ADULT STILL'S DISEASE: A MISSED DIAGNOSIS

M Ramanathan

ABSTRACT

Adult Still's disease is now a well recognised distinct clinical entity. Two cases of the disorder are presented to illustrate the protean nature of the syndrome. The literature is reviewed with regards to the diagnosis, management and complications of the condition. The need for the physician to be aware of this condition to avoid unnecessary investigations and delay in instituting effective therapy will be stressed.

Key words: Adult Still's disease, persistent fever, rash, arthralgia.

SING MED J. 1989; No 30: 223 – 225

INTRODUCTION

Adult Still's disease was first described as a distinct clinical syndrome by Bywaters in 1971 (1). It occurs after 15 years of age (1) and usually affects young adults (2, 3). It is primarily diagnosed clinically. There are no pathognomonic findings in this condition (4).

The clinical and laboratory features of two patients with Adult Still's disease seen by us over a period of two years in a general medical unit are now presented.

CASE REPORTS

CASE 1

A 24-year old man was hospitalised in March, 1986 because of fever and joint pains. He experienced abrupt onset of sorethroat, high fever, myalgia and joint pains two weeks before his admission. He denied shaking, chills, recent travel and ingestion of drugs. He had loss of appetite and weight. He was most perturbed by the marked myalgia and joint pains which had limited his movements. The systemic review was otherwise unhelpful.

He recalled a similar illness about six years earlier for which he was hospitalised for two weeks. He had consulted general practitioners on two occasions for fever and joint pains. He was totally well in between these episodes.

During the present entry, the most striking feature on examination was that he was not toxic looking despite a temperature of 40°C. The throat was mildly injected. He had shotty non-tender discrete cervical lymphadenopathy. There was no muscle tenderness. The left elbow, wrist, metacarpophalangeal joints and the ankles were tender on palpation and the movements were limited because of pain. There was mild effusion in both knees.

He was noted to have an erythematous, macular rash on the flanks, chest wall and the thighs. The rash was pruritic when he sweated. The rash disappeared spontaneously a few days later but re-appeared in other regions during spikes of temperature. Physical examination was otherwise normal.

The blood counts, serological and other laboratory studies done on this patient are presented in Table 1 and 2.

The septic workout including throat swab, blood, stool and urine cultures and Widal/Weil Felix agglutination tests were negative. The blood films were repeatedly negative for malarial parasites.

The chest x-ray, x-rays of the involved joints, ultrasound examination of the abdomen and echocardiographic studies were normal.

The patient had an intermittent fever in the ward with spikes of 39° – 40° in the late evenings. Because he showed no response to Paracetamol, he was started on Indomethacin 50 mg. 8 hourly a few days later. He responded promptly and was discharged home a week later.

He remains well on follow-up two years later except for two occasions when he developed a similar illness. These episodes required hospitalisation but he responded well to Indomethacin.

CASE 2

A 42 year old lady was admitted to the hospital in March, 1986 with a one-week history of high fever, marked myalgia and loss of appetite. The history was otherwise unhelpful.

On examination she was febrile and pale but not toxic looking. The examination was otherwise unremarkable.

The investigations done on this patient are shown in Table 1 and 2. The septic workout as in Case 1 was negative. A bone marrow aspiration was also done. The findings were consistent with a mild iron deficiency anaemia. There was no evidence of leukemia or infiltration with abnormal cells.

She had an intermittent fever which spiked to 40°C in the evenings. She responded well to Indomethacin 150 mg./day in divided doses. She was well and thus discharged a week later.

Table 1.
HEMATOLOGY RESULTS

Patient:		1		2
Hb. (g/dl)		10.4		8.8
WBC (x 10^9/l)		23.2		18.5
Different count:	P:	84	P:	82
	L:	12	L:	18
	M:	2		M:5
	E:	2		
Platelets (x 10^9/l)		620		640
Reticulocyte count:		0.3		1.0
E.S.R. (mm/1st Hour)		115		94
Peripheral blood film		normocytic normochromic anemia		microcytic hypochromic anemia

P: Polymorphs; L: lymphocytes; M: Mono; E: eosinophils.

General Hospital
75400 Malacca
Malaysia

M Ramanathan, MRCP (UK)
Consultant Physician

Table 2.
SEROLOGICAL RESULTS

Patient	1	2		Normal values:
LIVER FUNCTION TESTS:				
Serum Bilirubin :	22	6	micromole/l)	(3 — 18.8 micromole/l)
Alkaline :	8.0	10.1	(K.A. units)	(3 — 13 K.A. units/ml)
phosphatase				
Serum Albumin :	33	40	(G/L)	(35 — 48 G/L)
Serum Globulin :	55	39		(23 — 36 G/L)
S.G.P.T. :	21	6	(R.F. units)	(4 — 30 R.F. units)
	SERUM PROTEIN ELECTROPHRESIS:			G/dl.
Albumin :	29.00	48.00		(36.00 — 52.00)
IgG :	27.27	7.56		(8.00 — 16.00)
IgA :	2.31	2.94		(1.20 — 3.00)
IgM :	0.85	0.86		(0.9 — 2.20)
Paraprotein :	negative	negative		

Table 3.
CHARACTERISTICS OF ADULT STILL'S DISEASE.

	AFFECTED (%):
Male	50
Female	50
Similar episode in childhood	14
Arthralgia	99
Joint swelling	86
.Typical rash	87
High fever (>104)	85
Lymphadenopathy	52
Sore throat	50
Splenomegaly	45
Liver abnormalities *	47
Pleuritis/pneumonitis	34
Pericarditis	29
Weight loss (≳10%)	27
Abdominal pain	15
Alopecia	5
Uvetis	7

* Abnormal liver function tests and/or hepatomegaly.

