

PAEDIATRIC CARDIOLOGY and CARDIAC SURGERY

BRISTOL ROYAL HOSPITAL for SICK CHILDREN

and

BRISTOL ROYAL INFIRMARY

ANNUAL REPORT -- 1987

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BRISTOL ROYAL HOSPITAL for SICK CHILDREN and BRISTOL ROYAL INFIRMARY

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SENIOR MEDICAL STAFF

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

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
 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

OTHER SENIOR STAFF

Cardiac Catheterisation Laboratory (BCH):

Sister - Mrs Connie Wakely
 Chief Laboratory Technologist - Mrs Kathy Morris
 Chief Cardiac Radiographer - Miss Janet Hill
 Senior 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 Pat Nelis (Congenital Heart Registry)
 BRI - Mrs June White
 Miss Yvonne Philips

INTRODUCTION

Since this is the first formal Annual Report of the Department, some historical facts are included as background information.

The paediatric cardiology service at the Bristol Children's Hospital (BCH) was initially developed in the late 1960s and 1970s, mainly through the efforts of Dr S C Jordan. Closed heart surgery at the BCH and open heart surgery at the Bristol Royal Infirmary (BRI) was initially performed by Mr R Belsey (retired), Mr G Keen and, since 1975, Mr J D Wisheart. Dr H S Joffe was appointed as a second consultant paediatric cardiologist in 1980. In the early part of this decade the South Western Regional Health Authority (SWRHA) adopted a policy to extend adult and paediatric open heart surgery in Bristol to enable the department to comply with its regional role. As part of the planned expansion, the two cardiac catheterisation laboratories at the BRI were to be overhauled (almost completed) and a third suite was established at the BCH, with new biplane angiography equipment in each unit. There has been a steady increase in the surgical throughput and this is reflected in the data presented below. Mr J P Dhasmana was appointed as a third consultant cardiac surgeon in 1985 and now shares the paediatric workload.

In 1984, the Bristol unit was designated by the DHSS as one of the nine supraregional centres for infant cardiology and cardiac surgery in England. Since then there has been a further increase in the numbers admitted to the BCH for assessment and investigations, and to the BCH and BRI for surgery. Children are now referred from the S W Region, and parts of Wessex and South Wales, and beyond.

ADMISSIONS

The number of cardiac admissions to the BCH for assessment, medical treatment, investigation and closed heart surgery between 1980 and 1987 is given in Table 1 and illustrated in Figure 1.

Total admissions have more than doubled, and infant admissions more than trebled, since 1980. This is in keeping with the unit's growing regional role, and its designation as a supraregional centre for infants since 1984. Although admissions from the S W Region appear to have stabilised in 1987, those from Wessex and especially South Wales continue to increase (Figure 2). This trend is even more striking in respect of infants.

Admissions to the BRI are dealt with under Cardiac Surgery.

South Western Regional Health Authority

King Square House 26/27 King Square Bristol BS2 8EF
Telephone Bristol (0272) 423271/428371

file /cc- SGT, JDW, RM, JF
pl



My ref. MAP/JS

Your ref.

Date: 5th January 1989

If you telephone please ask for

Dr. M. A. Pitman

Dr. H. S. Joffe
Consultant Paediatrician
Bristol Royal Hospital for Sick Children
St. Michael's Hill
Bristol BS2 8BJ

Dear Dr. Joffe

Thank you for sending me the report for paediatric cardiology and paediatric surgery for the Bristol Royal Hospital for Sick Children and Bristol Royal Infirmary for 1987.

I have taken the liberty of circulating this widely within the Regional Health Authority as I feel it is important as a follow-up to the funding of regional specialties that we and those involved should be aware of the outcome of the developments which were undertaken.

