

ROYAL FREE HOSPITAL  
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THE ROYAL FREE HAMPSTEAD

Royal Free Hospital

HAEMOPHILIA CENTRE & HAEMOSTASIS UNIT  
Director: Professor Christine A Lee MA MD DSc (Med) FRCP FRCPPath  
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## DISCHARGE SUMMARY

Name: Angus STEWART

Date of Birth: GRO-C 65

Address:

GRO-C

Admitted: 23.12.99

London

GRO-C

Discharged:

GP:

Dr Notoney  
Crawford Health Centre  
Crawford Avenue  
Wembley Middlesex

Date: 12.04.99

Hospital No: 217032

Dear Dr Notoney

DIAGNOSIS: 1. PYREXIA OF UNKNOWN ORIGIN SINCE 24.12.98  
2. VON WILLEBRAND'S DISEASE TYPE 2M  
3. HEPATITIS C TYPE 3  
4. RIGHT KNEE HAEMARTHROSIS DECEMBER 1998

### Background

Angus Stewart is a 34 year old watchmaker who is married with children. He has regularly (three times a year) visited Japan because of work. His von Willebrand's disease was diagnosed in early childhood and he was initially treated at Great Ormond Street. The predominant problem was of recurrent epistaxis. He was referred to the Royal Free in 1978 after which time he presented on three occasions: 1983 elbow bleed following lifting a heavy object; 1987 presenting with lymphadenopathy and left hypochondrial pain. No cause was found at that time; and then in 1991 he required treatment with DDAVP for epistaxis.

In 1997 he received a single dose of interferon for treatment of his hepatitis C but no further treatment after that.

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### **History of this episode**

On 23.12.98 he attended the Haemophilia Centre with a painful, bruised and swollen right knee. Three days previously he had twisted his knee whilst getting out of a car. He was felt to have a right knee haemarthrosis and was treated with DDAVP and tranexamic acid. However, he developed pyrexia of 39.7°C during administration of his DDAVP. At this time Mr Stewart had an appropriate leukocytosis with a raised CRP, deranged LFTs consistent with his hepatitis and an ultrasound of his right thigh revealed muscle oedema and was thought to be possibly consistent with a compartment syndrome. He was commenced on intravenous cefotaxime at this time.

**24.12.98** - Mr Stewart developed mild renal impairment with a creatinine of 181. His thigh became more swollen and his antibiotics were changed to benzylpenicillin and flucloxacillin.

**22.12.98** - Mr Stewart developed cellulitis over his right thigh which worsened over the next couple of days so that on microbiological advice he was put on an increased dose of benzylpenicillin and flucloxacillin and clarithromycin was also added. Throughout this time Mr Stewart's sodium was persistently low between 128 and 130. His creatinine however had resolved by the end of December. CRP at the end of December was 81.

**04.01.99** - Ultrasound of the right thigh revealed swollen soft tissue with oedematous tissue planes but no focal collection or abscess.

**06.01.99** - Mr Stewart's leg was improving but he continued to spike temperatures. Fusidic acid was added. There was an attempted aspiration of his right knee which revealed no fluid. At this point the white count was 11.4 with a CRP of 26.

**08.01.99** - Ultrasound guided drainage of his thigh was attempted. 10 ml of heavily blood stained fluid was obtained and sent to Microbiology.

**11.01.99** - Mr Stewart's temperature, which seemed to have settled for 48 hours, spiked again. At this time a chest x-ray and an echocardiogram were normal.

**13.01.99** - His antibiotics were stopped. Mr Stewart was reviewed by the Orthopaedic Team who suggested an MRI. This revealed diffuse inflammation in the posterior compartment of his thigh and after discussion with Microbiology he was once again commenced on antibiotics. These were cefotaxime, benzylpenicillin and metronidazole.

**15.01.99** - Mr Stewart developed a rash which was presumed to be secondary to his antibiotics which were changed to clindamycin and gentamicin. He had an abdominal ultrasound which showed no enlargement of liver or spleen.

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**18.01.99** - A biopsy of the right thigh was carried out which showed focal chronic inflammatory cell infiltrate and haemosiderin containing macrophages. There was no neutrophilic infiltrate to suggest sepsis.

**19.01.99** - Having been afebrile for 48 hours he again spiked a temperature and developed loose stools. His clindamycin was changed to teicoplanin.

**22.01.99** - Having had persistent diarrhoea metronidazole was added. There was no evidence of clostridium infection. By the end of January his right thigh was much improved but his temperature continued to spike at 40°C and he had a repeat chest x-ray, a CT scan of the chest, abdomen and pelvis, malaria screen and auto-antibody screen.

**05.02.99** - His antibiotics were stopped but he continued to have persistent swinging fevers up to 40°C and again a repeat echo was requested and a second gallium scan low dose mantoux test with complement levels.

**14.02.99** - Repeat MRI of his thigh and knee appeared consistent with a fasciitis.

**18.02.99** - Ultrasound of the thigh again showed no fluid available for aspiration.

**22.02.99** - Reviewed by the Orthopaedic team who felt that no further intervention was required.

**24.02.99** - Reviewed by Infectious Disease and Microbiology teams who felt that high dose antibiotics directed at staph aureus would be advisable. He was therefore commenced on flucloxacillin and fusidic acid.

