

WHEN CARDIOLOGY BECAME A SEPARATE MATTER

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Abstract

The cardiac catheter technique established by Werner Forßmann in 1929 not only introduced the era of modern cardiology, but also led to the identification of this specialist field and its practising doctors, the cardiologists. The intentionally scientifically oriented "Deutsche Gesellschaft für Kreislaufforschung", founded in 1927, acquired a clinical focus with the Commission for Clinical Cardiology thanks to the cardiac catheter cardiologists trained mainly in other countries. Today this society is the German Society for Cardiology, subtitled Cardiac and Cardiovascular Research, with a membership of 5,339 (July 31st 2004). Simultaneously, the impulse for the specialist fields to become independent within the framework of the new advanced educational regulations came into force in 1972 leading to the first branches of internal medicine, cardiology, gastroenterology and pneumology, followed by the establishment of independent departments, clinics and university chairs in cardiology. (At the end of 2003 a total of 3,059 internal specialists in cardiology were working in Germany and there were 393 independent facilities, including 33 university chairs in cardiology.) In addition, 10-14 cardiac centres combining both adult and pediatric cardiology together with cardiac surgery. When setting up intensive care wards, the main impulse also came from cardiology, achieving a totally new dimension when coronary angiography and bypass surgery made it possible to make an exact diagnosis as well as to provide an efficient therapy, right up to interventional methods with acute PTCA in recent cardiac infarction. The necessary step towards informing the population led to the establishment of the German Heart Foundation in 1979 with a membership of 46,795 (December 31st 2003) and a scientific board of 436 highly qualified cardiologists. The development presented here would not have been possible without the cardiac catheter.

Seventy-five years ago Werner Forßmann proved in this hospital, on himself, that scanning of the human heart through a vein could be safely carried out without pain and while fully conscious. Great tribute has already been paid to the significance of this important discovery for cardiology and heart surgery, as well as for the further development in left heart scanning to coronary angiography and interventional methods.

Today I should like to draw your attention to a completely new development which, however, would

not have been possible without the cardiac catheter. This new technique has not only initiated the era of modern cardiology, but has also led to the *identification of this specialized subject* and to the doctors working in this field of expertise, the *cardiologists*. They had to gain their expertise training for the most part in foreign countries, mainly the United States, and on their return, they put it into practice often under great difficulties. I learned the cardiac catheter techniques in Stockholm under the guidance of Lars Werkö, Gustav Nylin and Edgar Mannheimer. Fortunately enough I was called back to Munich in the autumn of 1953 by Gustav Bodechtel, to set up the first cardiac catheter laboratory here, where we routinely performed cardiac catheterization since February 1954. One year later, this was complemented by angiocardiology using a large-scale Elema roll film changer. From this laboratory, among others, Konrad Bühlmeier moved to the Pediatric Clinic and became one of the pioneers of pediatric cardiology, which I will not go into any further.

The young cardiologists not only brought with them the expert knowledge from America but also got to know the "American way of life". They felt unappreciated at home and wanted to break down antiquated structures. In this they were supported by their cardiac surgery colleagues, whose own success depended on the exact cardiac catheter diagnosis.

This all began in their own specialized scientific society. The *German Society of Cardiovascular Research* was the oldest cardiac society in Europe. Already founded in 1927 it was open to all doctors interested in the cardiovascular system. In the deliberately scientifically oriented society, the theorists dominated. They saw themselves confronted with a new generation of cardiologists emancipated by the cardiac catheter, and seeking their own representation in Germany, if possible with their own society. Such a tendency even existed among the ranks of their own clinicians. This would have meant a division into two societies! The German Society of Cardiovascular Research, steeped in tradition, should however continue. An integration of two totally different fields of cardiology, and especially the connection between theoretical and practical disciplines was in fact unique in the world. Our intention was to strengthen the clinical matters, i.e. creating a clinical focus of or in the society at the time. Not wanting to turn the existing concept inside out, we thought about setting up a committee for clinical cardiology, in which clinical matters could be discussed. In connection with this, however, we also considered

the continuous presence of the society throughout the year, i.e. establishing a powerful office available the whole year. It would be able, particularly with the rapid development of our young specialized field, to react promptly and competently, not only on a scientific level, but also to aid the further development of cardiology in our country. The stronger emphasis on clinical cardiology should also be expressed in an additional clinically oriented scientific meeting.

