

→ Steve. Tom Hyam.

PAEDIATRIC CARDIOLOGY and CARDIAC SURGERY

BRISTOL ROYAL HOSPITAL for SICK CHILDREN

and

BRISTOL ROYAL INFIRMARY

ANNUAL REPORT - 1988

PAEDIATRIC CARDIOLOGY and CARDIAC SURGERY

BRISTOL ROYAL HOSPITAL for SICK CHILDREN (BCH) & BRISTOL ROYAL INFIRMARY (BRI)

SENIOR STAFF

Consultant Paediatric Cardiologists: Dr S C Jordan, MD, FRCP
 Dr H S Joffe, MD, FRCP, M Med, FACC
 Dr R P Martin, MD, MRCP

Consultant Cardiac Surgeons: Mr J D Wisheart, MCh, FRCS
 Mr J P Dhasmana, MS, FRCS

Consultant Cardiac Radiologists: Dr P Wilde, BSc, BM BCh, MRCP, FRCR
 Dr G Hartnell, BSc, MB ChB, MRCP, FRCR

Consultant Pathologist: Dr J Berry, BA, MA, BChIR, MRCP, MRCPath

Consultant Anaesthetists: BRI - Dr G Burton, BSc, MB ChB, DObs RCOG, FFARCS
 Dr Sally Masey, BSc, MB BS, FFARCS
 Dr S Bolsin, BSc, MB BS, FFARCS
 BCH - Dr J O'Higgins, MB BS, DObs RCOG, DA, FFARCS
 Dr P G N Thornton, MB ChB, DA, FFARCS
 Dr D E Hughes, MB ChB, MD, FFARCS
 Dr S J Mather, MB BS, LRCP, MRCS, DRCOG, FFARCS

Cardiac Counsellor: Mrs Helen Vegoda

Cardiac Catheterisation Laboratory (BCH):
 Sister - Mrs Connie Wakely
 Chief Laboratory Technologist - Mrs Kathy Morris
 Chief Cardiac Radiographer - Miss Lynette Jefferies
 Secretary - Miss Maggie Blake

Wards (BCH): ITU - Sister Joyce Woodcraft
 Baby Ward - Sister Julie Russell

Cardiac Surgical Theatre (BRI):
 Sister - Miss K Bennett
 Chief Perfusionist - Mr D Caddy

Cardiac Surgical Ward (BRI):
 Sister - Miss Julia Thomas

Secretarial Staff: BCH - Mrs Margaret Swainger
 Mrs Ronnie Smith
 Mrs Pat Nelis (Congenital Heart Registry)
 BRI - Ms Wendy Rodman
 Mrs Sue Harris
 Miss Yvonne Philips

INTRODUCTION

This year was a period of stabilisation following the rapid growth of the service during the last 4 years.

Dr Rob Martin was appointed proleptically as consultant paediatric cardiologist, and will commence duties in the cardiology unit early in 1989.

PATIENT NUMBERS

The total number of patients examined as inpatients and outpatients in the Bristol Children's Hospital (BCH) and in the peripheral clinics, excluding surgical admissions to the Bristol Royal Infirmary (BRI), was almost 4000 (Table 1). This included nearly 1000 new cases, of whom 40% were infants.

ADMISSIONS

The number of infants and older children admitted to the BCH during 1988 for assessment, medical treatment, investigation and closed heart surgery, by Region and District of origin, is given in Table 2. Over 60% of all admissions come from the South Western Region and nearly 40% from the north of Wessex and South Wales.

The total numbers of admissions to BCH from the South Western Region, North Wessex and South Wales were similar to 1987 levels (Table 3).

Admissions to BRI are dealt with under Cardiac Surgery.

PERIPHERAL CLINICS

A breakdown of the numbers of infants and children examined in the peripheral clinics is shown in Table 4. The total of 1917 patients illustrates the heavy load imposed on the service by these clinics, when compared with the 1540 patients seen as outpatients in BCH and the 497 admissions to BCH from the whole catchment area (Table 1).

INVESTIGATIONS

The total number of cardiac catheterisations (213) and echocardiographic studies (716) were similar to the numbers performed in 1987 (222 and 727, respectively), though ultrasound studies in infants increased from 249 to 299.

The unit acquired the use of the HP cardiac ultrasound machine from the BRI which includes pulsed and continuous wave Doppler and colour flow modalities. The aged ATL Mark 6 equipment continues to be used in the ITU for cerebral and abdominal as well as cardiac procedures.

The ultrasound service continues to be provided in cramped and wholly unsuitable accommodation and negotiations are taking place with management to identify an alternative site.

