

AD-A284 792



②



DTIC
 ELECTE
 SEP 23 1994
 S G D

PUBLICATION REPORT

31/94

ACUTE PARASITIC INFECTIONS AS A CAUSE OF FEVER OF UNKNOWN ORIGIN IN EGYPT

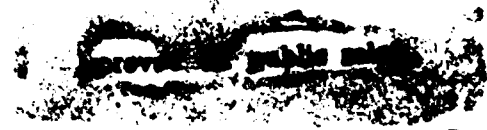
By

Farid Z., Kamal M., Mousa M., Karam M. and Hibbs R.

94-30559



epf



DTIC QUALITY INSPECTED 3

U.S. NAVAL MEDICAL RESEARCH UNIT NO. 3
(CAIRO, ARAB REPUBLIC OF EGYPT)

PSC 452, BOX 5000

FPO AE 09835-0007

94 9 22 108

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE October 1993	3. REPORT TYPE AND DATES COVERED
----------------------------------	--------------------------------	----------------------------------

4. TITLE AND SUBTITLE Acute Parasitic Infections as a Cause of Fever of Unknown Origin in Egypt	5. FUNDING NUMBERS WU 3M161102BS13-AK311.
--	--

6. AUTHOR(S) Farid, Z., Kamal, M., Mousa, M., Karam, M., Hibbs, R.	
---	--

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Naval Medical Research Unit No. 3 PSC 452, Box 5000 FPO AE 09835-0007	8. PERFORMING ORGANIZATION REPORT NUMBER 31/94
--	---

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Naval Medical Research and Development Command, National Naval Medical Center Building 1, Tower 12 Bethesda, MD 20889-5044	10. SPONSORING / MONITORING AGENCY REPORT NUMBER
--	--

11. SUPPLEMENTARY NOTES
Published in: J. Trop. Med. 2(5):87-89, 1993; Acc. No. 1782d

12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; Distribution is unlimited.	12b. DISTRIBUTION CODE
--	------------------------

Accession For	
NTIS CRA&I	✓
DTIC TAB	
Unannounced	
Justification _____	
By _____	
Distribution / _____	
Availability Codes	
Dist	Avail. and/or Special
A-1	20

13. ABSTRACT (Maximum 200 words) See attached	
--	--

DTIC QUALITY INSPECTED 3

14. SUBJECT TERMS Acute parasitic infections; Fever of unknown origin; Egypt	15. NUMBER OF PAGES
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT
---	--	---	----------------------------

ISSN 1110-0796

Vol. 2, No. 5, PP. 1 - 154.

October. (1993)

Journal of Tropical Medicine

JTM



**Royal Society of Tropical Medicine & Hygiene
"Egyptian branch"**

Tager Building, 1, Ozoris Street, Garden City, Cairo, Egypt. Tel.: 3541857
Legalized No. 3605

**Editorial Board Address : Professor Kabil S M, 41, Talaat Harb St.,
Cairo, Egypt. Tel. (202): 3915115 - Tel/Fax. (202): 3938723.**

ACUTE PARASITIC INFECTIONS AS A CAUSE OF FEVER OF UNKNOWN ORIGIN IN EGYPT

Farid Z. *Kamal M, *Mousa M, *Karam M. and Hibbs R.

U.S. Naval Medical Research Unit No. 3, Cairo, Egypt and *Abbassia Fever Hospital, Cairo, Egypt.

During 1992, 141 patients were referred to the Abbassia Fever Hospital (AFH) for investigation of fever undiagnosed for over 3 weeks. Of these 141 patients, 76 were females and 65 were males; their ages ranged from 5 years to 62 years.

Of the 141 patients investigated, 80 were diagnosed to have an infection, 28 a collagen vascular disease and 20 a neoplasm (Table). As in previous reports, infection was the most common cause of fever of unknown origin (FUO) (Petersdorf and Beeson, 1961) and tuberculosis was the most common infection causing FUO (Hassan and Farid, 1974; Farid et al., 1990a; Farid et al., 1993). Of the 80 patients with an infection, 32 were caused by tuberculosis and of these 32 patients, 14 had abdominal tuberculosis confirmed by ultrasonography (Hibbs et al., 1994). Acute parasitic infection with eosinophilia was the next most common cause of prolonged fever among infected patients in this series and included 10 with acute fascioliasis, 9 with schistosomiasis and 1 with ascariasis. Other parasitic infections included 1 toxoplasmosis and 1 malaria.

Correspondence and request for reprints:

Research Publication Branch, U.S. Naval Medical Research Unit #3, On the Extent of Ramses St., Adjacent to Abbassia Fever Hosp., Postal Code 11517, Cairo, Egpt.