Then Franz Loogen was elected to the Executive Board and made the first approaches, always accompanied by the fear of a threatening division of the society. He had a difficult position and encountered many obstacles. Eventually, in the members' meeting of May 5th in 1971, under the chairmanship of H. Reindell, it was possible to achieve the establishment of a Panel for Clinical Cardiology. It took, however, some time before the *Committee for Clinical Cardiology*, under the chairmanship of Franz Loogen, was finally set up. It gained rapidly in importance and represented the concerns of clinical cardiology in our country, also drawing up guidelines. At the first clinically oriented meeting, we rearranged – without a great deal of logistical preparation – the already planned coronary meeting in Frankfurt/Main in the autumn of 1974 thanks to the cooperation of Martin Kaltenbach. This was the start of a tradition – the autumn meetings in our society. The next meeting was held a year later in Munich. The society continued to flourish and is now known as the *German Society for Cardiology*, subtitled *Cardiac and Cardiovascular Research*. It has 5,339 members (July, 31st 2004) and is integrated in the European Society [2, 3, 6].

Parallel to this development, a new set of *medical specialist regulations* was being prepared, to take into account the increasing specialization in internal medicine, without questioning the main field, also with regard to EU conformity. At that time the relevant speaker in Germany for both was Prof. Hans-Joachim Sewering, who later became President of the Federal Medical Council. In order to maintain the unit of internal medicine, he planned to integrate the specialized disciplines in the internal advanced training, i.e. internal medicine as a prerequisite for the specialist. The first step was made by cardiology with the cardiac catheter laboratory, for which experts were needed. Sewering, who was working near Munich as a lung specialist, often brought his patients to the cardiac catheter laboratory, assuring himself of the progress of this new method and especially its significance for cardiac surgery. He therefore chose cardiology as the first specialist field to be included in his new specialist concept and asked me to put together relevant suggestions as well as – and this was of fundamental importance for the further development of our field – requirements for special departments with authorization to provide training. In this way, he wanted to promote the establishment of specialized departments in large clinics at the same time! Since the request to our society resulted in no progress, I asked Franz Loogen for his help, which he immediately gave. We met several times, also with Sewering, and worked out the relevant fundamental principles for future cardiologists, job outline, a catalogue of specialists – in which cardiac

catheter numbers were of course included –, but also the requirements for future places of training. After years of preparation, the new Specialist Regulations came into effect in 1972, i.e. Specialist for Internal Medicine, with three branches – cardiology, gastroenterology and pneumology. On March 31st 2003, a total of 3,059 internal specialists in cardiology were working in Germany [1].

This development was also taken into account by the *German Association of Specialists for Internal Medicine*, who founded the *Cardiology Section* to back up future cardiologists in career questions. Due to our involvement in drawing up the new regulations, we were asked by the association to put together the relevant documents to establish the new section. Later, this was divided into the group of free practising cardiologists and those working in hospitals (BNK or ALKK).

Efforts to establish independent *cardiology departments or clinics*, as designed by the new regulations, proved to be difficult. We were again fortunate to find the then forward-looking municipal hospital in Munich planning to integrate the arising specialization without interfering with the existing main fields of expertise. In this development too, cardiology was first in line. When one of the two main medical sections in the Hospital “Rechts der Isar” was to be newly occupied, a cardiologist was specially selected to perform the internal medicine for the hospital. At the same time he was to set up the modern cardiology department, including a cardiac catheter laboratory to be used by the whole communal hospital area in and around Munich. At the beginning of 1960, a further cardiac catheter laboratory was able to be set up in Munich which became the crystallization point of this new concept, to be followed by other specialized departments. The road towards cardiology becoming independent in the form of independent facilities, i.e. departments, clinics and university chairs in cardiology was a long one, but it is now an integral part of the German university and health planning system. At the end of 2003 there were 393 independent facilities [3], including 33 university chairs in cardiology.