The electrocardiographic (ECG) service for cardiac and other patients in the Children's Hospital is provided by ECG technicians from the BRI, as before.

SURGERY

The major development of the Cardiac Surgical Unit in the BRI was completed in the summer of 1988, and was opened by the Secretary of State for Health in September. The number of beds was increased from 19 to 29 and included completely new intensive care, high dependency and nursery areas. In addition, the playroom and two parents' rooms have been furnished by the generous and enthusiastic support of the Heart Circle. These changes will enable the total number of open heart operations to rise to over 700 per annum, including 150 - 200 for congenital defects. Miss Julia Thomas, Sister-in-charge, is to be congratulated on the efficient and virtually trouble-free way in which the new facilities on Ward 5 were commissioned and brought into use.

The benefit of these new developments in terms of number of operations should be seen in 1989; in 1988 the work was maintained at the previous level despite the disruption due to building work during the first half of the year. The surgical results are outlined in Table 5.

During 1988 Dr S Bolsin was appointed as a consultant anaesthetist with a major commitment to cardiac anaesthesia - both adult and paediatric. Further surgical and anaesthetic appointments are planned for 1989.

The excellent collaborative approach involving colleagues from many disciplines continues to flourish and is one of the most encouraging and creative aspects of our work.

COUNSELLOR

Mrs Helen Vegoda commenced duties in January 1988 and, after a period of acclimatisation and adjustment with social services and medical and nursing staff, the counselling service has become an integral and most valued part of the unit.

BRISTOL AND SOUTH WEST CHILDREN'S HEART CIRCLE

The Heart Circle continues to provide unstinting support to families with cardiac children, especially those who come to Bristol from outlying areas. Financial assistance is also given to those in need and to building and refurbishing programmes in the BCH and the cardiac unit in the BRI.

PUBLICATIONS

Al-Jilaihawi AN, Bullimore J, Mott M, Wisheart J.
 Combined chemotherapy and surgery for pulmonary metastases from osteogenic sarcoma. Results of 10 years experience.
 Eur J Cardio-thoracic Surg. 2: 37 - 42, 1988.

Johnston A, Bhamra RK, Till JA, Ward DE, Shinebourne EA, Joffe HS, Holt DW.
 Pharmacokinetics of Flecainide in children.
 Proceedings of the British Pharmacological Society Meeting, April, 1988.

COMMUNICATIONS

Bhatnagar NK, Joffe HS, Jordan SC, Wisheart JD.
 Conservative surgery for congenital mitral malformations.
 International Colloquium on Cardiac Reconstruction, Salzburg, January, 1988.

Watterson K, O'Higgins J, Dhasmana JP, Wisheart JD.
 Distal aortic pressure during surgery for coarctation of the aorta.
 First World Congress of Paediatric Cardiac Surgery, Bergamo, June, 1988.

Wisheart JD, Watterson K, Russell G, Berry JP, Dhasmana JP.
 Residual ductal tissue and recurrence of coarctation after the subclavian flap operation.
 European Association for Cardiothoracic Surgery, Bordeaux, September, 1988.

Trelawny-Ross C, Russell O, Jordan SC, Joffe HS.
 Cardiac surgery and Down's Syndrome - an investigation of parents' attitudes and expectations.
 In, Exhibition of Research, Opening of the Institute of Child Health, Royal Hospital for Sick Children, Bristol, October, 1988.

Jordan SC, Joffe HS.
 The Bristol and South West congenital heart register.
 Ibid.

Joffe HS, Jordan SC, Wisheart JD, Dhasmana JP, Wilde P, Hartnell G, Wakely C.
 The supraregional service for cardiology and cardiac surgery in neonates and infants.
 Ibid.

Berry J, Hutter JM, Bhatnagar NK, Wisheart JD, Dhasmana JP, Jordan SC, Joffe HS
 Persistence of ductal tissue in the aorta and its relation to recurrent coarctation of the aorta.
 Ibid.

Hutter JM, Wisheart JD, Dhasmana JP, Jordan SC, Joffe HS.
 A comparison between Mustard's and Senning's operations for transposition of the great arteries.
 Ibid.