Yours sincerely,

Dr. M. A. Pitman
Specialist in Community Medicine

CARDIAC CATHETERISATION

The highlight of 1987 was the opening of the new cardiac catheterisation suite in the BCH after many years of planning, as part of the Regional Health Authority programme to expand cardiac surgery. Critically ill babies no longer have to be transported to the BRI for this investigation and the overall management of these patients has been greatly facilitated. The angiography equipment, as planned and managed by the cardiac radiologists, Dr P Wilde and recently appointed Dr G Hartnell, is the most sophisticated available and is often used by the suppliers, Siemens, as a showpiece.

We were delighted that Connie Wakeley (ex BRI) was appointed as Sister in charge of the unit and the rotation of technology staff from the BRI under the control of Chief PMT, Kathy Morris, has worked extremely well. Lynette Jefferies was appointed as Senior Radiographer and settled in very well. Maggie Blake joined the unit as its Secretary and has effectively managed the administration.

The number of cardiac catheterisation procedures has fallen somewhat in 1987 (Table 2). This has undoubtedly been due to the increasing role of two-dimensional echocardiography as a major diagnostic tool in patients with congenital heart disease (see below). On the other hand, the catheterisation laboratory is increasingly being used in selected cases for more complex therapeutic procedures, eg. balloon pulmonary valvulotomy, thus avoiding the need for surgical intervention in a significant number of cases.

ECHOCARDIOGRAPHY

The number of ultrasound studies performed has increased from 610 (224 in infants) in 1985, to 621 (223) in 1986, and 727 (249) in 1987. The diagnostic accuracy of this non-invasive technique is proving sufficient to enable surgical decisions to be made without cardiac catheterisation, especially in severely ill neonates and infants.

The present ultrasound equipment (ATL Mark 6) which was acquired in 1982, largely through charitable donations, is becoming overworked and is now out of date. A new colour flow system with integrated pulsed and continuous wave Doppler facilities is urgently required to permit comprehensive non-invasive investigation of the increasing number of cases. It is paradoxical that modern and sophisticated echocardiographic equipment is available in many District General Hospitals throughout the Region, but not in the supraregional unit for infant cardiology. In addition, the service is being provided in an extremely cramped and inappropriate site and the need for an alternative venue in the Children's Hospital is becoming critical. The establishment of a technician post to support the echocardiography service also requires attention.

The electrocardiographic (ECG) service for cardiac and other patients in the Children's Hospital is provided by the ECG technicians at the BRI and works satisfactorily.

PERIPHERAL CLINICS

During the 1970s, joint clinics with the local consultant paediatricians were established throughout the South Western Region, ie. Cheltenham, Gloucester, Taunton, Barnstaple, Exeter, Torquay and Truro, and in the northern part of Wessex, ie. Bath and Swindon. At the invitation of consultant paediatricians in South Wales, joint clinics were also established in Abergavenny and Newport in 1986 and in Swansea, Carmarthen and Haverford West in 1987. Apart from the obvious benefits of convenience for the families and economy for the host Health Authority, these clinics have an important teaching function for the local Registrars, SHOs and visiting students during their paediatric training in District General Hospitals.

COUNSELLOR

The post of Counsellor in Paediatric Cardiology at BCH and BRI was finally established at the end of 1987 to address the urgent need for emotional and psychological support for older children with congenital heart abnormalities and for the parents of infants or children with such defects. Confrontation with the news of serious heart disease or with the strain of invasive cardiac investigations or heart surgery or, indeed, bereavement can be a devastating experience which requires professional skills for their management. This is the first such post in the country dedicated to this purpose and was made possible through a generous donation from the Bristol and South West Children's Heart Circle for a period of three years and funding from the Supraregional Services budget. Mrs Helen Vegoda was appointed and we look forward to her arrival in January 1988.

SURGERY

The volume and character of paediatric cardiac surgery in Bristol was fairly constant during the 1970s and early 1980s; each year approximately 60 open heart operations were performed in the BRI and 50 closed heart operations in the BCH (Figure 3). In retrospect, some important changes were beginning to take place, in particular the development of surgery for children under one year of age which, for the first time in the early 80s, rose above 10% of all open operations and 50% of all closed operations in children.

