A recently published book 'The Heart Club' sheds new light on the beginnings of heart surgery as means of treating previously untreatable diseases. It contains the record of 47 consecutive meetings between 1948 and 1956 in which a team including cardiologists, surgeons, anaesthetists, radiologists and clinical scientists met to plan, review and develop operations for structural heart disease. They took up the task at a time then the heart was a no-go area for surgery. They published full accounts of their clinical work on what we would now call an intention to treat basis. The minutes were rediscovered and are now published with annotations, biographies a full bibliography, and personal account of surviving patients who were amongst the earliest to have surgery for congenital heart disease.

**Keywords:** Congenital heart disease; Heart valves; Cyanotic heart disease; Surgery

### History of Heart Surgery

The history of heart surgery is well known and very well documented but the record is predominately of 'firsts' and early successes. Later accounts are in the form of reflections and reminiscences of great men: it is largely written as a 'Victors History'. A book of rediscovered minutes of a group working in Guy’s Hospital, London gives a quite different perspective. It provides an inspirational description of team work in the era 1948 to 1956. My book 'The Heart Club' based around their work both at Guy’s Hospital and publishing, make one think of the maxim 'Fortune favours the prepared mind' [1].

The medical text books of the early 1940s explicitly discounted surgery on the heart. The basis of this antipathy was undoubtedly related to the overall disappointing experience of operations for narrowed heart valves in the 1920s, and was in fact well founded. It was an experience which closed with Cutler’s paper in 1929 with the subtitle ‘final report’[2]. Cutler summarised the results of the 12 known operations, 10 of them on the mitral valve and seven were Cutler’s own cases. A couple of apparent success in two early operations encouraged the surgeons. Accounts written many years later highlight these as evidence of feasibility but at the time the surgical experience was seen as an unmitigated disaster – hence the ‘final report’. With no further evidence, through the 1930s the teaching became steadily more opposed. James Mackenzie and the ‘final report’. With no further evidence, through the 1930s the teaching became steadily more opposed. James Mackenzie and publishing, make one think of the maxim 'Fortune favours the prepared mind' [1].

The thoracic surgeon Russell Brock took a different view and his doubt of the orthodoxy which he shared privately with his cardiologist colleague Maurice Campbell. They knew Henry Souttar the London Hospital who had done a single operation for mitral stenosis in 1925 [3]. His patient remained alive for some years after Cutler’s 1929 paper; unlike Cutler, who had blindly cut the mitral valve leaflets, Souttar had freed its commissures – a less ‘drastic’ approach. They also knew of the surgery within the heart undertaken by Dwight Harken during the war. Harken had been a visiting fellow and protégé of Brock’s at the Brompton Hospital in 1939. He returned in 1944 to lead a US Hospital. He famously removed bullets and shrapnel from in and around the heart in soldiers injured in the fighting following the D-Day landings. He had 100% survival in 134 soldiers, a remarkable success which he reported at the Association of Surgeons of Great Britain and Ireland [4]. He proved incontrovertibly that manipulating the heart, passing instruments within it, and securely suturing the chamber and great vessels was routinely achievable. And then in 1947 Alfred Blalock worked at Guy’s for a month demonstrating and teaching the systemic to pulmonary artery shunt operation for cyanotic congenital heart disease. The operation was not on the heart itself, but it put heart disease clearly within surgical reach.

In 1948 Brock convened a meeting inviting the cardiologists, anaesthetists, radiologists and the clinical scientist working in the Medical Research Council research unit. At the second of the Club, Campbell was elected chairman and held that position until his retirement in 1956. The early meetings were dominated by organisational aspects and the development of cardiac catheterisation and angiocardiography to guide their operations. When their patients died, and that was by no means uncommon, they studied the hearts and reflected on the accuracy or otherwise of diagnosis, and how appropriate were their operations. As they built up their case experience, they reported them in Guy’s Hospital Reports of which Brock was, conveniently, the editor. They then reported their growing experience in the British Heart Journal of which Campbell, it so happened was editor. When they had reached 100 operations apiece for mitral and pulmonary stenosis, their results were in the British Medical Journal [5,6]. They were also developing their ideas in the laboratory where Donald Ross was studying oxygen consumption with veno-venous cooling and Brock was developing means of preserving homografts.

Brock’s methods were deliberate and tactical and he was aware of the critical importance of team work. In 1951 he wrote: "Intracardiac surgery is not for the lone worker. Team work is essential and I am only too happy to acknowledge that success is due principally to the loyal and unstinted co-operation of my various colleagues who take part with me in this work both at Guy’s and the Brompton Hospital. To give one example, at Guy’s there is a group of some 15 people actively engaged in the work, and as time..."
time passes we find that more and more are drawn into the team” [7].

All the residents and fellows were included the Club and their biographies are recorded in “The Heart Club”. Prominent surgeons and cardiologists from other London hospitals and around the world visited. During this period heart surgery remained blind and largely experimental but with the development of cardiopulmonary bypass, surgery was soon the first resort for structural heart disease. The Mackenzie Lewis era was over and the ‘new cardiology’ had given way to a new mechanistic view of the heart with burgeoning interest in surgery. In 1954 the cardiologist Paul Wood reflected on mitral stenosis in his famous lecture “An appreciation of mitral stenosis” [8,9] saying the trouble with mitral stenosis is – mitral stenosis”.

**Conflict of Interest**

None.

**References**


