

## SHORT REPORTS

### Acute myocardial infarction in Asians and whites in Birmingham

There is evidence that immigrant Asians suffer worse coronary artery disease than Asians remaining in their own countries and the indigenous population of the country of adoption.<sup>1-3</sup> Asians may make poor use of National Health Service provisions.<sup>4</sup> This study compares Asians and indigenous whites admitted to our coronary care unit from the casualty department with a history of acute chest pain due to suspected myocardial infarction.

#### Methods and results

The records of 3208 admissions to the coronary care unit from June 1976 to December 1981 were examined and 169 Asians were identified by their names. Their original case notes were retrieved and scrutinised; 27 Asians had not been admitted to the unit directly from the casualty department, and these were excluded from analysis. A further 14 sets of records were untraceable or inadequate. The remaining 128 Asian patients were then matched for age, sex, month of referral, and time of arrival in the casualty department (morning, afternoon, or evening) with indigenous whites. It proved impossible to match four Asians, who were exceptionally young (18 to 22 years), leaving 124 matched pairs for the final analysis. Sixty per cent of the Asians had been born in Pakistan, the remainder coming from east Africa, Bangladesh, and India. With few exceptions these patients were Moslem and at least half spoke no English. Differences between the two groups were assessed by Student's *t* test for paired data; where subgroup comparisons were made, the  $\chi^2$  test was used.

Of 124 Asian patients, 52 had been seen by their own general practitioners and sent into hospital; the remainder had been sent by a deputising doctor or had dialled 999. Sixty four of the whites had been seen by their own general practitioner, the remainder being admitted either by a deputising service or a 999 call. The patients were well matched for age (Asians 52.6 (SD 7.8) years, whites 52.9 (7.9) years). There were 111 men and 13 women in each group of 124 patients. The mean time from the onset of chest pain to arrival in the casualty department was 301 (30) minutes for Asians and 320 (33) minutes for whites, but the mean time from arrival in the casualty department to arrival in the coronary care unit was significantly longer in Asians (117 (94) *v* 84 (50) minutes; *p* < 0.001). The main comparisons concerning the diagnosis and complications of myocardial infarction and site of infarction are listed in the table.

#### Comment

Asian patients who developed chest pain did not differ in their use of emergency medical services when compared with whites suffering the same symptoms. An equal proportion of both groups was seen either by their own general practitioner or by the deputising service, or made use of the 999 call. Delay between the onset of symptoms

*Details of myocardial infarct and complications, history, and previous treatment in 124 Asians and 124 whites admitted to coronary care unit with suspected myocardial infarction. Unless otherwise shown results are numbers of patients*

	Asian	White
Myocardial infarct	87	89
Anterior	41 (47%)	51 (57%)
Inferior	37 (42%)	27 (30%)
Other sites	9	11
Peak mean (SD) serum aspartate aminotransferase (IU/l)	156.6 (144.6)	188.8 (203.0)
Mean (SD) Norris index <sup>5</sup>	6.08 (3.11)	6.27 (3.07)
Cardiac arrest	9	13
Death	6	12
Heart failure	9	29
Supraventricular arrhythmias	27	21
Ventricular arrhythmias (excluding cardiac arrest and death)	30	18*
Conduction disturbance	22	22
Temporary cardiac pacing	5	8
Smoking	58	81
Hypertension	26	22
Diabetes	12	6
Previous cardiovascular disease	10	11
Previous coronary heart disease	63	53
Previous arrhythmias	12	15
Diuretics	18	15
β blockers	27	26
Calcium antagonists	8	12
Other antiarrhythmics		

\**p* < 0.05.

and arrival in the casualty department was similar in both groups. Most Asians had Asian general practitioners but many were seen by the deputising service outside normal hours; in Birmingham the general practitioner deputising service employs many Asian doctors and thus our Asian patients probably had less of a language problem with doctors than after their admission to hospital.

Our results indicated that Asians admitted to our coronary care unit from the casualty department with acute chest pain differed little from matched whites with regard to the incidence and complications of myocardial infarction. There were two exceptions: the incidence of ventricular arrhythmias was greater in the Asians, and the length of time elapsing between arriving in the casualty department and being admitted to the coronary care unit was also longer. Few of our Asian patients spoke fluent English and at least half spoke no English at all. We believe that difficulty in communication between patient and doctor probably accounted for the longer delay that Asian patients experienced. A direct correlation between the delay and the increased incidence of ventricular arrhythmias is impossible to prove from this study. Neither of these complications, however, adversely affected the mortality in the Asian group.

We thank Mrs E Gale, Miss C Beekes, and Mr T J Stallard for their help with this project. The work was generously supported by a grant from the Royal College of Physicians Research Unit.

- 1 Tunstall Pedoe H, Clayton D, Morris JN, Brigden W, McDonald L. Coronary heart attacks in East London. *Lancet* 1975;ii:833-8.
- 2 Miller GJ, Beckles GLA, Alexis SD, Byam NTA, Price SGL. Serum lipoproteins and susceptibility of men of Indian descent to coronary heart disease. *Lancet* 1982;ii:200-3.
- 3 Marmot MG, Adelstein AM, Bulusu L. Lessons from the study of immigrant mortality. *Lancet* 1984;i:1455-7.
- 4 Oakhill A, Mann JR. Poor prognosis of acute lymphoblastic leukaemia in Asian children living in the United Kingdom. *Br Med J* 1983;286:839-41.
- 5 Norris RM, Brandt PWT, Coughney DE, Lee AJ, Scott PJ. A new coronary prognostic index. *Lancet* 1969;i:274-8.

(Accepted 28 January 1985)

Department of Cardiovascular Medicine, University of Birmingham and East Birmingham Hospital, Birmingham B9 5ST

R E LAWRENCE, MB, MRCP, senior house officer  
W A LITTLER, MD, FRCP, professor of cardiovascular medicine, Wolfson research fellow, Royal College of Physicians

Correspondence to: Professor W A Littler.

### Pancreatitis in sarcoidosis

We studied two patients with acute episodes of pancreatitis caused by sarcoidosis, an association not previously recorded. Prompt resolution of the pancreatitis occurred after treatment with steroids, which are usually contraindicated for the more usual forms of pancreatitis.

#### Case 1

A 47 year old woman was admitted to hospital with a history of headache and vomiting. Computed tomography of the brain showed an infarct of the left occipital lobe. Sarcoidosis had been diagnosed 19 years earlier when she had presented with erythema nodosum and was found to have non-caseating granulomas on a cervical node biopsy. One year before this admission she suffered a cerebellar infarction and had an attack of unilateral parotitis. She also suffered from hypertension which was treated with bendrofluazide 2.5 mg daily.

Three days after admission she developed severe abdominal pain. Serum amylase activity was 3885 IU (normal 70-300) and mainly pancreatic in origin.<sup>1</sup> Serum calcium and lipid concentrations, ultrasonic appearances of the biliary tree, computed tomograms of the pancreas, and stool fat estimations were all normal. Active pulmonary sarcoidosis was diagnosed on the basis of chest radiographs, gallium scan, bronchoalveolar lavage findings, and raised serum angiotensin converting enzyme activity. Both skin and transbronchial biopsies showed granulomas.

The thiazide diuretic was stopped and the pancreatitis treated conservatively. As the pancreatitis failed to resolve after six weeks, oral prednisone 40 mg daily was given, producing a prompt clinical improvement; the serum amylase returned to normal. After being discharged she was