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General Medicine

REVERSIBLE PANCYTOPENIA – RARE MANIFESTATION OF SCRUB TYPHUS

KEY WORDS: Scrub typhus, Doxycycline, Pancytopenia

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ABSTRACT Scrub typhus or tsu-tsumamushi disease is a febrile illness caused by bacteria of family Rickettsiaceae name orientia tsutsugamushi. Severe complication such as acute respiratory distress syndrome (ARDS), acute hepatic failure, meningoencephalitis and myocarditis may manifest. Anemia is frequently found in scrub typhus but pancytopenia is uncommon. We are presenting 3 cases of reversible pancytopenia in one male patient and two female patient whom pancytopenia improve after institution of oral doxycycline therapy . All 3 patient diagnosed by ELISA scrub typhus serology.

INTRODUCTION

Scrub typhus is febrile illness caused by bacteria of family rickettsiae name orientia tsutsugamushi. Scrub typhus is endemic to a geographically distinct region so called tsutsugamushi triangle which include Japan, Taiwan, China, South Korea¹. It also occur in Nepal, Northern Pakistan, Papua guinea and Australian state of Queensland and northern new south wales². It known to occur all over India including southern india and northern india³. Recent outbreak of scrub typhus reported in Himalayan region.³ It is primarily seen in people whose job or behaviour brings them into contact with mite infected habitats such as forest clearings, rice fields, grassy lands or riverbanks⁴.

The clinical manifestation range from mild and self limiting infection to fatal events. Incubation period is 6-21 days after the mite bite⁵. The presenting feature are fever, macul opapular rash, severe headache, myalgia, hepatospl eno megaly and cough⁶. A painless papule occur at the bite site which later ulcerates and changes into eschar⁶. Severe complication can be manifest by acute respiratory distress syndrome (ARDS), interstitial pnueumonitis, acute renal failure, acute myocarditis and multiorgan dysfunction⁷.

Pancytopenia is a rare complication rarely described earlier. We are presenting 3 case study of reversible pancytopenia in scrub typhus at government medical college and attached hospital kota in 2018 during September to November month whom pancytopenia reverse after doxycycline therapy.

CASE STUDY -1

A female patient of age 40 year admitted in mid September with history of fever with chills since 10 day and cough with sputum 3 days. There is no significant past history. On examination patient was febrile, pulse 100/ min, BP- 110/70, pallor present and on abdomen palpation hepatosplen omegaly present and on auscultation bilateral crepitation present in chest. Investigation given in following table 1

TABLE-1

Parameter	At time of admission	3 day after admission	at time of discharge
Haemoglobin	8	8.4	9.6
TLC count	2000	2500	3400
Platelet count	47,000	65,000	1,08,000
RBC count	2.2	2.92	3.5

S. bilirubin	0.3	0.2	0.7
SGOT	117	99	80
SGPT	78	51	47
T.Protein	7.3	7	6.8
Albumin	3.8	3.5	3.4
Urea	38	41	31
Creatinine	.8	.4	.9
LDH	1491	900	645
Triglycerides	191		
PT-INR	0.9		
ECG	TWNL		
X-RAY CHEST	b/l lower lobe haziness		
USG abdomen	mild splenomegaly		
Scrub typhus by ELISA	Positive		
Malaria	Negative		
Widal	Negative		
Dengue	Negative		
Hepatitis B, C	Negative		

Patient given 7 day course of oral doxycycline. After taking doxycycline patient fever and cough subside within 2 days and improve in haematological parameter also. Patient discharged with full clinical recovery.

CASE STUDY -2

A male farmer patient of age 27 yr admitted with high grade fever for 7 days and swelling all over body since 2 days. on examination vital stable, febrile, arterial saturation normal, pallor present, splenomegaly present and eschar over groin present. Investigation given in table 2

TABLE-2

Parameter	At time of admission	3 day after admission	at time of discharge
Haemoglobin	7.7	8.4	9
TLC count	2500	3400	5440
Platelet count	60,000	62,000	1,30,000
RBC count	2.9	3	3.2

S. bilirubin	1.7	1.5	1.1
SCOT	145	86	63
SGPT	133	34	47
T.Protein	5.4	5.9	6.9
Albumin	2.4	2.5	3
Urea	14	21	12
Creatinine	.9	.4	.3
LDH	1660	1234	342
Triglycerides	181		
PT-INR	1.14		
ECG	TWNL		
X-RAY CHEST	NAD		
USG abdomen	Moderate ascites, Oedematous GB, splenomegaly		
Scrub tyhus by ELISA	Positive		
Malaria	Negative		
Widal	Negative		
Dengue	Negative		
Hepatitis B , C	Negative		

Scrub tyhus by ELISA	Positive			
Malaria	Negative			
Widal	Negative			
Dengue	Negative			
Hepatitis B , C	Negative			

Parameter	At time of admission	3 day after admission	5 day of admission	At time of discharge
Haemoglobin	7.9	8.2	8.6	8.9
TLC count	1600	2200	3110	7000
Platelet count	45,000	33,000	68,000	80,000
RBC count	2.1	3	3.2	2.8
S. bilirubin	3.3	4.2	2.5	2
SCOT	185	328	63	45
SGPT	163	232	47	58
T.Protein	5.5	4.8	5	5.3
Albumin	2.2	2.5	2.5	2.7
Urea	14	21	12	20
Creatinine	.9	.4	.3	.9
LDH	954			432
Triglycerides				
PT-INR	1.14			
ECG	TWNL			normal
X-RAY CHEST	left lower lobe hazziness			
USG abdomen	Moderate ascites, Oedematous GB, splenomegaly, b/l pleural effusion			