	AU/mL	Negative: < 6 Equival: 6-10 Positive: >10
H S V II IgM Method:CLIA	0.03	AU/mL	Negative: < 6 Equival: 6-10 Positive: >10

NOTE: Presence of IgG indicates immunity.
 Sample Type : Serum
 Please Correlate With Clinical Findings If Necessary Discuss
 * This is an Electronically Authenticated Report *

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Page 3 of 3

Timeline

Table 3: Timeline of the events as follows

Date	Follow-up day	Complaints	Medicines
10/02/2021	Day 1 st	c/o- willing for pregnancy, dysmenorrhea, dyspareunia tiredness M/H - clotted bleeding Scanty menses (1-2 pads/day) Colour – dark brownish	<i>Dalchini churna</i> 125 mg BD <i>Kuberaaksha vati</i> 250 mg BD <i>Sariva Manjishtha phant</i> (Hot infusion) - 10 ml morning-Evening. (Procedure to make phant/hot infusion - First of all, the given medicinal powder is mixed in hot water in given proportion in boiling stage and same is retained as such for minimum 10 hours. When it cools down, it is ask to filter and this medicated liquid is known as phant)
10/03/2021	After one month	C/O- willingness for pregnancy dyspareunia. tiredness dysmenorrhea – slightly decreases M/H- clotted bleeding on day 1 st bleeding slightly increased (2-3 pad/day for first two days 1-2 pad/day on 3 rd , 4 th & 5 th day.) Colour- light brown	Same as above
10/04/2021	After 2 months	C/O- willingness for pregnancy, no tiredness no dysmenorrhea, no dyspareunia. M/H - Flow improved(2-3 pad/day for first 4 days) No clotted bleeding noticed. Colour- light red	Same as above
10/05/2021	After 3 months	No any major complaints M/H- Flow improved(2-3 pad/day for first 4 days) No clotted bleeding noticed. Colour- fresh red	Same as above
10/06/2021	After 4 months	TORCH test values decreased as compared to previous values. M/H: Flow improved(2-3 pad/day for 5 days) No clotted bleeding noticed. Colour- fresh red	Same as above
10/07/2021	After 5 months	Periods regularised and normal No any major complaints Willingness for Conception	<i>Shatavari churna</i> – 500 mg BD <i>Kuberaaksha Vati</i> 250 mg BD <i>Sariva manjistha phant</i> 10 ml BD.
10/08/2021	After 6 months	Missed period LMP- 13-07-2021 UPT positive Routine antenatal care started	<i>Masanumasik</i> tablet 1 BD for nine months, along with modern medications prescribed by gynaecologist.

Patient continue treatment for 6 months i.e. 10-02-2021 to 10-08-2021. On date 13-08-2021 patient periods were post-poned. Patient LMP was 13-07-2021. SO patient was advised to do UPT[16] (Urine pregnancy test) at home and it was positive. After 7 weeks dated on 31-8-2021, patient did ultrasound showing single live intrauterine pregnancy. Even after conceiving, in order to maintain healthy and full term pregnancy Ayurveda medications continued along with modern medications. As a result patient delivered healthy baby after 9 month by vagina.

Diagnostic assessment

TORCH test and ultrasound examination were done time to time.

Therapeutic intervention

Considering the patient's history of spontaneous abortions, TORCH test was performed which was positive while according to Ayurveda *putraghni yonivyapad*, *kshetra*, and *beeja* were identified as the primary *dushti* variables for the patient's diagnosis and treatment. So treatment was planned to achieve *shuddha*

Beej and *shuddha Kshetra* prior to conception to ensure high- Quality ovum and healthy uterine environment for conception. *Jantughna*, *artavajanan*, and *garbhashay shodhak* are the three medications that are most utilized in treatment. Once *shuddha artava* and a healthy menstrual cycle are attained, *garbhashaya balya* and *garbhasthapaka aushadhi* were used. *Dalchini churna*, *sariva-manjistha phant*, *kuberaksha vati* and *shatavari churna* were used during whole duration of treatment and *masanumasik* tablets throughout the pregnancy to avoid any further complications.

Follow up and Outcome

One the day first patient had complaint of willingness for pregnancy, dysmenorrhea, dyspareunia tiredness, and regular but scanty menses (1-2 pads/day for two days) with clotted and dark brownish color menstrual flow history. After one month of treatment (at the time of first follow up) dysmenorrhea decreased slightly, clotted bleeding noted on day 1st only, menstrual flow increased slightly (2-3 pad/day for first two days; 1-2 pad/day on 3rd, 4th and 5th day.) and flow color changes to light brown. After two months of treatment patient had no complaints of tiredness, dysmenorrhea and dyspareunia. Menstrual Flow improved (2-3 pad/day for first 4 days), no clotted bleeding noted. Color of bleeding was light red. All this indicates that the *artavadushti* was resolving and *shuddha artava (beej) lakshan* were achieved. In the next month of treatment patient stated the color of menstrual flow as fresh red color indicated that *shuddha artava lakshan* were achieved. After this the TORCH test was repeated. TORCH test values decreased as compared to previous values. Menstrual flow improved (2-3 pad/day for 5 days) along with fresh red colored flow. After 5 months of treatment *garbhashaya balya* and *garbhasthapaka aushadhi* were added which results in missed period and UPT positive in next month. The patient was treated with *Masanumasik* tablet twice a day throughout the pregnancy, along with modern medications prescribed by gynaecologist. As a result of whole treatment, the patient underwent a vaginal delivery on March 11, 2022, and delivered a healthy baby boy weighing 3.300kg.

