
Contents

Preface	x
Acknowledgments	xiii
About the Author	xv

Section I

OVERVIEW OF FORENSIC MEDICINE

1	Introduction and Philosophy	3
2	Medical Experts	5

Section II

CARDIAC TRAUMA

3	Myocardial Contusion and Blunt Cardiac Trauma	9
	Overview	9
	Mechanism of Blunt Cardiac Injury	10
	Pathology of Contusion	10
	Forensic Consideration	11
	Symptoms	12
	Signs	14
	Diagnosis	15
4	Consequences of Blunt Cardiac Trauma	21

Section III**VASCULAR ABNORMALITIES**

5	Coronary Arterial Afflictions	27
	Introduction	27
	Coronary Artery Disease	27
6	Vascular Injury	33
7	Aortic Aneurysms and Aortic Dissection	35
	Nonpenetrating Vascular Injury	42
8	Nontraumatic Vasculopathies	45
9	Coagulopathic Disorders	51
	Basic Coagulation Defects	51
	Heparin-Induced Thrombocytopenia	58
	Additional Coagulation Commentary	62
10	Mesenteric Ischemia	65

Section IV**SPECIFIC CARDIOPATHIC DISORDERS**

11	Pericardial Problems	69
12	Valvular Heart Disease	75
13	Cardiac Tumors	79
14	Cardiomyopathic Disorders	81

Section V**TOXIC AND PHYSICAL INFLUENCES**

15	Cardiotoxicity	89
	General Pharmacologic and Physical Overview	89
	Cocaine	93

Alcohol	95
Physical Agents	95
Androgenic Steroids	96
Carbon Monoxide	97
Particulate Air Pollution	98
Radiation Therapy	98
Medication-Induced Cardiac Valvulopathy	100
Drug-Induced Electrocardiographic Changes	100

Section VI

TECHNICAL, EPIDEMIOLOGIC, SOCIAL AND PHILOSOPHICAL INFLUENCES

16	The Electrocardiogram	105
17	Stress	107

Section VII

ILLUSTRATIVE CASE REPORTS

18	Case Reports	117
	Case 1: Blunt Chest Trauma Resulting in Traumatic Tricuspid Insufficiency	117
	Case 2: Myocardial Contusion, Cardiac Rupture, and Sudden Death	119
	Case 3: Acute Myocardial Infarction in the Very Young	121
	Case 4: Nitrate Holiday	124
	Case 5: Thoracic Aortic Aneurysm	125
	Case 6: Total Aortic Dissection	126
	Case 7: Abdominal Aortic Aneurysm, Dissection, and Rupture	128
	Case 8: Temporal Arteritis	130
	Case 9: Disseminated Intravascular Coagulation and Heparin-Induced Thrombocytopenia	131
	Case 10: Postoperative Drug-induced Hemorrhage	133
	Case 11: Acute Mesenteric Ischemia (Arterial)	134
	Case 12: Subacute and Chronic Mesenteric Ischemia	136
	Case 13: Superior Mesenteric Vein Thrombosis	138
	Case 14: Pericardial Tamponade	140
	Case 15: Toxic Myocarditis from a “Herbal Energy Capsule”	142
	Case 16: Left Atrial Myxoma	144

Case 17: Vascular Metastatic Obstruction — Arterial Obstruction Secondary to Metastatic Chondrosarcoma	146
Case 18: Oncologic Cardiomyopathy	147
Case 19: Idiopathic Dilated Cardiomyopathy	150
Case 20: Brugada Syndrome	153
Case 21: Carcinoid Syndrome	155
Case 22: Stress-Induced Myocardial Infarction	156
Case 23: Pulmonary Embolism	157
Case 24: Radiation-Induced Cardiac Disease	159
Case 25: Carbon Monoxide Toxicity	160
Appendix A: The RuDusky Classification — The World's First Complete Classification of Myocardial Contusion and Blunt Cardiac Trauma	163
Appendix B: Potential Short-Term and Long-Term Cardiovascular Risks of Adjuvant Breast Cancer Systemic Therapy	169
Appendix C: Recommended Reading	171
References	173
Bibliography	183