TABLE 1. BRISTOL PAEDIATRIC CARDIOLOGY AND CARDIAC SURGERY
1988 STATISTICS

| | TOTAL NUMBER OF PATIENTS | | | | | |
|--------------------|--------------------------|-----|-------------|------|-------|------|
| | UNDER 1 YEAR | | OVER 1 YEAR | | TOTAL | |
| | New | Old | New | Old | New | Old |
| BCH INPATIENTS | 163 | 88 | 52 | 194 | 215 | 282 |
| BCH OUTPATIENTS * | 114 | 194 | 245 | 987 | 359 | 1181 |
| PERIPHERAL CLINICS | 117 | 203 | 289 | 1308 | 406 | 1511 |
| TOTALS | 394 | 485 | 586 | 2489 | 980 | 2974 |
| | 879 | | 3075 | | 3954 | |

* 1988/89 Figures

TABLE 2
BRISTOL CARDIOLOGY AND CARDIAC SURGERY
1988 STATISTICS

INPATIENTS - BRISTOL CHILDREN'S HOSPITAL

| DHA | ADMISSIONS | | | CATHETERS | | | ULTRASOUND (IP only) | | | CLOSED OPERATIONS | | |
|-------------------------|------------|-----|-----|-----------|-----|-----|-------------------------|-----|-----|----------------------|-----|-----|
| | U.1 | O.1 | Tot | U.1 | O.1 | Tot | U.1 | O.1 | Tot | U.1 | O.1 | Tot |
| SOUTH WEST REGION | | | | | | | | | | | | |
| Gloucester | 16 | 11 | 27 | 8 | 7 | 15 | 8 | 2 | 10 | 5 | 3 | 8 |
| Cheltenham | 7 | 6 | 13 | 2 | 4 | 6 | 3 | 0 | 3 | 2 | 2 | 4 |
| Frenchay Southmead) | 11 | 20 | 31 | 5 | 10 | 15 | 2 | 3 | 5 | 1 | 1 | 2 |
| Bristol & W) | 46 | 70 | 116 | 4 | 30 | 34 | 19 | 14 | 33 | 6 | 6 | 12 |
| Somerset | 20 | 20 | 40 | 5 | 12 | 17 | 13 | 6 | 19 | 5 | 4 | 9 |
| North Devon | 11 | 4 | 24 | 3 | 2 | 5 | 7 | 2 | 9 | 1 | 1 | 2 |
| Exeter | 15 | 22 | 37 | 7 | 7 | 14 | 7 | 14 | 21 | 2 | 8 | 10 |
| Torbay | 7 | 8 | 15 | 3 | 5 | 8 | 5 | 3 | 8 | 4 | 2 | 6 |
| Plymouth | 3 | 1 | 4 | 1 | 1 | 2 | 3 | 0 | 3 | 1 | 0 | 1 |
| Cornwall | 12 | 15 | 27 | 6 | 8 | 14 | 7 | 4 | 11 | 3 | 2 | 5 |
| | 148 | 177 | 325 | 44 | 86 | 130 | 74 | 48 | 122 | 30 | 31 | 61 |
| WESSEX | | | | | | | | | | | | |
| Bath | 16 | 23 | 39 | 7 | 11 | 18 | 10 | 4 | 14 | 2 | 3 | 5 |
| Swindon | 14 | 10 | 24 | 6 | 4 | 10 | 10 | 2 | 12 | 3 | 1 | 4 |
| | 30 | 33 | 63 | 13 | 15 | 28 | 20 | 6 | 26 | 5 | 4 | 9 |
| SOUTH WALES | | | | | | | | | | | | |
| Gwent | 15 | 15 | 30 | 7 | 9 | 16 | 11 | 2 | 13 | 6 | 4 | 10 |
| Sth Glamorgan | 16 | 0 | 16 | 6 | 0 | 6 | 15 | 0 | 15 | 4 | 0 | 4 |
| Mid Glamorgan | 13 | 2 | 15 | 5 | 0 | 5 | 12 | 1 | 13 | 2 | 0 | 2 |
| West Glamorgan | 11 | 6 | 17 | 7 | 4 | 11 | 12 | 2 | 14 | 3 | 2 | 5 |
| Dyfed | 15 | 13 | 28 | 5 | 11 | 16 | 14 | 6 | 20 | 5 | 3 | 8 |
| | 70 | 36 | 106 | 30 | 24 | 54 | 64 | 11 | 75 | 20 | 9 | 29 |
| OTHER | 1 | 2 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 |
| TOTALS | 249 | 248 | 497 | 87 | 126 | 213 | 158 | 65 | 223 | 56 | 45 | 101 |