Throughout this decade the Regional Health Authority has been implementing a plan of step-wise increases in facilities for cardiac surgery and consequently in the number of open heart operations performed in all age groups, which have more than doubled from 250 to over 500 between 1980 and 1987. This vital development, together with designation as a supra-regional unit for infant cardiac surgery in 1984, and the appointment of Dr Sally Masey and Mr J P Dhasmana a little later, have also led to the doubling of the annual number of paediatric cardiac operations; the proportion of operations carried out during infancy has continued to increase (Figure 4). An important feature of this development has been the emergence of active and constructive collaboration between many disciplines including Cardiology, Cardiac Surgery, Radiology, Pathology and Anaesthesiology; this is reflected in a number of publications and communications from the Department.

A summary of the types of surgery performed between 1984 and 1987 and the results are contained in Table 3. Mortality is attributed to surgery if it occurs within 30 days of the operation. These results are virtually identical to those obtained nationally (as published in the UK Cardiac Surgical Register). We look forward to the continuing development of the Surgical Unit as a whole and to further progress in the volume and character of paediatric cardiac surgery.

BRISTOL AND SOUTH WEST CHILDREN'S HEART CIRCLE

Under the expert guidance of the Secretary, Mrs Jean Pratten, the Heart Circle has given remarkable support since the 1970s to the paediatric cardiology and cardiac surgical departments and, perhaps more importantly, to the many families for whom they cared. Although the list of equipment purchased by the Heart Circle is a long one, the emphasis has always been on providing facilities not readily available from the NHS, such as hostel and residential accommodation for families (the envy of many other units in the country). Of the 24 bed sitting rooms established, 10 are on the Baby Unit at the Bristol Children's Hospital, 2 on the Cardiac Surgery Unit at the Bristol Royal Infirmary and the remaining 10 in close proximity to both hospitals. Recently, the Heart Circle has provided funds for play facilities at the BRI and the extension of the Playroom at the BCH (for the use of all patients and siblings at the hospital). In addition, the personal support given to so many of the parents at times of crisis is widely recognised and appreciated. Support for the Counsellor post has already been mentioned. The Heart Circle is now an integral part of the children's cardiology services in Bristol and has active branches throughout the South West and beyond. We hope this close relationship will continue to flourish.

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COMMUNICATIONS

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TABLE 1. ADMISSIONS TO BRISTOL CHILDREN'S HOSPITAL - BY REGION
(Number under 1 year in parentheses)

REGION:	S W REGION	WESSEX	WALES	TOTAL
1980	184 (59)	34 (17)	8 (1)	226 (77)
1981	181 (87)	58 (36)	6 (3)	245 (126)
1984	274 (95)	49 (23)	38 (28)	361 (146)
1985	323 (119)	34 (23)	46 (35)	403 (177)
1986	352 (147)	32 (22)	77 (49)	461 (218)
1987	330 (148)	67 (39)	102 (63)	508 (253)*

* including 9 (3) from other regions

TABLE 2. CARDIAC CATHETERISATIONS IN CHILDREN - BY REGION
(Number under 1 year in parentheses)

	S W REGION	WESSEX	WALES	TOTAL
1980	(Breakdown not available)			130
1984	156 (62)	32 (12)	24 (19)	212 (93)
1985	180 (53)	19 (12)	28 (19)	227 (84)
1986	195 (73)	22 (13)	40 (22)	257 (108)
1987	141 (46)	31 (16)	48 (24)	222 (86)

TABLE 3. RESULTS OF SURGERY FOR CONGENITAL HEART DISEASE IN BRISTOL (1984-7)

	NUMBER	MORTALITY (%)
OPEN HEART SURGERY		
<u>Over One Year</u>	350	8.0
Simple	107	1.9
Moderate	184	6.5
Complex	59	23.7
<u>Under One Year</u>	74	27.0
<u>Total Open</u>	424	11.3
CLOSED HEART SURGERY		
<u>Over One Year</u>	161	1.9
<u>Under One Year</u>	193	11.0
<u>Total Closed</u>	354	6.9
ALL CASES	778	9.3

FIGURE 1.