The *cardiac centres* occupy a special position, uniting cardiac surgery and cardiology (usually adult and pediatric cardiology) under one roof. The reason for setting up these centres originally was the mental trauma caused by the long waiting-lists for cardiac surgery, which should shake up politicians with the motto “Death on the Waiting-List”. The blame was falsely assigned to the cardiac surgeons. There were just too few cardiac centres – at the time only 27. I experienced myself how Prof. Rudolf Zenker suffered under this accusation until he took it into his own hands, outside his own clinic, to set up an additional cardiac surgery facility in Munich. His primary plan to establish a centre through private initiative failed. He found support in the former Bavarian Prime Minister Alfons Goppel, who made a Red Cross hospital with sufficient funding for the relevant alterations available. The original concept of a purely cardiac surgical clinic was rapidly overturned in favour of a centre which, alongside cardiac surgery, combined both adult and pediatric cardiology. The German Cardiac Centre, later the DHZ Munich, successfully began its activities in 1974

and went on to initiate a series of similar centres in Germany, independent of university clinics or communal hospitals, such as the Cardiac Centre of North-Rhine Westphalia in Bad Oeynhausen which started in 1985, followed by the Cardiac Centre in Berlin. In the meantime there exist, strictly speaking, about 10-14 centres [1] exist.

Also, when setting up *intensive care wards* main impulses came from cardiology, firstly often planned as cardiological observation wards, particularly with regard to overview heart attacks, dangerous cardiac dysrhythmias, and severe cardiac insufficiencies. This changed overnight when coronary angiography and bypass surgery made it possible to diagnose exactly and provide an efficient therapy for coronary heart diseases including heart attacks, right up to the interventional methods including acute-PTCA in recent myocardial infarction. Thus, cardiology achieved a totally new dimension. It became a public matter, with politicians and especially the media pouncing on it. It was no longer only about patients, but rather the whole population felt concerned and confused, and wanted to know all about it. While it had been a natural occurrence for many years in other countries that professors, scientists and doctors would turn to the public to present their problems and new scientific knowledge, not being afraid to express themselves in common terms, in Germany it was frowned upon and considered "not appropriate" at the time. Thus, this most important instrument of informing the public was left to medical outsiders, as the numerous dubious articles in magazines, newspapers and media showed, with only a few exceptions such as the "Sprechstunde" by Dr. Antje Kühnemann, or the "Praxismagazin" by Mohl.

That was one of the main reasons why in early 1979 5 cardiologists, 1 pharmacologist and 1 cardiac surgeon got together in Frankfurt/Main to found an organization to bridge the gap between doctors and patients/public, like the Heart Foundations in other countries, which exist alongside the specialist societies. The result was the German Heart Foundation (Deutsche Herzstiftung) with Prof. Franz Gross as its first Chairman. It rapidly became established and recognized through its then still unknown doctor-patient seminars, a Heart Week, a telephone help line, its own magazine and representation in the media. In the

meantime, the foundation has 46,795 members (December 31st 2003). The German Heart Foundation has 436 highly qualified cardiologists, mostly professors, on its scientific board, working on a voluntary basis [4, 5].

The development in Germany presented here would not have been possible without the cardiac catheter, which led to a new definition of cardiology throughout the world. Particularly in the USA, but also in Europe and Asia, vast and influential cardiological organizations were established with an enormous scientific health policy and economic power. This is also demonstrated by the recently held Congress of the European Society of Cardiology (ESC) with 25,000 participants. An example of the recognition of German cardiology is the transfer of the presidency of the European Society to two German cardiologists: Franz Loogen and his former pupil Günter Breithardt. Despite this rapid development, independence does not mean separation from the parent field of internal medicine, in which the specialist fields are still integrated, also with regard to multimorbidity, i.e. the diversity of disease in older people, which represents the main contingent in cardiology.

André Cournand once said: Werner Forßmann put the key in the lock, we – and with that he meant himself and his colleagues – turned the key and – one can add – many others pushed the door open!

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