Non-invasive radiological techniques, including ultrasonography, echocardiography and computerized tomography, were of great importance in diagnosing these patients. The use of new immunoserological techniques, including the Counterimmunoelectrophoresis (CIEP) and Enzyme-linked immunosorbent assay (ELISA) (Mansour et al., 1983; Boctor et al., 1985 and Shaheen et al., 1989) were particularly useful in diagnosing acute febrile patients with eosinophilia, including 10 patients with acute *Fasciola hepatica* infection, 9 patients with acute *Schistosoma mansoni* infection and 1 patient with *Ascaris lumbricoides* infection. Clinically, acute *Fasciola* and acute *Schistosoma* infection present a similar clinical picture essentially of prolonged fever accompanied by tender hepatomegaly, eosinophilia and mild anaemia. Ultrasonography is useful in demonstrating abnormalities caused by the *Fasciola* worm in the liver, gall bladder and biliary system (Bassily et al., 1989). Diagnosing these patients promptly is important since treatment is specific and relatively easy. The acute phase of the infection is controlled by low dose prednisone for 2-3 days before starting specific therapy. Acute schistosomiasis is treated with a single dose of praziquantel 75 mg/kg divided into 3 equal parts given in one day (Farid et al., 1986; Farid et al., 1987 and Farid et al., 1989). Acute fascioliasis is treated with bithionol,

Table: Diagnostic categories of fever of undetermined origin based on a study of 141 patients admitted to the Abbassia Fever Hospital, Cairo, January-December 1992.

Category	No.	%	Final diagnosis
Infections	80	57	Tuberculosis (32), Salmonellosis (10), Fascioliasis (10), Schistosomiasis (9), Infective Endocarditis (5), Brucellosis (4), Pyelonephritis (2), Dental Abscess (1), Tubo-ovarian Abscess (1), Leprosy (1), Osteomyelitis (1), Toxoplasmosis (1), Falciparum Malaria (1), HIV (1), Ascariasis (1)
Collagen-vascular diseases	28	20	Systemic Lupus Erythematosus (13), Rheumatoid Arthritis (6), Stills' Disease (5), Rheumatic Fever (1), Polyarteritis Nodosa (1), Polymyositis (1), Dermatomyositis (1)
Neoplasms	20	14	Lymphoma (10), Hodgkins' Disease (6), Neuroblastoma (3), Acute Leukemia (1)
Other Causes	13	9	Sarcoidosis (3), Idiopathic Granulomatous Hepatitis (1) Neutrophilic Dermatitis (Sweet-Syndrome) (1), Drug Fever (2), Periodic Disease (1), Undiagnosed (5)

50mg/kg daily for 10 days (Farid et al., 1988 and Farid et al. 1990b).

Acknowledgments

This research was supported by the Naval Medical Research and Development Command, NMC, NCR, Bethesda, MD, Work Unit No. 3M161102BS13-AK311.

The opinions and assertions contained herein are the private ones of the author and are not be construed as official or as reflecting the views of the Navy Department, Department of Defense, the U.S. Government or the Egyptian Ministry of Health.

References

Bassily S, Iskander M, Youssef FG, El-Masry N and Bawden M. (1989): Sonography in Diagnosis of Fascioliasis. *Lancet*. i, 1270: 1271.
Boctor FN, Farid Z, Shaheen H and Trabolsi B. (1985):

Scrodiagnosis of occult helminth infection in patients with fever and eosinophilia using ELISA. *Proceedings of the International Congress for Infectious Diseases Cairo*, 222: 224.

Farid Z, Trabolsi B and Hafez A. (1986): Acute Schistosomiasis mansoni (Katayama syndrome). *Ann. Trop. Med. Parasitol.*, 5, 563: 564.

Farid Z, Mansour N, Kamal K, Girgis N, Woody J, and Kamal M. (1987): The diagnosis and treatment of acute toxæmic schistosomiasis in children. *Trans. Roy. Soc. Trop. Med. Hyg.*, 81, 959.

Farid Z, Kamal M and Woody J. (1988): Treatment of acute toxæmic fascioliasis. *Trans. Roy. Soc. Trop. Med. Hyg.*, 82, 299.

Farid Z, Woody J and Kamal M. (1989): Praziquantel and acute urban schistosomiasis. *Trop. Geogr. Med.*, 41, 172.

- Farid Z, Kamal M, Safwat Y, Salama Z and Kilpatrick M. (1990a):** Tuberculous Lymphadenitis in Cairo, Egypt. *Trop. Geogr. Med.*, 42, 385: 388.
- Farid Z, Mansour N, Kamal M, Safwat Y and Woody JN. (1990b):** The treatment of acute *Fasciola hepatica* infection in children. *Trop. Geogr. Med.*, 42, 95: 96.
- Farid Z, Kilpatrick ME. and Kamal M. (1993):** Cryptogenic Tuberculosis-1990 Cairo - Egypt. *J. Trop. Med. JTM*, 2, 31: 32.
- Hassan A and Farid Z. (1974):** Fever of Undetermined Origin in Cairo. *N. Engl. J. Med.*, 290, 807.
- Hibbs RG, Kamal M. and Farid Z. (1994):** Abdominal Tuberculosis in Cairo, Egypt. *Trans. Roy. Soc. Trop. Med. Hyg.*, (In press).
- Mansour NS, Youssef FG, Mikhail EM and Boctor FN. (1983):** Use of partially purified *Fasciola gigantica* worm antigen in the serological diagnosis of human fascioliasis in Egypt. *Am. J. Trop. Med. Hyg.* 32, 550: 554.
- Petersdorf RG and Beeson PG. (1961):** Fever of unexplained origin: report on 100 cases. *Medicine (Baltimore)*, 40, 1: 30.
- Shaheen HI, Kamal KA, Farid Z, Mansour N, Boctor, FN and Woody JN. (1989):** Dot-Enzyme-Linked Immunosorbent Assay (Dot-ELISA) for the rapid diagnosis of Human Fascioliasis. *J. Parasitol.*, 75, 4, 549: 552.