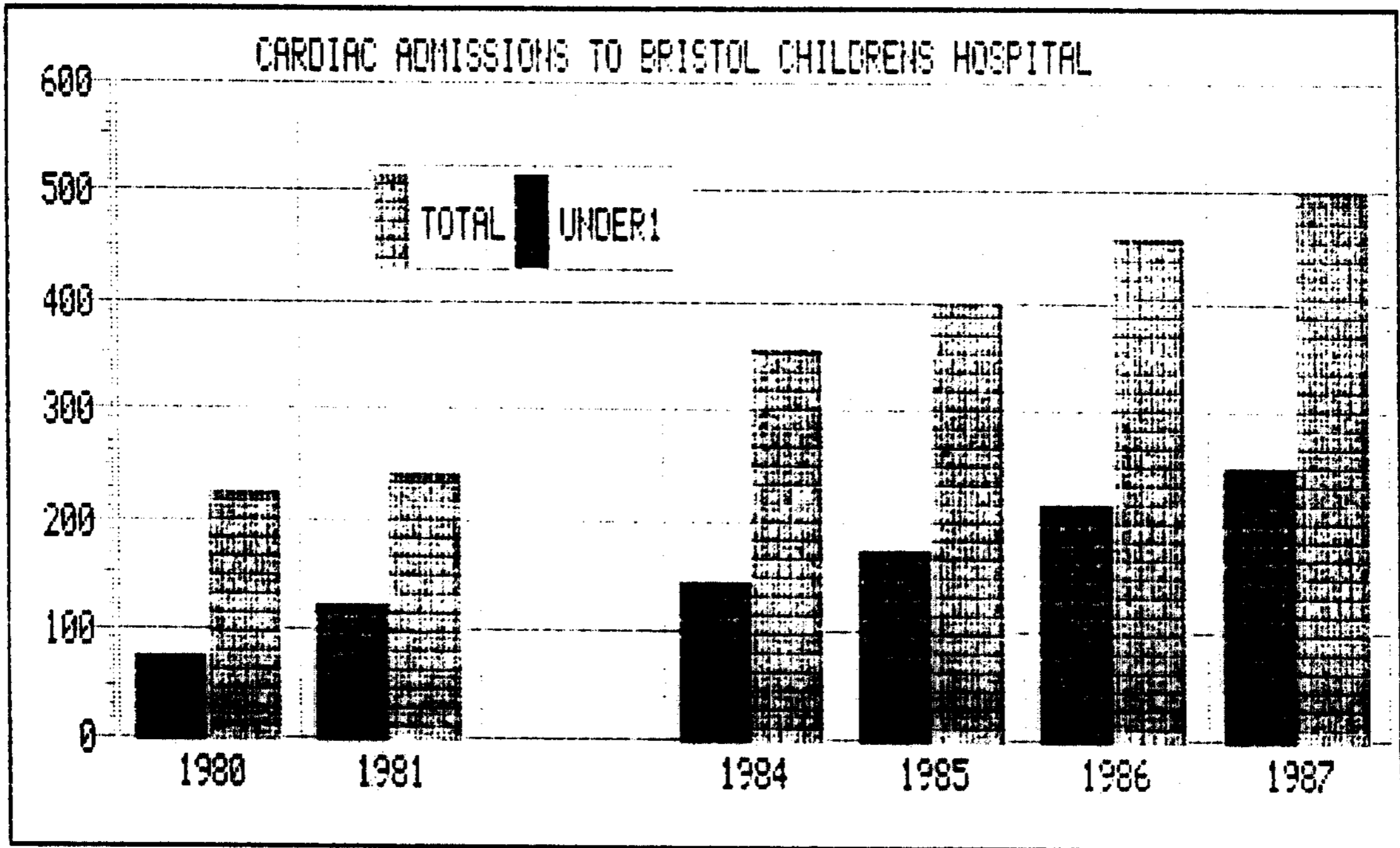


FIGURE 2.

