Partners HealthCare System, Inc
MASSACHUSETTS GENERAL HOSPITAL
A Teaching Affiliate of Harvard Medical School
55 Fruit Street, Boston, Massachusetts 02114

[redacted]

Discharge Reports from 5/1/2015 through 5/16/2015 (cont)

05/11/2015 **Discharge Summary** **Unsigned**

Report Status: Unsigned

DISCHARGE SUMMARY

[redacted]

PRINCIPAL DIAGNOSIS
Myocarditis

ASSOCIATED DIAGNOSES
No current problems or disability

SIGNIFICANT OPERATIONS/PROCEDURES/TESTS PERFORMED DURING HOSPITALIZATION
Operations/Procedures:
None
Labs/Imaging/Other Tests:
Echocardiogram - normal
Cardiac MRI - findings in line with myocarditis

LIFE-SUSTAINING TREATMENT (CODE STATUS) AT DISCHARGE
Full Code (discussion with patient/surrogate not appropriate or possible at this time) Entered by: [redacted]

ALLERGIC REACTIONS, INTOLERANCES AND SENSITIVITIES
NKA: No Known Allergies

CHIEF COMPLAINT
Fever, chest pain

HISTORY AND REASON FOR HOSPITALIZATION AND SIGNIFICANT FINDINGS
HISTORY OF PRESENT ILLNESS:
This is a 38yo man with no significant PMH, now presenting with malaise, fatigue, headache, insomnia, anorexia, and chest discomfort.

Briefly, he traveled to Denver, Colorado on 5/6 with his wife and 2yo son for a family wedding. They further traveled to a relatively rural/wilderness area at 11,000ft elevation. He was in his USOH before leaving. On 5/7 he began developing malaise, mild sore throat, and diffuse myalgias. These symptoms worsened and he developed a waxing and waning headache, shortness of breath (especially with exertion), and insomnia. He developed upper back pain with some radiation to his chest. Several other wedding attendees were suffering from apparent altitude sickness and he attributed his symptoms to this as well versus a muscle strain. His headaches have been severe (9/10) at times. His symptoms did not improve with return to Denver or, on 5/12, to Boston. In the ED he again had an acute episode of back pain with radiation to the chest. He became febrile in the ED as noted below.

He specifically denies palpitations, tearing chest pain, recent immobility, calf/leg pain or swelling, any neurological symptoms, sick contacts with similar symptoms. He has never had pain like this before. He is up to date on all immunizations. He has never had

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mononucleosis. He has no known tick exposure.

ED COURSE:
VS on presentation: 98.2 F 96 F 137/76 F 18 F 100 on RA F 4/10
Exam notable for: Mild L trapezius ttp.
Labs notable for: troponin elevation, LFT elevation
EKG: Normal sinus rhythm. ste c/w repol, pr depression, LAFB
Imaging notable for: unremarkable CXR, unremarkable bedside TTE
Medications of note: ASA325, heparin gtt (D/Ced), tylenol
Consults: Cardiology
Vitals prior to transfer: 101.8 F 97.2 F 78 F 110/62 F 18 F 97 on RA

REVIEW OF SYSTEMS: Benign except as above.

CARDIAC HISTORY:
None

OTHER PAST MEDICAL HISTORY:
No significant PMH

FAMILY HISTORY:
Grandfather died of SCD in his 40s when out hunting, possible MI.

SOCIAL HISTORY:
[redacted]
Tobacco: None
EtOH/Illicits: Rare EtOH (1-2/mo)

PRE-ADMISSION MEDICATIONS (confirmed with patient):
None

ALLERGIES INTOLERANCES:
NKA

PHYSICAL EXAM:
Vitals: Temp: 98.4 HR: 71 BP: 122/63 RR: Sat: 98% on RA
GEN: Uncomfortable appearing
HEENT: MMM. Anicteric. Mild pharyngeal erythema
PULM: WOB WNL. CTAB w/o W/R/R.
CV: RRR. S1S2 WNL. No M/R/G. JVP WNL
ABD: S, ND, NT.
EXT: WWP. No edema. 2+ pulses. No rashes.
NEURO: AAOx3. No focal deficits. No photophobia. No nuchal rigidity.

