Twin-to-Twin Transfusion Syndrome

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Twin-to-twin transfusion syndrome (TTTS) is a major complication of monochorionic pregnancy. While in absolute terms it is uncommon, it accounts for a significant proportion of the total morbidity and mortality seen in monochorionic pregnancies. This condition leads clinicians to manage monochorionic and dichorionic pregnancies differently. It is a condition where two otherwise healthy babies are put at significant risk of loss or long-term damage from the vascular connections on the surface of their shared monochorionic placenta. Up until about 30 years ago, women who developed this condition would generally present with a history of rapidly increasing abdominal size at mid pregnancy. Once they reached term size and beyond, invariably they would either break their waters or go into preterm labor and lose both of their twins. Very little was known of this condition at the time. This book tells the story of how we have come to understand this devastating condition and how this dramatic explosion of basic scientific knowledge, as well as clinical understanding, drove the development of technology that allows us to treat TTTS.

Dr Skupski has done an excellent job of editing and writing chapters in this book. He has detailed the history of the development of our understanding of TTTS as well as its treatment with laser.

There is a detailed exploration of the development of placenta and how it allows TTTS to develop, and a detailed examination of how the anastomoses of monochorionic placetas are examined with injection and how this sheds light on the development of this condition.

The chapter on the pathophysiology of TTTS is a state-of-the-art description of our understanding of the placental and fetal factors that are responsible for the pathophysiology of TTTS, and indicates where we still have gaps in our knowledge.

There are chapters on the diagnosis and clinical and ultrasound features of TTTS, as well as detailed descriptions of current treatment and neonatal outcomes and how to monitor this condition both prior to and after treatment with laser.

Overall, this is a timely, detailed exploration of this condition, which severely affects monochorionic twins, and is a worthwhile reference source for all who are involved in the management of multiple pregnancies and those wanting to understand this most devastating complication. In being so good at explaining the why, what, when, and how of TTTS, it is an essential reading for clinicians who deal with multiple pregnancies.