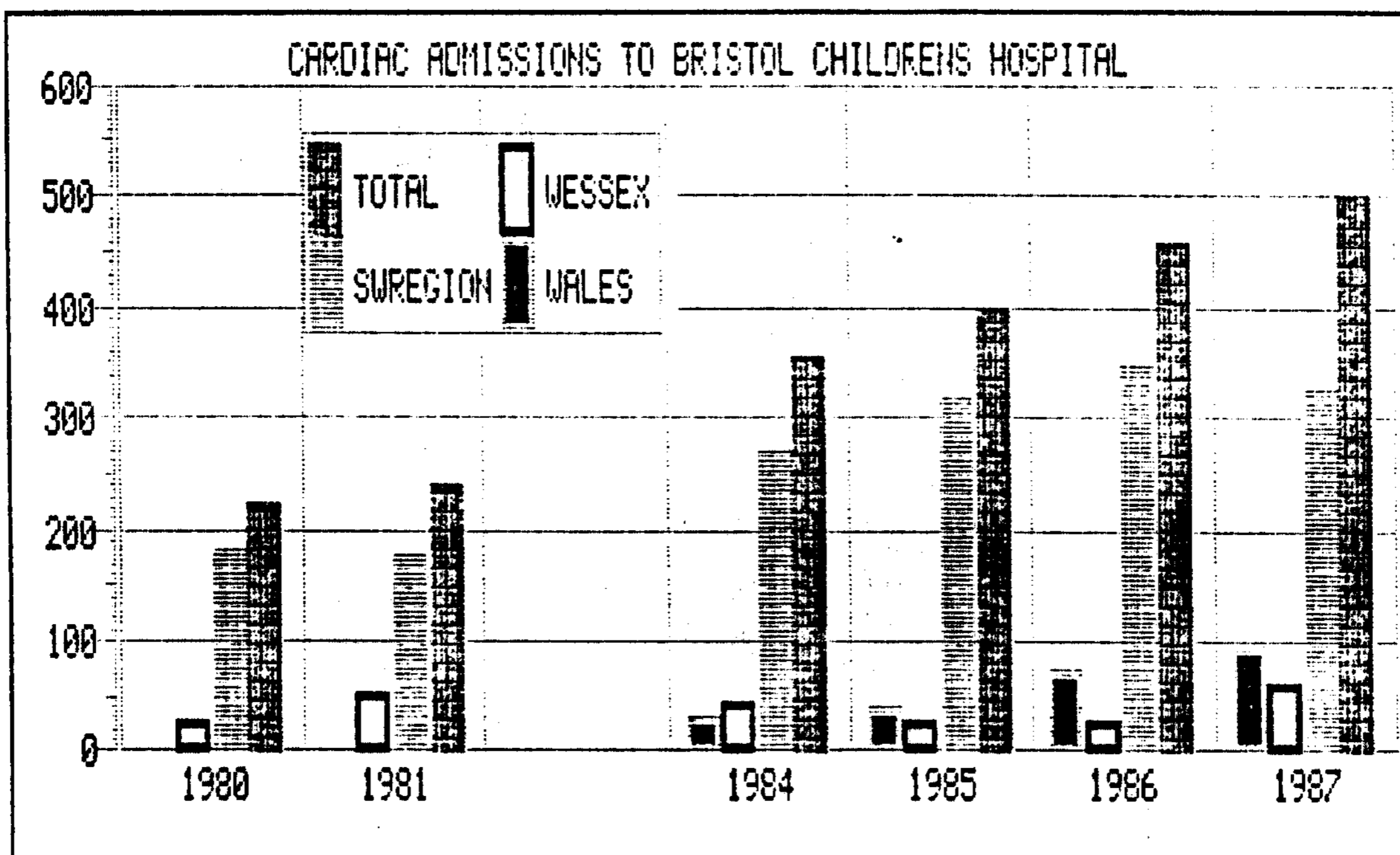
