

Presentation of the 1993 Ian Donald Gold Medals

For the first time, two Ian Donald Medals were presented at the 1993 Meeting of the International Society of Ultrasound in Obstetrics and Gynecology. Professor

Manfred Hansmann was awarded the traditional Ian Donald Medal and Martin H. Wilcox received the new Ian Donald Medal for Technical Development.



Manfred Hansmann receives the traditional 1993 Ian Donald Gold Medal from Stuart Campbell



Martin Wilcox receives the 1993 Ian Donald Gold Medal for Technical Development from Lawrence Platt

Presentation of the Ian Donald Gold Medal to Manfred Hansmann

Following Alfred Kratochwil and Stuart Campbell, the International Society of Ultrasound in Obstetrics and Gynecology has chosen as recipient of this year's Ian Donald Gold Medal another pioneer of ultrasound in obstetrics and gynecology who was not only involved with the early development of sonography in our specialty, but who has also continued to make important contributions ever since.

By 1968, Manfred Hansmann had started to work with diagnostic ultrasound in the Department of Obstetrics and Gynecology at the University of Bonn. In 1971 he became the head of the first Ultrasound Laboratory in Germany. Having written a thesis on ultrasound cephalometry and thorax measurements, he was appointed Lecturer, and constructed the first charts in Germany of fetal weight estimations from abdominal and head measurements. It is important to realize that these tables, which are taken for granted and which are incorporated into machines for automatic print-out today, all had to be worked out from very diligent studies of images which had little similarity to today's beautiful gray-scale sonographic pictures. Manfred Hansmann, however, was not satisfied with measurements alone, and soon realized the potential of distinguishing between misdated pregnancies and actual growth-retarded fetuses. Figure 1 is a picture he presented in the early 1970s in which two fetuses at 38/39 weeks of gestation were compared. The upper one is a dystrophic fetus with a biparietal diameter of 9.6 cm and a transverse abdominal diameter of 6.8 cm and the lower is a macrosomic fetus from a diabetic mother with an identical biparietal diameter of 9.6 cm and a transverse abdominal diameter of 12.4 cm. It must have been very satisfying for him in

those days when he witnessed that his predictions from the measurements were in fact confirmed, with the first fetus weighing 2580 g with a body length of 47 cm and the second one 4480 g with a body length of 52 cm.

Manfred Hansmann was appointed Professor in 1978 and became Chief of the First Division of Prenatal Diagnosis and Therapy in Germany at the University of Bonn in 1984. He is still the Director of this outstanding faculty, where he and his staff see thousands of patients every year.

Manfred Hansmann was one of the first to realize the potential of ultrasound in obstetrics for screening, provided that good referral centers and follow-up procedures are available. Based on his unique pioneer position in Germany, he was able to convince the policy makers that two ultrasound screening examinations should be funded by health insurance for every pregnant woman wishing to make use of it. As a result, the maternity care regulations in Germany implemented a screening scheme on October 31, 1979, that provided two ultrasound examinations, one between 16 and 20 weeks and another between 32 and 36 weeks for the entire population of pregnant women. The proposed mass screening scheme found amazing acceptance within a very short period of time. Hansmann then went on to develop a multiple-level concept of referrals in which any screening examinations with suspicious findings were referred to level II centers in practices or hospitals, and, where necessary, to level III centers for special procedures such as cordocenteses or complicated management protocols. The number of cases seen by these centers, such as the one in Bonn, increased dramatically as a consequence of this scheme, leading to an enormous pooling of experience in those

