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Scrub typhus fever treated with constitutional homoeopathy: a case report

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Abstract

Rickettsia tsutsugamushi, a rickettsial zoonotic disease, uses the trombiculid mite as a reservoir. Acute sickness symptoms include high body temperature, chills, headache, lethargy, rash, prostration, and widespread lymph node swelling. The infection and feeding on the hosts (people and rodents) occur during the larval stage. No one individual can transmit it to another. Because it is an acute sickness, it responds well to treatment. However, problems such as multi-organ malfunction might arise on occasion. After conventional antibiotic therapy for scrub typhus fever failed, homoeopathy became an integral part of the patient's care. After 15 days of chilliness, fever, sweating, acute myalgia, and headache, a 32-year-old female patient finally came in with fever symptoms. In subsequent stages, fever and itching across the whole body manifested as rashes. Both the ICT for malaria and the Scrub Typhus IgM tests came back negative, confirming the diagnosis of Scrub Typhus infection. The patient's full set of symptoms was assembled after a thorough case history was recorded. Following repertorization, a 50 millesimal potency *Arsenicum album* was originally recommended; this helped alleviate symptoms, but it did not fully heal the patient. The patient had a good response to fifty milligrams of *Psorinum*, which was later recommended based on acute totality. Within two months, the Scrub Typhus Antibody Rapid Test turned out to be negative. The case was successfully treated with the homoeopathic drug *Psorinum*, which was given based on the whole report.

Keywords: Scrub typhus, multi-organ failure, serological assays, homoeopathy

Introduction

The zoonotic illness known as scrub typhus is caused by the *Rickettsia tsutsugamushi*. Trombiculid mites and the small animals that they feed on, such as field mice, rats, and others, are the actual hosts of the illness. The disease is spread by infected larval mite bites and manifests as an acute illness. Northern Japan, Southeast Asia, the Western Pacific Islands, Eastern Australia, China, and other parts of the world are all home to scrub typhus. Scrub typhus is most often contracted by tourists going on outdoor activities like camping, trekking, and rafting in rural regions of nations where the disease is common. The illness does not spread from one person to another in a direct manner. The illness is passed along from one generation of mites to another by transovarial transmission. Adult stages do not consume hosts that are vertebrates. Various vertebrate hosts are consumed by the larvae [1]. A macular rash, chills,

fever, headache, malaise, prostration, and other symptoms manifest around the fifth day of sickness mark its abrupt start. Lymphocytosis and generalized lymphadenopathy are prevalent. The presence of a blackened scab, or "eschar," covering the punched-out ulcer at the site of a mite bite is a common symptom. By day 14, the rash had gone. Potential side effects include psychosis, bleeding, prostration, pneumonia, cough, heart failure, renal failure, and hearing. Fever is often followed by hepatitis and thrombocytopenia. There is a lag in the recuperation process. In untreated instances, the pyrexia often subsides by the third week [1, 2, 3]. Scrub typhus cannot be confirmed using standard blood testing. The presence of antibodies and/or polymerase chain reaction (PCR) support the diagnosis. One important diagnostic criterion is a very positive Weil Felix response [1, 3]. To diagnose rickettsial illness, the micro-



immunofluorescence assay (M-IFA) is the test of choice. Serological approaches provide the basis of the presently available rapid bedside diagnostics [4, 5].

There is currently no vaccine available to protect against scrub typhus. However, there are measures that may be done to reduce the risk of infection, such as practicing good hygiene, taking baths, changing clothes often, and staying away from rodents and flying squirrels, who are known to transport the disease [6]. At this moment, there is a lack of adequate data to support the claim that several wide range antibiotics

The medicines doxycycline and tetracycline are widely used, however they have an extremely low cure rate. Researchers in India need to dig more into the causes, symptoms, diagnosis, and treatment of scrub typhus now [7]. Similarly, despite the high death rate or serious sequelae associated with scrub typhus fever when medications fail, there is surprisingly little homoeopathic research on the topic. In this case, we will go over how a female patient at Dr. A. C. Homoeopathic Medical College & Hospital in Bhubaneswar, Odisha, was treated constitutional homoeopathically for scrub typhus

fever and rashes in their outpatient department. The patient's whole set of symptoms was taken into account before prescribing medication. The homoeopathic principles were followed while choosing the dosage and strength, as well as when repeating the drug.

