Incidence of pericardial effusion during attacks of familial Mediterranean fever

E Tutar, F Yalçinkaya, N Özkaya, M Ekim, S Atalay

Familial Mediterranean fever (FMF) is an autosomal recessive disorder that affects primarily Jews, Armenians, Turks, and Arabs. It is characterised by recurrent, self limited attacks of fever accompanied by inflammation of the peritoneal, synovial, and pleural surfaces. Pericardial involvement is a well known (0.7–1.4%) but rare feature of the disease. Our initial observation of two patients who had recurrent pericarditis as a sole manifestation of FMF has led us to suggest that pericardial inflammation is more prevalent than generally believed. Since echocardiography is a non-invasive and sensitive tool for the detection of pericardial effusion, we undertook an echocardiographic study to assess the exact frequency of pericardial effusions during attacks of FMF.

RESULTS

The age of the patients ranged from 5.5–22 years (mean (SD) 10.9 (3.7) years). During the echocardiographic study 27 patients had been treated with colchicine for 6 months to 15 years (mean (SD) 45 (32.3) months), and the remaining 15 were not treated with colchicine. Chest pain was present in 24 of 55 attacks. None of the patients had other clinical findings, such as friction rub, suggesting pericarditis. All patients were found to have normal ECG and chest radiographic studies during the attacks. Echocardiographic study showed minimal pericardial effusion during two attacks of two patients (8 and 9 year old boys). The amount of pericardial effusion was 4 mm in the first and 6 mm in the second case. Effusions resolved spontaneously on control echocardiogram at the end of the attacks. The type of clinical exacerbations in patients who had pericardial effusion was chest attack type in one and abdominal attack type in the other case. Both patients with pericardial effusion had been taking colchicine (for six months and two years). Thus, the frequency of pericardial effusion diagnosed by echocardiography during the FMF attacks was found to be 2 in 55 (3.6%). Although echocardiographic examination did not show any effusion, the presence of chest pain strongly suggested pericardial inflammation in six attacks of three other patients.

DISCUSSION

Although pericarditis is regarded as one of the clinical features of FMF, pericardial involvement has not been mentioned much in large series of FMF. Thus, whether pericarditis is a manifestation of FMF or a coexisting, intercurrent illness has been debated. Re-evaluation of pericardial involvement in a recent study showed a 0.7% prevalence of pericarditis in 1553 thoracic attacks of 3976 patients with FMF. This study clearly showed that pericarditis was a manifestation of FMF. Similarly, the prevalence of definite pericardial attacks has recently been reported as 1.4% (34 of 2468 patients) by the Turkish FMF Study Group. Both studies show that pericarditis is a rare manifestation of FMF as compared with the other forms of serositis.

Why pericardium is not involved as commonly as other serosal membranes is unknown. It has been suggested that underdiagnosis may partly be responsible for the infrequent detection of pericarditis. If echocardiography were used to detect pericarditis in every attack of FMF (especially for chest attacks), it would be possible to detect pericardial attacks more frequently. Our present study, however, shows that pericardial effusion is not a frequent manifestation of FMF, even with the use of echocardiography. Only one prospective echocardiographic study was undertaken before ours, by Dabestani and colleagues. They reported a much higher (27%) prevalence of pericardial involvement in predominantly adult patients with FMF. However, Dabestani and colleagues described pericardial disease as an effusion in the

www.heartjnl.com
pericardial space or pericardial thickening detected only by M mode echocardiography. It is known that if two dimensional and M mode echocardiography are used together, diagnostic acuity of echocardiography to detect pericardial effusion is increased. Since it is difficult to detect a thickened pericardium with echocardiography, the reliability of echocardiographic diagnosis is questionable. Thus, the high prevalence of pericardial disease that Dabestani and colleagues found in their echocardiographic study may have been an overestimation caused by the method used to define pericardial disease.

Another possible explanation of this discrepancy is the difference in the ages of the patients. Since pericarditis tends to appear at a late stage of FMF, a higher prevalence may be predicted in adult patients than in children. It is known that colchicine is effective for the treatment of FMF attacks. Moreover, both of these disorders, no study to date has reported that colchicine may prevent the occurrence of pericardial fluid in patients with these disorders, no study to date has reported that colchicine can blunt any type of FMF attacks. Moreover, both of our patients with pericardial effusion had been taking colchicine.

Previous clinical studies and the results of our study show that pericardial attacks are infrequent manifestations of FMF, and routine echocardiographic screening is not necessary in FMF attacks.

FROM BMJ JOURNALS

Job strain and high work demands and lack of opportunity to control work are related to increased risk of coronary heart disease in British government employees

The Whitehall II study has followed prospectively over 10 000 London based civil servants (government department employees) for a mean of 11 years, in particular identifying those who developed coronary heart disease (CHD). Data were collected on known coronary risk factors and self-reported questionnaires detailed such work characteristics as job demands and decision latitude (degree of control over skill use, time allocation and authority to make decisions).

Those with high scores in both areas were defined as having “job strain”. They proved to be at the greatest risk of CHD, regardless of their coronary risk factors or domestic psychosocial support (hazard ratio 1.57 (CI 1.26–1.96)). A high score for either of the components also led to a higher risk of CHD.

The authors suggest the policy implications of their research are that strategies for work place health promotion should rely on redesigning jobs by reducing psychological demands and increasing individuals’ say in decisions about their work as well as offering more variety in job tasks. The next step should be intervention studies to evaluate the utility of any such changes.

Authors’ affiliations
E Tutar, F Yalçınkaya, N Özçay, M Ekim, S Atalay, Ankara University, Medical School, Ankara, Turkey

Correspondence to: Dr E Tutar, Defne sitesi 8 blok, No 37, 06530, Umıtkoy, Ankara, Turkey; tutar@dialup.ankara.edu.tr

Accepted 7 May 2003

REFERENCES

Incidence of pericardial effusion during attacks of familial Mediterranean fever

E Tutar, F Yalçinkaya, N Özkaya, M Ekim and S Atalay

Heart 2003 89: 1257-1258
doi: 10.1136/heart.89.10.1257

Updated information and services can be found at:
http://heart.bmj.com/content/89/10/1257

These include:

References
This article cites 9 articles, 2 of which you can access for free at:
http://heart.bmj.com/content/89/10/1257#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections

- Clinical diagnostic tests (4779)
- Echocardiography (2127)
- Drugs: cardiovascular system (8842)
- Heart failure (565)
- Hypertension (3006)
- Metabolic disorders (1030)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/