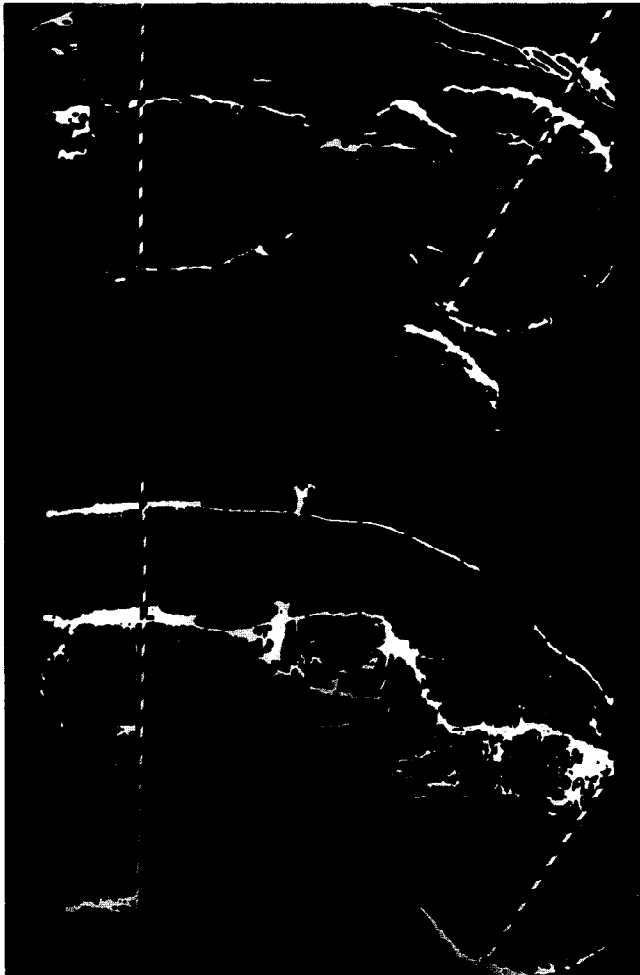


Figure 1 Ultrasound pictures from the early 1970s where two fetuses at 38/39 weeks' gestation are compared. The upper one is dystrophic (small for gestational age), the lower one macrosomic due to maternal diabetes

places. Although there has never been a randomized study in Germany to prove the benefit of the scheme, the increase of referrals for specific malformations, such as those of the fetal urinary tract or the neural tube, act as very convincing indirect evidence that this scheme is working. It must be very gratifying for Manfred Hansmann to see that the gestational ages at which malformations are observed in the centers are being recorded earlier and earlier – a fact that is currently provoking much debate at the official level to expand the screening scheme. It has been proposed that the old system, based on two examinations, should be replaced with a more 'up-to-date' scheme with three examinations, one being around 10 weeks, the next at 20 and the third at 30 weeks of gestation. It was clearly due to the special personality of Manfred Hansmann that this ultrasound screening program, which put a financial burden on the insurance medical system, could nevertheless be established nationwide in Germany.

Hansmann never considered diagnosis of malformations and other complications during pregnancies to be the end-point of sonography in pregnancy, and always kept a keen eye on therapy. Because he had access to real-time ultrasound machines at an early stage in his

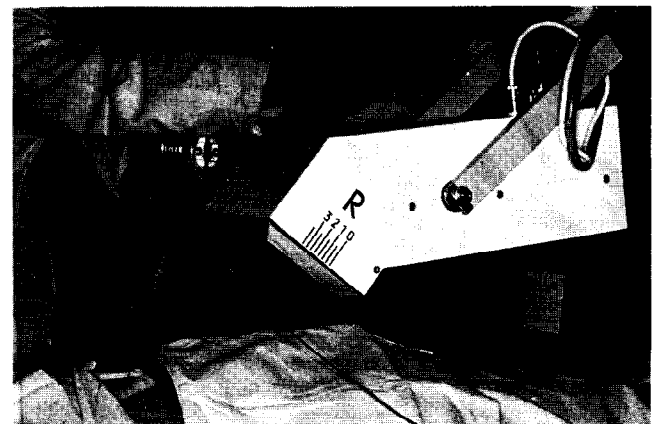
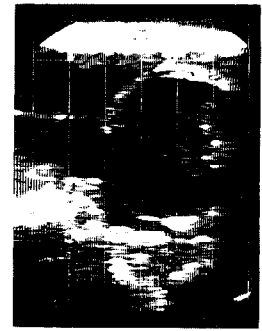
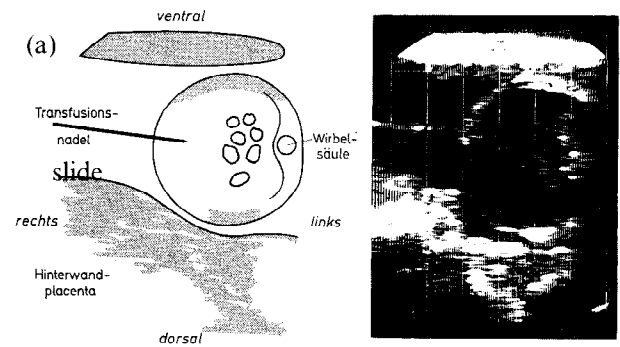


Figure 2 Hansmann introduced the concept of ultrasound-guided intrauterine transfusions in the early 1970s. (a) Graph from the original publication in 1972; (b) intraperitoneal transfusion under real-time ultrasound guidance

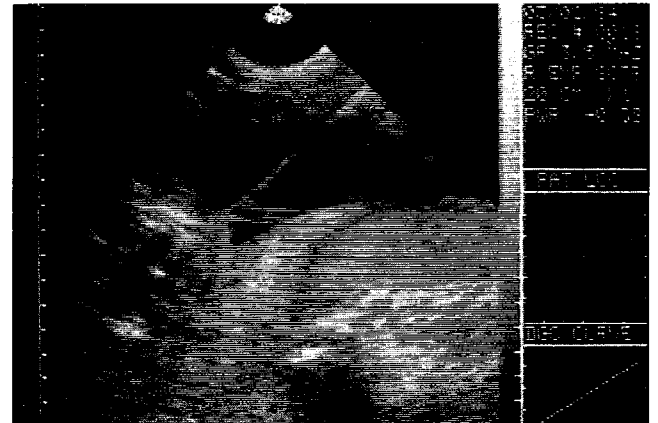


Figure 3 Intracardiac puncture under ultrasound guidance

career, by the beginning of the 1970s he had already experimented with this modality for intrauterine transfusions which at that time were still carried out under X-ray control with contrast media. In 1972, he published his findings on performing transfusions under continuous real-time ultrasound guidance (Figure 2) in the German literature, and at this point realized that it would become the future methodology. Inspired by the fact that fetal blood sampling was only possible under fetoscopic control with its inherent higher complication rates, he also courageously pioneered the technique of Intracardiac puncture under ultrasound-guided intracardiac puncture. This was based on the concept that