Case Report

The 32-year-old female patient presented to the outpatient department of the affiliated hospital with Dr. A.C. Homoeopathic Medical College in Bhubaneswar, Odisha on 02-07-2021 with a fifteen-day history of fever. The fever started coming on alternating days, then it arrived daily between 11 a.m. and 2 p.m., and it stayed all night. Symptoms of fever included a rapid rise in temperature to 104°F at midnight, chilliness, agonizing discomfort throughout the body, flushed cheeks, and nausea. By morning, it had diminished due to perspiration. She was prone to catching colds, sneezing, and burning in her throat and nose whenever she went outside. She exhibited less thirst and was a cold patient. In her mind, she was agitated, fidgety, and anxious. She had tried antibiotics twice for fever but neither time had they worked. After a thorough physical, the patient's vitals were 110/min and 134/90 mm Hg, respectively. No redness, swelling, or jaundice.

Investigation- Report of Blood- 30.06.2021-[Fig1]

Hb-11.9, T.R.B.C.- 3.87mill/cumm, T.W.B.C.- 8300/cumm, D.C.in %-N-66, L-28, E-2, M-4. ESR- 32 mm/1sthr.



ACCESSION NO : 0310UF011177	AGE : 30 Years	SEX : Female	DATE OF BIRTH :
DRAWN : 30/06/2021 09:07	RECEIVED : 30/06/2021 09:04	REPORTED : 30/06/2021 12:36	
REFERRING DOCTOR : SELF	CLIENT PATIENT ID :		
Test Report Status Final	Results	Biological Reference Interval	Units
HAEMATOLOGY			
CBC-5, EDTA WHOLE BLOOD			
BLOOD COUNTS			
HEMOGLOBIN	11.9	Low 12.0 - 15.0	g/dL
RED BLOOD CELL COUNT	3.87	3.8 - 4.8	mil/ μ L
WHITE BLOOD CELL COUNT	8.3	4.0 - 10.0	thou/ μ L
PLATELET COUNT	227	150 - 410	thou/ μ L
RBC AND PLATELET INDICES			
HEMATOCRIT	35.1	Low 36 - 46	%
MEAN CORPUSCULAR VOLUME	91.0	83 - 101	fL
MEAN CORPUSCULAR HEMOGLOBIN	30.6	27.0 - 32.0	pg
MEAN CORPUSCULAR HEMOGLOBIN CONCENTRATION	33.8	31.5 - 34.5	g/dL
RED CELL DISTRIBUTION WIDTH	12.9	11.6 - 14.0	%
MEAN PLATELET VOLUME	9.9	6.8 - 10.9	fL
WBC DIFFERENTIAL COUNT - NLR			
NEUTROPHILS	66	40 - 80	%
ABSOLUTE NEUTROPHIL COUNT	5.48	2.0 - 7.0	thou/ μ L
LYMPHOCYTES	28	20 - 40	%
ABSOLUTE LYMPHOCYTE COUNT	2.32	1.0 - 3.0	thou/ μ L
NEUTROPHIL LYMPHOCYTE RATIO (NLR)	2.4		
EOSINOPHILS	02	1 - 6	%
ABSOLUTE EOSINOPHIL COUNT	0.17	0.02 - 0.50	thou/ μ L
MONOCYTES	04	2 - 10	%
ABSOLUTE MONOCYTE COUNT	0.33	0.2 - 1.0	thou/ μ L
BASOPHILS	00	0 - 2	%
ABSOLUTE BASOPHIL COUNT	0	Low 0.02 - 0.10	thou/ μ L
DIFFERENTIAL COUNT PERFORMED ON: EDTA SMEAR			
ERYTHRO SEDIMENTATION RATE, BLOOD			
SEDIMENTATION RATE (ESR)	32	High 0 - 20	mm at 1 hr

Fig 1: Complete Blood count on 30-06-21

After taking the case the general and particular symptoms were analysed and evaluated according to their intensities. The totality of symptoms was constructed considering the characteristic mental generals, physical generals, particulars basing upon diagnosis. After erecting the totality [Table-1] repertorisation was done with Hompath classic software [8].