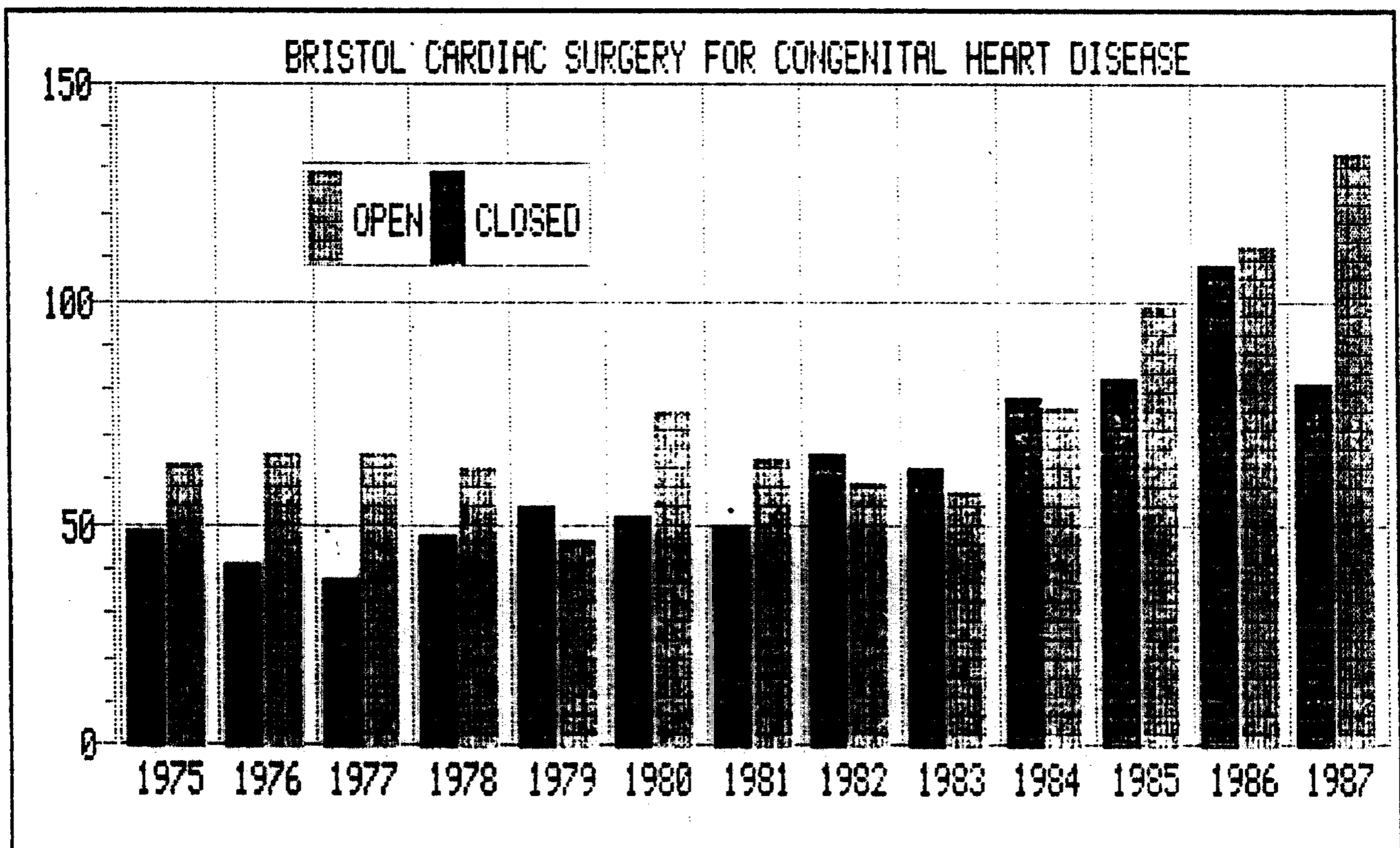