Based on analysis of 95 reported cases. (2).

Table 4.
LABORATORY FINDINGS IN ADULT STILL'S DISEASE.

	AFFECTED (%)
Elevated ESR	100
WBC > 10,000	98
> 18,000	69
Neutrophils > 90%	55
Anemia	90
Decreased serum albumin	88
Increased IgG	47
Increased IgA	29
Increased IgM	26
Positive antinuclear antibody	5
Positive rheumatoid factor	1

Based on analysis of 95 reported cases. (2).

Eight weeks later she had an abrupt onset of similar illness. During this episode, she had three additional features viz, diffuse alopecia, joint pains and the classical Still's rash on her flanks and thighs. She complained of multiple joint pains involving the small joints of the hands, ankles and knees. She had mild effusion in her right knee. She again responded well to Indomethacin.

She continues in good health two years later except on two occasions when she had fever and joint pain which responded to Indomethacin.

A summary of the laboratory test results for both patients is given in Tables 1 & 2. Both patients had negative results for blood rheumatoid factor, antinuclear factor, VDRL & Coombs' test.

DISCUSSION

The diagnosis of Adult Still's disease is possible only by recognising a striking constellation of clinical and laboratory abnormalities (4). Moreover, it is a diagnosis of exclusion. One need to exclude infections and other rheumatological or blood disorders before arriving at the diagnosis of Adult Still's disease.

An infective cause was excluded in our patients by the extensive septic workout done on them including appropriate cultures, x-rays, ultrasound and echocardiographic studies.

The negative lupus screening excluded systemic lupus erythematosis (SLE) in the cases under discussion. The spiking fever pattern and marked polymorphonuclear leucocytosis were also atypical of SLE. Leucopenia is usual in SLE in the absence of superimposed infection (2).

Rheumatoid arthritis was probable in both patients. The absence of classical morning stiffness, symmetrical polyarthritis and rheumatoid factor on repeated examination made it unlikely.

Both the patients had been followed up for two years. So far, they have not shown any manifestation of seronegative arthritic conditions like Reiter's disease, ankylosing spondylitis or inflammatory bowel disease.

The possibility of a lymphoproliferative disorder and multiple myeloma was entertained in the second patient. These were subsequently excluded by the results of the bone marrow and protein electrophoresis studies.

Our patients under discussion shared some common features which led us to the diagnosis of Adult Still's disease in them. These features included: myalgia, inter-

mittent fever with spikes in the evenings, classical Still's rash, arthritis, anaemia, polymorphonuclear leucocytosis, raised ESR, abnormalities in the liver function tests, negative septic workout and the absence of rheumatoid and antinuclear factors.

Further, the asymptomatic intervals experienced by the two patients also illustrate the polycyclic nature of the illness (5).

It has been pointed out that "not all manifestations are present with each febrile episode and historical data can be of considerable assistance in making the diagnosis" (5). The rash in our second patient was seen only during her second episode of illness.

The absence of arthritis or rash at presentation does not exclude Adult Still's disease. They were present only in 68% and 54% of patients during the first month of illness respectively (3).

A characteristic feature of the syndrome is its marked response to non-steroidal anti-inflammatory drugs (NSAIDS). Although aspirin has been used most commonly, equally impressive results have been obtained with other NSAIDS and in particular Indomethacin and Naproxen. We chose Indomethacin mainly because of ease of administration. Aspirin is required in a dosage of about 4 gm./day which might cause side effects. Sometimes steroids are required to relieve the symptoms in these patients. However it has also been shown that Indomethacin occasionally helps some of these patients who did not respond to steroids (3).

This syndrome was generally believed to run a benign cause with a favourable prognosis by earlier workers (1, 4). This is being disputed now (3). A number of complications including cardiac tamponade, diffuse intravascular coagulation, amyloidosis and permanent disability from joint destruction has been reported (3). It is possible that some of these complications may not be due to the disease itself, but were caused by the drugs which patients received.

The need to recognise Adult Still's disease as a separate clinical entity has been repeatedly stressed (1, 2, 4, 5)

The increasing number of case reports and reviews illustrates the fact that Adult Still's disease is not an uncommon disease as it was once thought. The condition is often treated as a case of pyrexia of unknown origin. Hence the extensive septic workup of these patients (2). It is therefore necessary for physicians to appreciate that Still's disease is a recognisable syndrome that may affect adults. This awareness will avoid unnecessary diagnostic procedures and delay in instituting prompt and effective therapy.

ACKNOWLEDGEMENT

I would like to thank the Director General of Health Malaysia for his kind permission to publish this article and Mrs. Magdelene Hendroff for secretarial assistance.

REFERENCES

1. Bywaters EGL. Still's disease in adult. Ann. Rheum. Dis. 1971; 30: 121-33.
2. Pinals RS. Persistent fever and arthralgia in adults. Hosp. Prac. 1986; 21: 35-43.
3. Wouters JMGW, van de Putte LBA. Adult onset Still's disease: clinical and laboratory features, treatment and progress of 45 cases. Q J Med 1986; 61: 1055-65.
4. Esdaile JM, Tannenbaum H, Hawkins D. Adult Still's disease. Am. J Med. 1980; 825-30.
5. Bujak JS, Aptekar RG, Decker JL, Wolff SM. Juvenile rheumatoid arthritis presenting in the adult as fever of unknown origin. Medicine 1973; 52: 431-44.