TABLE 3
BRISTOL CARDIOLOGY AND CARDIAC SURGERY
1980 - 1988 STATISTICS

ADMISSIONS TO BRISTOL CHILDREN'S HOSPITAL - BY REGION

| REGION: | S W REGION | | | WESSEX | | | WALES | | | TOTAL | | |
|---------|------------|-----|-----|--------|-----|-----|-------|-----|-----|-------|-----|--------|
| | U.1 | O.1 | Tot | U.1 | O.1 | Tot | U.1 | O.1 | Tot | U.1 | O.1 | Tot |
| 1980 | 125 | 59 | 184 | 17 | 17 | 34 | 1 | 7 | 8 | 77 | 149 | 226 |
| 1981 | 87 | 94 | 181 | 36 | 22 | 58 | 3 | 3 | 6 | 126 | 119 | 245 |
| 1984 | 95 | 179 | 274 | 23 | 26 | 49 | 28 | 10 | 38 | 146 | 215 | 361 |
| 1985 | 119 | 204 | 323 | 23 | 11 | 34 | 35 | 11 | 46 | 177 | 226 | 403 |
| 1986 | 147 | 205 | 352 | 22 | 10 | 32 | 49 | 28 | 77 | 218 | 243 | 461 |
| 1987 | 148 | 182 | 330 | 39 | 28 | 67 | 63 | 39 | 102 | 253 | 255 | 508 * |
| 1988 | 148 | 177 | 325 | 30 | 36 | 66 | 70 | 36 | 106 | 249 | 248 | 497 ** |

* including 3+6=9 from other regions

** " 1+2=3 " " "

TABLE 4
BRISTOL CARDIOLOGY AND CARDIAC SURGERY
1988 STATISTICS

| DHA | UNDER 1 YEAR | | | OVER 1 YEAR | | | TOTAL |
|-------------------|--------------|-----|-------|-------------|------|-------|-------|
| | New | Old | Total | New | Old | Total | |
| SOUTH WEST REGION | | | | | | | |
| Gloucester | 12 | 23 | 35 | 33 | 115 | 148 | 183 |
| Cheltenham | 12 | 13 | 25 | 8 | 94 | 102 | 127 |
| Somerset | 10 | 30 | 40 | 17 | 180 | 197 | 237 |
| North Devon | 5 | 6 | 11 | 9 | 45 | 54 | 65 |
| Exeter | 20 | 25 | 45 | 40 | 181 | 221 | 266 |
| Torbay | 15 | 12 | 27 | 23 | 111 | 134 | 161 |
| Plymouth | 0 | 0 | 0 | 0 | 8 | 8 | 8 |
| Cornwall | 10 | 21 | 31 | 25 | 171 | 196 | 227 |
| | 84 | 130 | 214 | 155 | 905 | 1060 | 1274 |
| WESSEX | | | | | | | |
| Bath | 9 | 21 | 30 | 24 | 133 | 157 | 187 |
| Swindon | 1 | 9 | 10 | 6 | 48 | 54 | 64 |
| | 10 | 30 | 40 | 30 | 181 | 211 | 251 |
| SOUTH WALES | | | | | | | |
| Gwent | | | | | | | |
| Abergavenny | 3 | 6 | 9 | 15 | 25 | 40 | 49 |
| Newport | 4 | 15 | 19 | 25 | 80 | 105 | 124 |
| West Glamorgan | 9 | 9 | 18 | 31 | 39 | 70 | 88 |
| Dyfed | | | | | | | |
| Carmarthen | 4 | 4 | 8 | 21 | 39 | 60 | 68 |
| Haverford West | 3 | 9 | 12 | 12 | 39 | 51 | 63 |
| | 23 | 43 | 66 | 104 | 222 | 326 | 392 |
| TOTALS | 117 | 203 | 320 | 289 | 1308 | 1597 | 1917 |

TABLE 5
BRISTOL CARDIOLOGY AND CCRDIAC SURGERY
1988 STATISTICS

RESULTS OF SURGERY FOR CONGENITAL HEART DISEASE
(figures for 4 year period, 1984 - 87, in parentheses)

| | PATIENTS | | DEATHS | |
|----------------------|-----------|-----|-------------|--------|
| | | No. | | % |
| <hr/> | | | | |
| OPEN HEART SURGERY | | | | |
| Over 1 year | 99 (350) | 8 | 8.1 (8.0) | |
| Simple | 18 (107) | 0 | 0 | (1.9) |
| Moderate | 58 (184) | 1 | 1.7 | (6.5) |
| Complex | 23 (59) | 7 | 30.4 | (23.7) |
| Under 1 year | 29 (74) | 11 | 37.9 (27.0) | |
| Total Open | 128 (424) | 19 | 14.8 (11.3) | |
| <hr/> | | | | |
| CLOSED HEART SURGERY | | | | |
| Over 1 year | 50 (161) | 1 | 2.0 (1.9) | |
| Under 1 year | 49 (193) | 6 | 12.2 (11.0) | |
| Total Closed | 99 (354) | 7 | 7.1 (6.9) | |
| <hr/> | | | | |
| ALL CASES | 227 (778) | 26 | 11.5 (9.3) | |

OPEN HEART SURGERY IN CHILDREN