Table 1: Symptoms forming the Totality

Sl. No.	Symptoms
1.	Mentally Irritable
2.	Restlessness, nervousness
3.	Chilly patient
4.	Catches cold easily
5.	Thirst less
6.	Fever in forenoon, with chilliness
7.	Whole body pain with fever
8.	Burning of throat and nose
9.	Sneezing more in morning
10.	Fever ends after sweating

Normal Repertorisation		Totality Symptoms Covered														
		Ars	Sil	Kali-c	Sulph	Puls	Rhus-t	Lyc	Nit-ac	Sep	Caut	Nat-m	Calc	Cham	Nux-v	Ph-ac
[C] [Mind]Irritability:		19	18	17	17	17	16	16	16	16	15	14	14	14	14	14
[C] [Mind]Restlessness, nervousness:Tendency:		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
[C] [Generalities]Heat:Vital, lack of:		3	3	2	3	3	3	3	2	3	2	2	3	2	2	2
[C] [Generalities]Cold:Tendency to take, taking cold agg.:		3	3	3	2	2	3	2	3	2	3	2	3	1	3	3
[C] [Stomach]Thirstlessness:		2	3	3	2	2	2	3	3	3	1	3	3	3	3	2
[C] [Fever, Heat]Forenoon:Chilliness, with:		2	1	2	1	3	1	2	2	2	1	1	1	2	1	3
[C] [Fever, Heat]Pain:With:		1	1	1	1									3		
[C] [Fever, Heat]Perspiration:Amel.:							1									
[C] [Nose]Sneezing:Morning:		1	1	1	3	2	1	1	1	2	3	2	1		2	
[C] [Nose]Pain: Burning:		3	3	2	2	2	1	1	2	1	2	2				1
Symptoms 1 to 10		Total Symptoms : 10														
		Remedies 1 to 15														
		Total Remedies : 634														

Fig 2: Repertorization sheet

Repertorial Analysis - Ars. alb. - 19/9, Sil. - 18/9/, Kali carb. - 17/8, Sulph. - 17/8, Puls. - 17/7, Rhus tox. - 16/9, Lyc. - 16/8, Nit. ac. - 16/7, Sep. - 16/7.

First Prescription

After analysing the repertorial result (Fig.-2) and referring some of the Materia Medica books, Arsenicum album was the drug of choice. The selected medicine was prescribed in LM potencies i.e. 0/1, 0/2 in 30ml, 16 doses each, once daily morning for one month on 02-07-2021. Then the patient was advised to consult after one month.

Table 2: Time line of Treatment

Date	Symptoms	Investigation Reports	Medicine Prescribed
02.07.21	Fever came in 11 AM to 2 PM, preceded by shivering, followed by body pain. Burning of throat and nose, with sneezing. Fever ends after sweating. Thirst less. Chilly patient. Irritable, anxiety and nervous.	Blood - 30.06.2021- Hb-11.9 mg/dl, TRBC- 3.87mill/cumm, TWBC - 8300/cumm, D.C. in%- N-66, L-28, E -2,M-4, ESR- 32m/1 st hr,	Arsenic 0/1,0/2, 30ml, in 16 doses each, once daily in morning
12.08.21	Fever came at 11AM with body ache and chilliness, remained till end of night, > after foul smelling hot perspiration. Wants to cover always. Skin eruptions red maculo- papular type, with itching. On scratching raised red lines (dermatographia) marked. (Fig 3)	05.08.21- Blood – ICT for MP- Negative IgM (Scrub typhus)- 0.18(reactive >0.14), Positive. (Fig 4)	Psor 0/1, 0/2 30ml each in 16 doses, once daily in morning.
19.09.21	Fever intensity less, came on slight exertion with whole body pain, < in afternoon, wanted to cover always. Skin rashes diminished and changed to black spots, with less itching and less bleeding on cracked skin.		Psorinum 0/3 and 0/4, 30 ml each in 16doses,once daily in morning
17.10.21	No fever. Pain in body on slight movement and exposure to open air. Skin rashes and dermatographia diminished along with itching and bleeding.		Psorinum 0/5,0/6, 30 ml each in 16doses, once daily in morning
12.12.21	She had no fever or no skin rashes No dermatographia or itching of skin. Only weakness present with occasional myalgia and chilliness. One of the healing site of cracked skin is showed in Fig. 5)	07.11.21- Blood- Scrub Typhus Antibodies Rapid test- Not detected. (Fig. 6)	Psorinum 0/7- 0/8 given 30ml each in 16 doses, once daily in morning.



