The Beginnings of Perinatal Medicine

Description: Viewed from a scientific historical angle, perinatal medicine is a still young special interdisciplinary field of medicine which came into being during the middle of the 20th century. Thanks to the scientific and medical activities of one of the editors of this volume, Professor Erich Saling, who is also called "The Father of Perinatal Medicine", essential impulses and innovations were achieved. With the introduction of fetal blood analysis he made it possible to gain access to the unborn infant, which today is regarded as a milestone at the beginning of Perinatal Medicine. For the first time, human medicine entered the intrauterine space.

With the exception of the collection of articles by Rooth and Saugstad published in 1985, in the history of perinatal medicine there only exist single papers of various sub-disciplines (example fetal surveillance sub partu, ultrasonography) either as an article in a magazine, or as a chapter in an appropriate text book. Up to now there has been no publication that presents in an integrative way the history of the still young speciality. The main emphasis will be on the time period up to the early 70s (that means the early stages of Perinatal Medicine), however, both scientific precursors and later developments are mentioned shortly, when opportune.

The authors of this volume are qualified specialists and some of them have decades of experience in the field they describe.

Key Highlights:
- History of a new medical field, of particular interest for obstetricians, perinatologists, neonatologists, gynecologists
- Erich Saling is one of the main pioneers, several other longstanding experts in this field
- Many historic figures and photographs

Contents:
1 Preface and introduction
2 Fetal heart activity and measurements of labor activities
   2.1 Scientific precursors
   2.1.1 Development of the stethoscope
   2.1.2 Recognition of the existence of fetal heart sounds
   2.1.3 First attempts to register the fetal heart beats
   2.1.4 Measurement of the intrauterine pressure during labor
   2.2 Early stages: "modern" cardiotocogram (CTG)
   2.3 Later developments
3 Fetal blood analysis (FBA)
   3.1 Precursors
   3.2 Fetal blood analysis (FBA)
   3.3 Further developments
   3.3.1 Pulse oxymetry
   3.4 Excursion: Physiological concepts in connection with fetal blood analysis
   3.4.1 "Brain sparing effect"
   3.4.2 "Maternogenic" increase of metabolic acidity in the fetus
4 Amniotic fluid interventions and examinations
   4.1 Knowledge about the significance of meconium in the amniotic fluid
   4.2 Amniocentesis
   4.3 Amnioscopy
5 Prevention of Rh-immunization
   5.1 History
   5.1.1 First descriptions and discovery of the pathogenesis
   5.1.2 First exchange transfusions
10.2.4 Scientific comparison of different methods
10.2.5 Supplementary oxygen
10.2.6 Refilling anesthetic bag
10.2.7 Change in pressure limiting valves
10.2.8 Later developments and recommendations
10.3 Mechanical ventilation
  10.3.1 Intermittent positive airway pressure
  10.3.2 Negative external inhalation
  10.3.3 Bronchopulmonary dysplasia
  10.3.4 Outcomes of mechanical ventilation
  10.3.5 Altering inflation times and rates
  10.3.6 Later developments
10.4 Exogenous surfactant therapy
  10.4.1 Physiological background
  10.4.2 Identification of the chemical structure of surfactant
  10.4.3 Methods for assessing surfactant
  10.4.4 Hormones and the surfactant system
  10.4.5 Surfactant therapy
10.5 Conclusions

11 History of clinical structures and development of the Perinatal Care System
11.1 Introduction
11.2 Historical precursors of a structural reform
  11.2.1 The need for the establishment of antenatal care at the end of the 19th century
  11.2.2 John William Ballantyne's plea for a pro-maternity hospital
11.3 Erich Saling's proposals for reforms in obstetrics: Early attempts to a structural reform
11.4 International developments as the answer to Saling's proposals
11.5 Later developments and evolution of an integrative Perinatal Care System
12 History of first activities such as training, publications, foundation of very first congresses and societies
  12.1 New section in medicine: First activities
  12.2 First local educational activities
  12.3 Later developments
13 History of the International Academy of Perinatal Medicine (IAPM)
  13.1 Introduction
  13.2 The first steps
  13.3 The roots of the Academy
  13.4 Foundation of the IAPM
  13.5 Identity, mission, and objectives of IAPM
    13.5.1 Mission
    13.5.2 Objectives of the IAPM
  13.6 Activities of the IAPM