Discussion

Previous research has shown that more spontaneous miscarriages and preterm birth rates were linked to instances of Rubella (IgG and IgM). Additionally, it was stated that occurrence of spontaneous abortion is linked to CMV (IgG-positive) cases or gave birth to stillborn children. (6) Patients with the herpes simplex virus (IgG-positive) are to blame for spontaneous abortion and preterm delivery. (7) Previous investigations found that the fetuses with hydrocephalus, undeveloped eyes, a spongy head, and tiny size were born to moms with toxo IgG-positive titers. (8) Overall, TORCH infection leads to premature abortion or deformity in children. The most treasured dream of all women is becoming a mother. According to Ayurveda, the four key components for fertility are *rutu*, *kshetra*, *ambu*, and *beeja*. (9) Any of these four factors,

Dushti, results in *vandhyatva* (infertility). The primary cause of abortion in Ayurveda is *vata dushti*. In illnesses like *Putraghni yonivyapad*, *kshetra* and *beeja* are crucial factors. A clinical condition known as *putraghni yonivyapad* is typified by recurrent miscarriages brought on by an excessive intake of *rooksha ahara vihara*. This results in *vata prakopa*, which causes *shonita dushti* and *artava dushti*, both of which lead to repeated *garbha vinasha*. (10) Considering the patient's history of spontaneous abortions, *putraghni yonivyapad*, *kshetra*, and *beeja* were identified as the primary dusti variables for the patient's diagnosis and treatment. So chikitsa to achieve *shuddha Beej* and *shuddha Kshetra* were planned prior to conception. *Garbhashay shodhak*, *jantughna*, and *artavajanan* were the most commonly used drugs in treatment. *Garbhashaya balya* and *garbhasthapaka aushadhi* are utilised once the *shuddha artava* and a healthy menstrual cycle have been achieved.

Initially *Dalchini churna* was used. *Dalchini* is effective for viral uterine infection like TORCH since it has antiviral (11) quality. It is *garbhashay shodhak* and regulates uterine bleeding. Additionally, it eases menstrual pain.

Vishwabhaishajya (Zingiber officinale), *Rason (Allium sativum)*, *Latakaranj (Caesalpinia crista Linn.)*, and *Hingu (Ferula asafetida Linn.)* are all ingredients in *Kuberaksha Vati*. It serves, as a *garbhashay jantughna*. All of the aforementioned drugs work on the *apan vayu*, and the *sthan* of *garbhashay* is the *apan kshetra*. Thus, this medicine is used to treat dysmenorrhea. *Allium sativum* has good amount of vitamin B including B 6 and is crucial for hormone regulation. Preclinical and clinical data on its antiviral effects on the respiratory and reproductive systems due to its organosulfur component are available. (12) *Latakaranj (Caesalpenia crista Linn.)* controls ovulation irregularities, and menstruation irregularities. (13) *Hingu (Asafoetida)* worked by controlling and stimulating enzymes involved in the ovarian cycle and metabolism. (14) *Hingu (Ferula asafetida Linn.)* has also anti-viral activity.

Sariva (Hemidesmus indicus R. Br.) and *Manjistha (Rubia cordifolia L.)* both act as potent antiviral drugs. *Hemidesmus indicus R. Br.* acted as a virucide agent and/or prevented virus attachment to the host cell surface, which decreased the infectiousness of viral particles produced from infected cells, presumably due to its anti-ER-glucosidase inhibitory activity. It also inhibited the early stages of HSV infection. (15) It also acts as a *deepan* (digestion and metabolic enhancement). *Pachan* (enhancing digestion), *Raktaprasadak (improves the quality of blood)*, and *Raktashodhak (blood purifier)*. It's also described as *shukrakaram* (increasing sperm and ovum) and *visaghna* (anti-toxic). (16) So it is the appropriate drug of choice for TORCH infection.

After TORCH infection was reduced, a drug like *shatavari (Asparagus racemosus)* was added to treatment because it has properties like *balya* (provides strength), *vrushya* (aphrodisiac), and *rasayan* (immune-modulatory). (17) By lowering oxidative stress levels

and raising antioxidant levels in the body, *shatavari* may help female reproductive health issues such as hormone imbalance, oocyte quality, follicular growth and development, and infertility. (18). In *Kashyap Samhita*, there is a separate chapter to enlighten the *karma* of Shatavari. *Acharya Kashyap* indicated *shatavari* to the women having the ability to conceive but the child being unable to survive. (19), so *shatavari churna* was administered.

Conclusion

Habitual abortions brought on by TORCH infection are a frequent issue that increases maternal morbidity. In a relationship, it is a severe emotional setback. One of the main causes of early pregnancy loss and congenital birth defects is TORCH infection. It is becoming more prevalent day by day as a result of the hectic modern lifestyle and eating habits, which ultimately lead to infection. A similar treatment is suggested in this case based on the assessment of *doshas* and *dhatu*s. All of the medications have antiviral, antibacterial, *garbhasthapaka*, *raktashodhak*, *raktaprasadhak*, *rasayana*, and *balya* qualities, which help to conceive and sustain them. These medications are *Garbhasthapaka* and nourish the foetus as well.

Abbreviations

BOH – Bad obstetric History.

TORCH - Toxoplasmosis, Rubella,

CMV - Cytomegalovirus

HSV - Herpes simplex virus

Consent

Patient was provided with informed consent. Consent was explained thoroughly to the patient explaining whole treatment. Patient also provides permission for the publication of data.

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Conflict of interest: None

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