Fig 3: Rashes and scratching site with bleeding


Collected on	05/08/2021 12:44:25 PM	Received on	05/08/2021 04:28:54 PM
Reported on	06/08/2021 12:38:20 PM	PatSer No.	KIMSOPP7737193
Ref Doctor	Dr. Jayashree Nanda		
UHID			
TEST NAME	BIOLOGICAL REFERENCE INTERVALS		
ICT FOR MP : (Immunochromatography)	NEGATIVE		
Scrub Typhus IgM : (ELISA)	0.18		
Result(Num).	Reactive: >0.14 Non Reactive: <0.14		
Report Status:Final	* END OF REPORT *		

Fig 4: Scrub Typhus IgM Positive (6.6.21)



Fig 5: Healing site of cracked skin after treatment

DRAWN :	07/11/2021 08:37	RECEIVED :	07/11/2021 08:34	REPORTED :	09/11/2021
REFERRING DOCTOR :	DR. JAYASHREE NANDA			CLIENT PATIENT ID :	
Test Report Status	Final	Results	Biological Reference Int		
Interpretation(s)					
RBC AND PLATELET INDICES- Meaner index (MCV/RBC) is an automated cell-counter based calculated screen tool to differentiate cases of Iron deficiency anaemia(>13) from (<13) in patients with microcytic anaemia. This needs to be interpreted in line with clinical correlation and suspicion. Estimation of HbA2 remains diagnosing a case of beta thalassaemia trait. WBC DIFFERENTIAL COUNT - NLR-The optimal threshold of 3.3 for NLR showed a prognostic possibility of clinical symptoms to change from mild patients. When age = 49.5 years old and NLR = 3.3, 46.1% COVID-19 patients with mild disease might become severe. By contrast, when age < 3.3, COVID-19 patients tend to show mild disease. (Reference to - The diagnostic and predictive role of NLR, d-NLR and PLR in COVID-19 patients A.-P. Yang, et al. International Immunopharmacology. This ratio element is a calculated parameter and out of NABL scope. ERYTHRO SEDIMENTATION RATE, BLOOD-Erythrocyte sedimentation rate (ESR) is a non-specific phenomena and is clinically useful in the diagnosis of disorders associated with an increased production of acute phase reactants. The ESR is increased in pregnancy from about the 3rd month and remains elevated post partum. ESR is influenced by age, sex, menstrual cycle and drugs (eg. corticosteroids, contraceptives). It is especially low (0-1mm) in hypofibrinogenemia or congestive cardiac failure and when there are abnormalities of the red cells such as polikilocytosis, spherocytosis or sickle cell disease. Reference : 1. Nathan and Oski's Haematology of Infancy and Childhood, 5th edition 2. Paediatric reference intervals. AACC Press, 7th edition. Edited by S. Soldin 3. The reference for the adult reference range is "Practical Haematology by Dacie and Lewis, 10th Edition"					
BIO CHEMISTRY					
C-REACTIVE PROTEIN, SERUM					
C-REACTIVE PROTEIN	9.1	High	0 - 3		
METHOD : PARTICLE-ENHANCED TURBIDIMETRIC INHIBITION IMMUNOASSAY(PETINIA)					
Interpretation(s)					
C-REACTIVE PROTEIN, SERUM-Immunoturbidometry					
SEROLOGY					
SCRUB TYPHUS ANTIBODIES RAPID, SERUM					
SCRUBTYPHUS ANTIBODIES RAPID TEST	NOT DETECTED	NOT DETECTED			

