
Intrapartum Ultrasonography for Labor Management

Antonio Malvasi
Editor

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 Springer

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To my wife, Elena, and my children, Mariaelena and Vito Maurizio, who, of all that walk the earth, are most precious to me: They are the reason I am here. They have always been there for me and have never doubted my dreams, no matter how crazy they might be.

Preface

Ultrasound has revolutionized the traditional midwife, and semiotics in particular gave a dignity to the unborn child, who is now framed as a patient. However, the main interest has been on ultrasound fetal malformations and fetal growth, whether normal or pathological, while little interest has been directed to the delivery event.

Indeed, although the birth is a common phenomenon, few technologies have been developed for the monitoring of labor. This phenomenon contrasts with everyday reality. In fact, for example, although fetal distress represents 1–2% of deliveries, it can be monitored with different instrumental techniques (cardiotocography, pulse oximetry using Stan®, pH-metry), dystocia affects about 40% of the deliveries but it is still diagnosed manually, as it was in 1700.

Intrapartum sonography is a relatively new technique; it adds to what is felt by the fingers as the eye can see objectively the commitment, the descent, and the rotation of the fetal head in the birth canal. This makes it possible to follow the labor in a more objective view by midwives and enables early detection of labor dystocia, allowing timely intervention and reducing maternal and fetal complications. On the other hand, an objective evaluation of labor reduces operative deliveries based on a presumptive diagnosis of dystocia, provides a documentation of labor developments, and enables operators to lower exposure to possible litigation in case of complications that bring charges of malpractice. A new ultrasonography area, intrapartum obstetric ultrasound, has been documented by a growing number of scientific articles that increase the literature. In fact, it is forming a scientific level, a real “pelvimetric ultrasound,” that does not replace but strongly supports pelvimetry by providing clinical support of objectivity and by showing the mechanisms of parturition in occipito anterior, posterior, and transverse presentations. In the near future, the literature will be subject to an inevitable revision of the results obtained from the classical clinical symptomatology alone. This text, in the authors’ opinion, is easy to consult and offers practical support to those who operate and work in the delivery room and attempt to better diagnose physiological from pathological labor and to reduce the inevitable risks involved in the complex phenomenon that is childbirth. Furthermore, our work fills a gap in publishing today on a topic of considerable practical interest that we hope will inspire the attention it deserves.

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