
Contents

Preface to the Third Edition	vii
Authors	ix
1 General Remarks on Estimating the Time Since Death	1
<i>Burkhard Madea and Claus Henssge</i>	
1.1 Estimation of the time since death	1
1.2 Errors in estimating the time since death	4
2 Historical Review on Early Work on Estimating the Time Since Death	7
<i>Bernard Knight and Burkhard Madea</i>	
3 Supravitality in Tissues	17
<i>Burkhard Madea</i>	
3.1 Definitions	17
3.2 Postmortem mechanical excitation of skeletal muscle	24
3.3 Postmortem electrical excitability of skeletal muscles in casework	25
3.4 Longitudinal studies of electrical excitability	31
4 Rigor Mortis	41
<i>Estimation of the Time Since Death by Evaluation of Cadaveric Rigidity</i>	
<i>Thomas Krompecher</i>	
5 Postmortem Lividity	59
<i>Hypostasis and Timing of Death</i>	
<i>Burkhard Madea and Bernard Knight</i>	
6 Postmortem Body Cooling and Temperature-Based Methods	63
<i>Claus Henssge, Guy Rutty, Michael Hubig, Holger Muggenthaler and Gita Mall</i>	
6.1 Basics and application of the ‘nomogram method’ at the scene	63
<i>Claus Henssge</i>	
6.2 Finite element method in temperature-based death time determination	114
<i>Michael Hubig, Holger Muggenthaler and Gita Mall</i>	
6.3 The use of temperatures recorded from the external auditory canal for the estimation of the postmortem interval	134
<i>Guy Rutty</i>	
7 Autolysis, Putrefactive Changes and Postmortem Chemistry	153
<i>Burkhard Madea, Gerhard Kernbach-Wighton, Claus Henssge, Elke Doberentz and Frank Musshoff</i>	
7.1 Autolysis (self-digestion)	153
<i>Burkhard Madea and Gerhard Kernbach-Wighton</i>	
7.2 Eye changes after death	161
<i>Burkhard Madea and Claus Henssge</i>	
7.3 Cerebrospinal fluid chemistry	186
<i>Burkhard Madea and Claus Henssge</i>	
7.4 Estimation of duration of immersion	189
<i>Elke Doberentz and Burkhard Madea</i>	
7.5 H³-Magnetic resonance spectroscopy	203
<i>Frank Musshoff and Burkhard Madea</i>	

8	Gastric Contents and Time Since Death	213
	<i>Burkhard Madea and Bernard Knight</i>	
9	Immunohistochemical Methods as an Aid in Estimating the Time Since Death	223
	<i>Burkhard Madea</i>	
10	Practical Casework	227
	<i>Claus Henssge, Burkhard Madea and Stefan Potente</i>	
	10.1 Integration of different methods in casework	227
	<i>Claus Henssge and Burkhard Madea</i>	
	10.2 Conditional probability in death time estimation	237
	<i>Stefan Potente</i>	
11	Forensic Entomology	249
	<i>Saskia Reibe</i>	
12	Radiocarbon Dating	259
	Basic Principles and Applications	259
	<i>Wilfried Rosendahl and Doris Döppes</i>	
13	Cross-Sectional Imaging and the Postmortem Interval	269
	<i>Guy Rutty and Bruno Morgan</i>	
	Index	277