FIGURE 3.



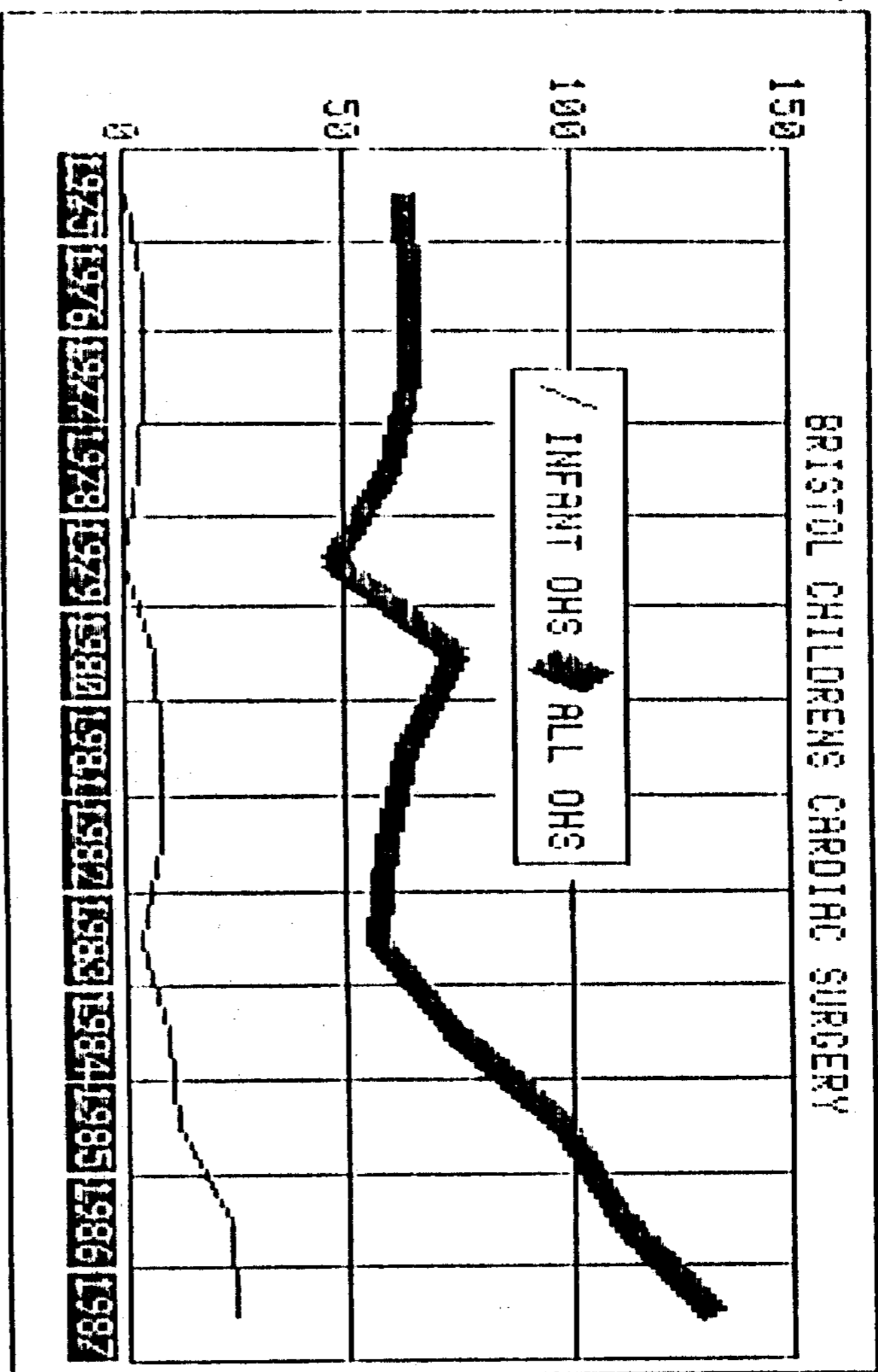


FIGURE 4a. OPEN HEART SURGERY

