

Börje Walldius—In Memoriam

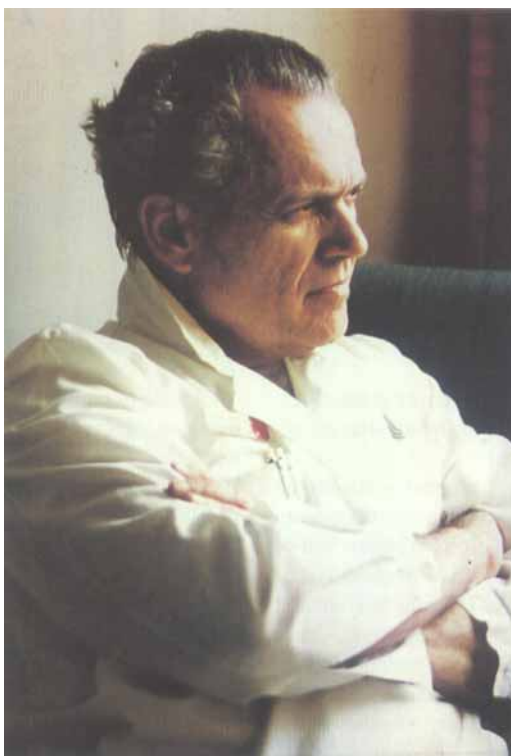
Börje Walldius passed away February 20th, 1998. He was born in 1913 in Kristianstad, a town in the southern part of Sweden. After finishing college in 1932, he studied medicine at the University of Lund and received his medical degree in 1942. Thereafter followed some years of training in radiology, general surgery and orthopedic surgery at various hospitals in Sweden. His interest brought him in 1949 to the Norrbacka Institute in Stockholm, at that time the orthopedic clinic of the Karolinska Institute, where he stayed until 1959. In 1960, he was temporarily Professor of Orthopedic Surgery at the University of Gothenburg. He then returned to Stockholm to become Assistant Head of the Orthopedic Department of St. Göran's Hospital, working there until his retirement in 1978. Even then, he continued to have a very active private orthopedic practice for a long time.

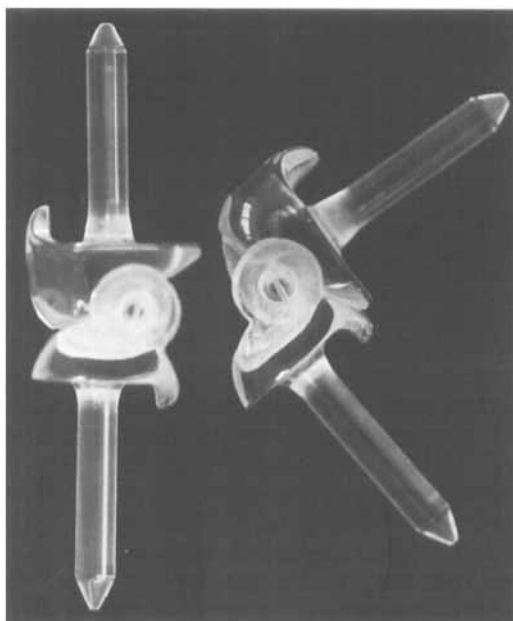
The fame of Börje Walldius is firmly related to his pioneer work in constructing a total knee-prosthesis. This device was presented in his thesis in 1957: "Arthroplasty of the Knee using an Endoprosthesis" (*Acta Orthopaedica Scandinavica, Supplementum* 24). Up to that time, several methods had been tried to treat painful deformities of the knees. Usually interposition of fascia lata grafts was used, but the results were not good, particularly not after some time. Walldius was influenced by the preliminary good results of the Judet hip prosthesis which showed satisfactory tissue compatibility. Therefore he developed, after biomechanical studies, his total knee-prosthesis of the same acrylic material. The tibial and the femoral parts were locked together with a stainless steel rod to form a hinged joint, allowing 90° flexion from the straight leg position. In his thesis,

Walldius presented 32 operations in 26 patients, thus 6 patients had operations on both knees. The results were remarkably good: in 24 of the cases painfree knees and restored walking ability occurred. This progress in knee surgery immediately became internationally recognized and, for some decades, Börje Walldius was probably the most internationally well-known Swedish orthopedic surgeon. He was invited to orthopedic institutions all over the world to speak and demonstrate his method. Many orthopedic surgeons from abroad came to Stockholm to learn how to use his endoprosthetic replacement of the knee.

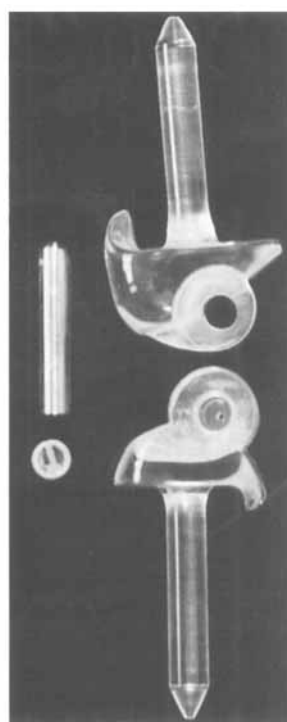
Throughout the years following the first presentations of the prosthesis, Walldius continued to develop the prosthesis. Details were changed in the form and a prosthesis in metallic material, of the same hinged model as before, appeared. Thus his work became the basis for the evolution of knee-endoprosthetic engineering.

Looking back, it is interesting to remember that in Sweden his work was initially received with some reservation. Professor Henning Waldenström, for instance, considered that it was injudicious to put in so much foreign material in the body as the Walldius prosthesis did. However, I found it very useful, because of its size, in reconstructions after resection of epiphyseal bone tumors, e.g., giant cell tumors. An explanation of the Swedish reservation may be that Börje Walldius in his work was somewhat of a lone wolf. He did his studies together with technicians, but trained no medical "disciples". Furthermore, his intense temperament sometimes led him into conflicts. He often attended national meetings, also at a high age, presenting stubborn views, particularly against





The Walldius prosthesis (1957).



the use of bone cement. At two orthopedic meetings, his keen involvement resulted in heart attacks, although he eventually recovered.

When writing this obituary, I am glad to inform the reader that there is now a unanimous appreciation in Sweden of the pioneer work of Börje Walldius and of his person. When the new Museum of Medical History in Stockholm was opened in 1996, he was invited to participate in its organization. He was given a stand of his own, in which he exhibited his endoprostheses and their prototypes with great enthusiasm. In 1997, Börje Walldius was elected Honorary Member of the Swedish Orthopedic Association. Internationally, he received further recognition. In 1996, an abridged version of his thesis was published as *The Classic* in the journal *Clinical Orthopaedics and Related Research*.

Outside of medicine, Börje Walldius had two main interests, sports and music. The former was seen when we went together several times to watch the Final of the Swedish Championship in Bandy, which is held in February each year, outdoors. After this “cup of tea” in our spare-time, a warm cup of tea was served alternately in our respective homes. As for his music interests he could sometimes be found in a small room in the cellar of the Norrbacka Institute playing the violin when he put off his work. Börje was a man of warm feelings, a good friend and a faithful advocate of his patients.

Ulf Nilsson