**26.02.99** - After an episode of collapse with epigastric tenderness overnight Mr Stewart dropped his haemoglobin by 3 grams and was transfused appropriately and started on an H<sub>2</sub> antagonist.

**04.03.99** - Mr Stewart was found to have a positive anti-streptolysin titre and weakly positive strongyloides serology. He was recommenced on high dose benzylpenicillin and at that time Mr Stewart had a normal upper GI endoscopy.

**05.03.99** - Mr Stewart's haemoglobin dropped again requiring a further 3 units of blood.

**10.03.99** - Anti-staphylococcal titre was negative so his flucloxacillin and fusidic acid were stopped. He continued on high dose benzylpenicillin.

**11.03.99** - Possible melaena stool, negative colonoscopy. Further 3 unit blood transfusion required for dropping haemoglobin.

From the middle of March to the current time Mr Stewart has continued to have intermittent pyrexias up to 40°, some of which are associated with severe rigors usually whilst he is afebrile prior to his temperature rising. He has had numerous negative blood cultures throughout this time, but on 30th March one set of blood cultures grew an E. coli for which he was appropriately treated with 9 days of meropenem. His haemoglobin has remained stable since mid-March.

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### **Scans and Endoscopies**

23.12.98 - X-ray right knee. No obvious fracture.  
23.12.98 - Ultrasound right thigh. Possible compartment syndrome.  
04.01.99 - Ultrasound right thigh. Swollen soft tissue with oedematous tissue planes. No focal collection or abscess.  
08.01.99 - Ultrasound guided drainage of thigh.  
13.01.99 - Echocardiogram. Normal.  
14.01.99 - MRI right lower limb. Features suggesting fasciitis.  
15.01.99 - Abdominal ultrasound. No enlargement of liver or spleen.  
18.01.99 - Biopsy of the right fascia lata muscle. Chronic focal inflammatory cell infiltrate with lymphocytes and plasma cells. Haemosiderin containing macrophages. No neutrophilic infiltrate to suggest sepsis. **Conclusion:** mild chronic inflammation.  
26.01.99 - Gallium scan. Slight diffuse uptake in right upper thigh consistent with resolving recent infection/inflammation.  
26.01.99 - CT chest, abdomen and pelvis. No abnormality.  
14.02.99 - MRI of thigh and knee. Verbal report consistent with fasciitis. Improved since previous film.  
16.02.99 - Gallium scan. Normal.  
16.02.99 - Echocardiogram. Normal.  
18.02.99 - Ultrasound right thigh. No fluid available for aspiration.  
02.03.99 - X-ray right knee. No bony abnormality.  
04.03.99 - Upper GI endoscopy. No abnormality detected.  
10.03.99 - Ultrasound abdomen. Normal liver, spleen and kidneys. No collections seen.  
11.03.99 - Colonoscopy. No abnormality seen.  
01.04.99 - Small bowel follow through. No small bowel lesion identified.

### **Microbiology**

Blood cultures x 18 negative.  
Stool cultures x 19 negative for MC&S.  
Negative for ova cysts and parasites, Campylobacter, Salmonella, Shigella, E.coli, Clostridium difficile and Cryptosporidium. Positive for candida.  
Urine samples for MC&S x 2 negative.  
MRSA screen negative.  
Wound swab - skin flora only

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Fluid from right thigh aspirate. Moderate pus cells grossly bloody. No bacterial growth.

Culture of soft tissue from thigh - no bacterial growth

Throat swab - no streptococci.

Tongue swab - no bacterial growth or yeasts

Malaria screens all negative

Anti staphylococcal titre negative

Yersinia serology negative

Entamoeba histolytica negative

Microplasma serology negative

Mantoux 1:10,000 negative

1:1,000 negative

HIV 1997 April negative

E.coli from blood culture 30.03.99 sensitive to meropenem

Syphilis ELISA negative

Chlamydia psittaci < 1.8

Hepatitis B & EBV negative

Toxoplasma - previous exposure IgM negative

#### Other tests

ANA x 2 negative.

Immunoglobulins normal on several occasions.

IgG subclasses normal on 24.03.99

Complement x 2 normal

T-cell subsets normal

Ferritin B12 and folate normal

Direct antiglobulin test negative

CA125 21 (reference range 0-35)

AFP 3 (reference range 0-10)

CEA < 3 (reference range 0-10)

PSA 0.6

Bone marrow aspirate - hypocellular and reactive. No evidence of lymphoma.

Confirmed by immunophenotyping

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**Current Situation**

Mr Stewart was changed to oral antibiotics on 7 April and his temperature gradually improved over the next several days. He remained afebrile for 48 hours but then unfortunately started to have a low grade temperature again.

Mr Stewart however felt much better in himself and was having no further rigors. After discussion with Professor Lee and with Mr Stewart's agreement it was decided that we would discharge him on the 14 April and keep him under regular weekly review. He will therefore be attending the Haemophilia Centre on 21 April at which time he will be reviewed by the Registrar.

His problems at the time of discharge are persisting low grading pyrexia and some continuing diarrhoea. It is likely that we will ask Mr Hamilton's team to review him after discharge as they were considering a laparoscopy at one point, but we feel it would be desirable for Mr Stewart to have some time at home before another hospital stay.

**Medication on Discharge**

Paracetamol prn.

Yours sincerely

GRO-C

Dr M Mathias  
SHO in Haematology