this technique was also used in newborns, when no other access to the circulation was possible (Figure 3). Hansmann's center in Bonn is now one of the largest facilities for cordocenteses in Europe, illustrating the rapid development in this field.

The list of achievements of Hansmann in the area of ultrasound is extensive and only a few of the highlights can be mentioned here. He is on the Editorial Board of journals such as *Fetal Diagnosis and Therapy*, *Prenatal Diagnosis*, *Ultraschall in der Medizin*, and is Editor of *Ultraschall in Klinik und Praxis*, and *Ultrasound in Obstetrics and Gynecology*. He has edited three books, is the author and co-author of more than 200 publications and, together with Hackelöer and Staudach, wrote the *Textbook and Atlas of Ultrasound in Obstetrics and Gynecology* which has been reprinted five times in Germany and was translated into English and Japanese. Currently, he is working with Hackelöer, Staudach and Holzgreve on a new edition of this very successful book.

He has received almost all the important awards in the international arena of ultrasound in obstetrics and gynecology, including the Pioneer Award from the World Federation of Ultrasound in Medicine and Biology. He has been an Honorary member of the American Institute of Ultrasound in Medicine since 1987, was President of the International Fetal Medicine and Surgery Society, received the Maternity Award of the German Society of Perinatology, was President of the German Society of Ultrasound in Medicine and the first President of the Society for Prenatal and Obstetric Medicine in Germany. He is currently Vice-President of ISUOG and the only award that was still missing from his very impressive list of achievements was the Ian Donald Medal. ISUOG therefore salutes Manfred Hansmann's many outstanding contributions to our specialty by awarding him the Ian Donald Gold Medal.

W. HOLZGREVE

Presentation of the Ian Donald Medal for Technical Development to Martin H. Wilcox

Martin H. Wilcox was born in 1940 and obtained a BSEE from the Moore School of Electrical Engineering at the University of Pennsylvania in 1966. Marty's career focused on many interesting areas in engineering. His first involvement with clinical product lines was when he was with the Department of Radiology at the University of Pennsylvania Hospital. Marty helped physicians with his expertise for the special purpose of testing digital computers used in radioisotope computer tomogram scanning. This introduction to electronics in the hospital environment paved the path for Marty's subsequent work with United TeleControl Electronics and Penura Corporation. During his tenure with these two corporations, he was responsible for the development of all electronic portions of the hand-held, battery-operated, Doppler ultrasound diagnostic instrument. In addition, he worked on automatic blood pressure measuring instruments and portable screening audiometers.

Marty subsequently became the senior design engineer and first non-principal employee of the Unirad Corporation, which later became Technicare, a Division of Johnson and Johnson. From his early days in 1972 on the campaign, Marty was involved in designing the product line for the initial echocardiographic static B scanning instruments. In 1972, Marty became the President, Treasurer and responding Co-chairman of the board of Advanced Diagnostic Research Corporation (ADR), later known as ADR Ultrasound. In this capacity, Marty designed a unique linear array, real-time B scanning machine for obstetrics. This, in actuality, became a milestone for the advancement of ultrasound

in the field of obstetrics, from the early days of Ian Donald, for whom this illustrious award was named, to portable real-time ultrasound machines.

Major advances have occurred in the technology of ultrasound devices. Marty's pioneering development of the linear array portable ultrasound machine brought to the clinician an instrument that was technically simple to use and also logistically easy to maneuver because of its portability. It also opened up the prospects of studying fetal movement and behavior, culminating in the development of the biophysical profile and echocardiography. The use of this instrument was clearly the forerunner of the great advances of ultrasound in our field at a time of a debate of whether real-time ultrasound could be comparable to statistic scanning machines. These advances in instrumentation became monumental. Marty's work with the development of the first linear sector machine further contributed to the use of these devices in the obstetric and gynecological patient. In 1984, Marty left the field of diagnostic ultrasound as a result of the sale of his company. He continued to work with ultrasound in underwater scanning instrumentation.

The International Society of Ultrasound in Obstetrics and Gynecology is extremely pleased to award the first Ian Donald Medal for Technical Development to Martin H. Wilcox for his major and monumental contributions to the technical development of ultrasound in obstetrics and gynecology.

L. D. PLATT