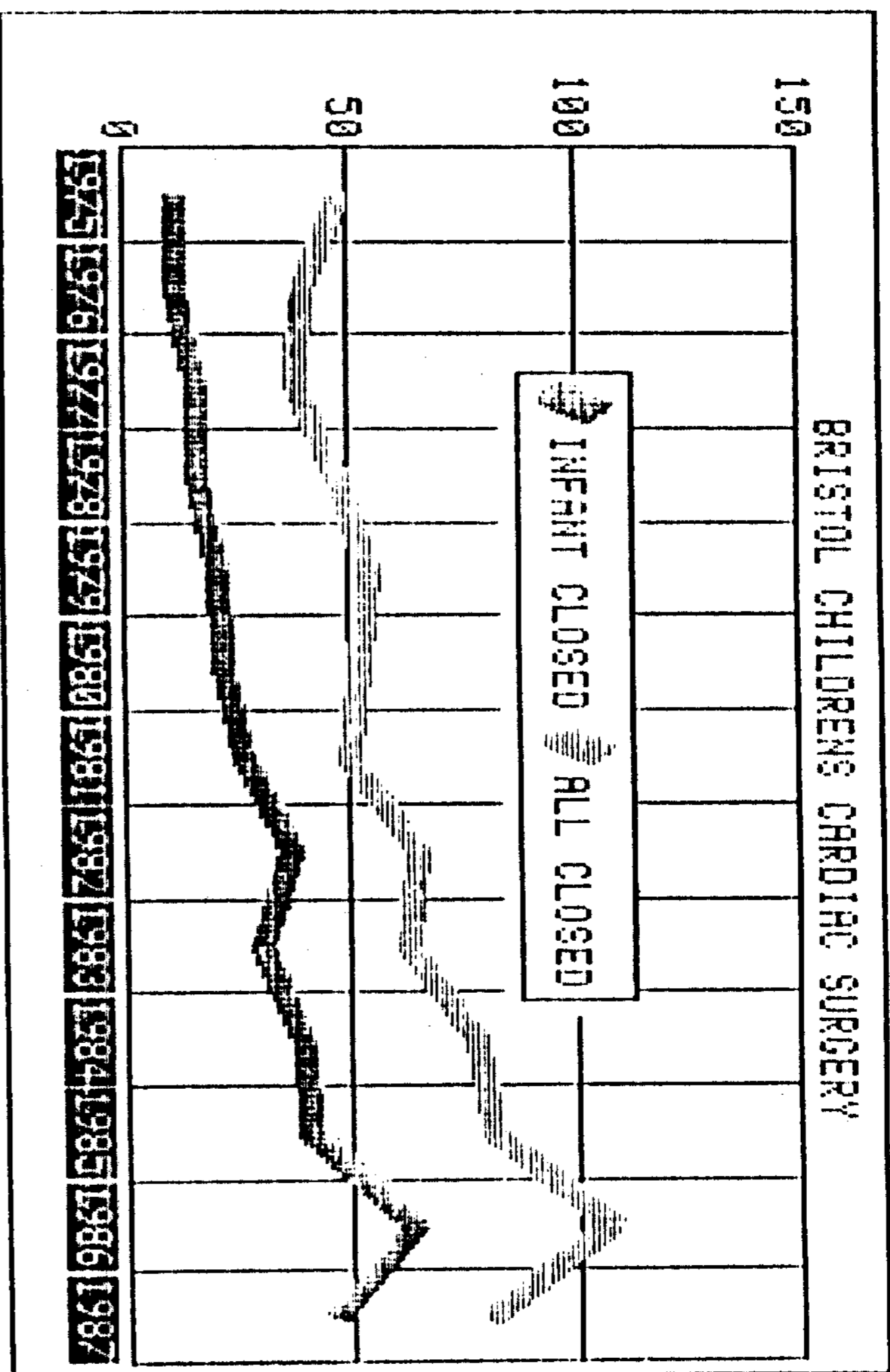


FIGURE 4b. CLOSED HEART SURGERY