Fig 6: Scrub Typhus Antibody Test Negative (7.11.21)

Discussion

Reasons for prescribing medications might be based on a variety of factors, including the following: organ-specific, miasmatic, constitutional, predominant modalities, etc. [9]. Here, the patient's unique mental, physical, specific, and pathological symptoms were considered while prescribing medication. Since arsenic covered a wider range of symptoms and was in line with Materia Medica, it was chosen as the similimum after repertorization. All of the initial symptoms that pointed to Psorinum returned, albeit, as previously noted by



new Materia Medica volumes (Table 4). Relieving symptoms and the illness itself was possible with the use of psorinum at a 50 milligram potency, administered in escalating doses [10–12]. The elimination of the scrub typhus antibody from the blood report is undeniable proof of a successful treatment. After therapy, the patient's Modified Naranjo Criteria score was 9, suggesting a causal link between the drug and the observed outcome. Table 3

Table 3: Modified Naranjo's Criteria scores of the patient after treatment

Sl. No.	Modified Naranjo's criteria	Patient's answer	Score
1	Was there an improvement in the main symptom or condition for which the homoeopathic medicine was prescribed?	Yes	+2
2	Did the clinical improvement occur within a plausible time frame relative to the medicine intake	Yes	+1
3	Was there an initial aggravation of symptoms?	No	0
4	Did effect encompass more than the main symptom or condition (i.e. were other symptoms ultimately improved or changes)?	Yes	+1
5	Did overall well-being improve?	Yes	+1
6	a. Direction of cure: did some symptoms improve in the opposite order of the development of symptoms of the disease?	Not sure Not sure	0
	b. Direction of cure: Did at least two of the following aspects apply to the order of improvement of symptoms:		
	From organs of more importance to those of less importance, From deeper to more superficial aspects of the individual, From the top downwards.		
7	Did "old symptoms" (defined as non-seasonal and non-cyclical symptoms that were previously thought to have resolved) reappear temporarily during the course of improvement?	No	0
8	Are there alternate causes (other than the medicine) that – with a high probability- could have caused the improvement? (Consider known course of disease, other forms of treatment, and other clinically relevant interventions)	No	+1
9	Was the health improvement confirmed by any objective evidence? (e.g. lab test, clinical observation, etc.)	Yes	+2
10	Did repeat dosing, if conducted, create similar clinical improvement?	Yes	+1
	Total		+9



There are limited success stories documented in the homeopathic literature on treatment of scrub typhus fever with nosodes like *Psorinum*. On the basis of the clinical experience of homeopathic physicians and Materia Medica knowledge from the books of different stalwarts (Table-4), the treatment of scrub typhus fever was successful.

Table 4: Symptoms of fever in *Psorinum* in different Materia Medica books

W. Boericke	J. T. Kent	S. R. Phatak
Extreme sensitiveness to cold. Wants covering even in summer. Profuse offensive perspiration in fever. Night sweats. Dreads of least cold air. Lack of reaction to indicated remedy. Attack of cold on change of weather, from cold to hot.	Intermittent febrile state. The patient is so hot, he is covered with a boiling sweat in fevers. The face is red puffed, mottled. Profuse night sweats with debility.	Easily takes cold, chilled, foul smelling discharges. In fever heat with steaming sweat. Sweat easy, profuse, < night, cold, on palms.

The first grade medicine for typhus fever in Boericke's Repertory are - Fever, Typhus Fever - Ars., Bapt., Bell., Camph., Hyos., Lach., Op., Phos.ac., Phos., Rhus-tox ^[15].

Conclusion

The results of this case study clearly show that Scrub typhus fever may be effectively treated with individualized homeopathic therapy that is based on the whole spectrum of symptoms. Having the symptoms go away quickly and the antibody test coming back negative for scrub typhus following treatment without any side effects is good proof that homeopathic therapy is effective. It is quite difficult to generalize the results of one successful example to the others. The efficacy of homeopathic remedies for scrub typhus needs further investigation, therefore, in the form of both case series and clinical trials.

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