ADMISSION LABS AND OTHER STUDIES
05/11/15 - Sodium 134 (L), Potassium 3.6, Chloride 96 (L), Carbon Dioxide 27, BUN 9, Creatinine 1.09, Glucose 109, Calcium 9.1, Phosphorus 1.6 (L), Magnesium 2.5 (H), HCT 44.7, WBC 7.44, PLT 140 (L), HGB 15.0, PT 14.7 (H), PT-INR 1.2 (H), Albumin 4.4, Globulin 3.1, Total Protein 7.5, Alk Phos 97, Bilirubin (Direct) 0.3, Bilirubin (Total) 1.5 (H), ALT (U/L) 26, AST 124 (H), Troponin-T 1.50 (H), Lymph# 0.68 (L)

2015/05/11 00:00:00 - Chest Single View: IMPRESSION:
Low lung volumes with findings suggestive of pulmonary edema or atypical pneumonia.

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Enlarged cardiac silhouette of uncertain etiology.

HOSPITAL COURSE AND TREATMENT
The patient was admitted to the MGH Cardiac Stepdown unit for further evaluation and therapy. Hospital course by problem is summarized below:

Myocarditis and fever:
The presentation was felt to most concerning for myocarditis arising the context of a systemic infectious syndrome causing high fever, fatigue, malaise, headache, diarrhea, myalgias, LFT abnormalities, and possible BM suppression (lymphopenia, thrombocytopenia). A viral etiology was felt most likely, but other diagnostic possibilities considered included Rickettsial illness, Group A streptococcal infection, and atypical bacterial infections. Doxycycline therapy was initiated on the evening of admission for empiric coverage of atypical organisms given recent travel and outdoor exposures. Other therapies included ibuprofen, IV fluids, and acetaminophen for pain control. Colchicine was not continued as there was low clinical suspicion for pericarditis. The ID service was consulted for input. A TTE on admission was overall reassuring, without evidence of pericardial effusion or impaired contractile function. The patient had intermittent fevers as high as 103F, chills, intermittent headache, but no further chest pain. Infectious studies of note included negative blood cultures, negative HIV, reassuring viral hepatitis serologies, negative babesia thick smear, negative GAS throat culture, negative heterophile Ab, negative Lyme serology, and numerous pending studies as detailed below. A cardiac MRI was notable only for changes consistent with acute myocarditis and again confirmed normal LV systolic function. By 5/14, the day of discharge, the patient had improved symptomatically and indicated his readiness to return home to complete his recovery. He was discharged with scheduled ID and Cardiology follow-up.

MOST RECENT LABS AND OTHER STUDIES
05/14/15 - Sodium 141, Potassium 3.8, Chloride 104, Carbon Dioxide 20 (L), BUN 10, Creatinine 0.85, Glucose 76, Calcium 8.9, Phosphorus 2.5 (L), Magnesium 1.9, HCT 41.7, WBC 4.56, PLT 124 (L), HGB 13.9, Lyme Ab(s) Negative, Lymph# 0.74 (L), Heterophile Ab Negative
05/13/15 - ANA (qual) , HCV Ab Negative, CMV Ab, IgG PEND, EBV - VCA Ab, IgG PEND, EBV - VCA Ab, IgM PEND, EBV Nuclear Ab PEND, HBV Surface Ag Negative, HBV Surface Ab 23.87, Haptoglobin 332 (H), ANA (Pattern) SPECKLED, EBV Ab(s) PEND, Rickettsia Ab (Typhus Grp), IgG titer PEND, Anaplasma Ab, IgG titer PEND, Anaplasma Ab, IgM titer PEND, Rickettis Ab (Spotted Fever Grp) IgG titer PEND, Rickettsia Ab (Spotted Fever Grp), IgM titer PEND, Interpretation (A. phagocytophilia) PEND, E. chaffeensis Ab titer, IgG PEND, E. chaffeensis Ab titer, IgM PEND, Interpretation (E. chaffeensis) PEND
05/12/15 - CRP (mg/L) 190.2

ITEMS FOR FOLLOW-UP/ANNOTATIONS AT TIME OF DISCHARGE
If results for pending tests are required, please contact Health Information Services at [redacted]
Lab Annotations
05/13/15 - CMV Ab, IgG PEND
The result was not available at the time of discharge summary creation.

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05/13/15 - EBV - VCA Ab, IgM PEND
The result was not available at the time of discharge summary creation.

05/13/15 - EBV - VCA Ab, IgG PEND
The result was not available at the time of discharge summary creation.

05/13/15 - EBV Nuclear Ab PEND
The result was not available at the time of discharge summary creation.

05/13/15 - EBV Ab(s) PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Rickettsia Ab (Typhus Grp), IgG titer PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Anaplasma Ab, IgG titer PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Anaplasma Ab, IgM titer PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Rickettis Ab (Spotted Fever Grp) IgG titer PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Rickettsia Ab (Spotted Fever Grp), IgM titer PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Interpretation (A. phagocytophilia) PEND
The result was not available at the time of discharge summary creation.

05/13/15 - E. chaffeensis Ab titer, IgG PEND
The result was not available at the time of discharge summary creation.

05/13/15 - E. chaffeensis Ab titer, IgM PEND
The result was not available at the time of discharge summary creation.

05/13/15 - Interpretation (E. chaffeensis) PEND
The result was not available at the time of discharge summary creation.

CONDITION ON DISCHARGE
Improved

DISCHARGE MEDICATIONS
Acetaminophen 650 MG PO Q6H prn [Pain-Mild, Temperature Greater than 100.5] (last dose: 05/14/2015 08:29 AM)

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Ibuprofen 400 MG PO Q8H prn [Pain-Moderate] (last dose: 05/14/2015 02:18 AM)
Doxycycline Hyclate 100 MG PO BID (last dose: 05/14/2015 08:29 AM)
Rx: 100 MG TABLET 1 Tablet(s) BID 5 day(s) Dispense: 10 Tablet(s)
Refills: 0
The Rx icon reflects prescriptions written at the time of discharge, hence does not indicate whether the patients received or filled the prescription.

DISCHARGE INSTRUCTIONS
Diet: No Restrictions
Activity: Activity as tolerated
Treatment: You were admitted to MGH and found to have a likely viral myocarditis syndrome based on your symptoms, ECG findings, and lab abnormalities (elevated troponin). Numerous diagnostic studies for possible viral and bacterial causes were sent for lab analysis, many of which remain pending. An echocardiogram and MRI were performed. Echocardiogram was reassuring. MRI findings were consistent with myocarditis. The ID service was consulted for additional input and recommended a 7d course of doxycycline to cover the unlikely possibility of Rickettsial disease as a cause. Follow-up was scheduled with ID and Cardiology as outlined below.
Instructions: Please be sure to take all prescribed medications after hospital discharge and to discuss any medication changes or dose adjustments with your doctor.

Please contact your doctor or return to the closest Emergency Department for new or worsening chest pain, shortness of breath, loss of consciousness, severe pain not responsive to over-the-counter medicines, or other serious symptoms. If you have questions about your admission and would like to speak with a member of the team, please call MGH at [redacted] and request to speak with a member of the Cardiac Stepdown Team.
Followup: Please follow up with [redacted] on Cox 5 at 3:30 PM on 5/27/2015.
The MGH Cardiology clinic will call you to arrange a follow-up appointment.
Please follow up with your PCP regarding this admission.

POST-DISCHARGE GOALS
Continuity of Care: Please attend all scheduled appointments

[redacted]

[redacted]