

Contents

Dedication	v	(Blunt) Chest Trauma	96
Preface	vii	Miscellaneous Chest Problems	106
CHAPTER ONE			
The Chest			
Lower Respiratory Tract Infection (Pneumonia, Bronchitis, and Bron- chiolitis)	1	Hydrocarbon Pneumonitis	106
Basic Roentgenographic Patterns of Pneumonia	1	Other Pulmonary Aspiration Problems	107
The Viral Spectrum	1	Delayed Diaphragmatic Hernia	107
Patchy Parenchymal Infiltrates (Bron- chopneumonia)	10	Delayed Congenital Lobar Emphysema	108
Lobar Consolidation	10	Allergic Pneumonitis	109
Miscellaneous Patterns of Pneumonia	13	Dehydration, Acidosis, Overaeration, and Microcardia	109
Round Pneumonias	15	Hemoptysis in Childhood	110
Looking for the Pneumonia	15	Anterior Chest Pain	111
Know Your Normal Chest First	15	Rapidly Expanding Chest Masses and Cysts	111
Picking up Early or Minimal Infiltrates	20	Normal Findings Causing Problems	111
Using Felson's Silhouette Sign	20	Technically Poor Examination	111
Favorite Hiding Places of Pneumonia	24	Normal Thymus Gland	113
A Few Peculiarities of Certain Pneu- monias	28	CHAPTER TWO	
Pleural Fluid Collections and Empyema	36	Upper Airway, Nasal Passages, Sinuses, and Mastoids	
Hilar and Paratracheal Adenopathy	54	Normal Anatomy of Upper Airway	116
Atelectasis and Emphysema	57	Upper Airway Obstruction and Acute Stridor	116
Which Side Is Abnormal?	57	Epiglottitis	121
Pneumatoceles and Pulmonary Abscess	70	Croup	121
Pneumomediastinum, Pneumothorax, and Pneumopericardium	72	The Chest Film in Airway Obstruction	125
Pulmonary Congestion and Edema	77	Foreign Bodies in the Upper Airway and Hypopharynx	126
Pericardial Fluid and Myocarditis	84	Other Causes of Upper Airway Ob- struction	128
The Asthmatic Child	85	Retropharyngeal Abscess	128
Foreign Bodies in the Lower Airway	91	Sinusitis, Mastoiditis, and Nasal Pas- sage Abnormalities	131
Penetrating and Non-Penetrating		Epistaxis	135

CHAPTER THREE

The Abdomen

Acute Abdominal Problems	137
Abnormal Intraluminal Gas Patterns	137
Airless Abdomen	137
Paralytic Ileus	138
Mechanical Ileus	138
Mixed Paralytic and Mechanical Ileus	140
Closed Loop Obstruction	140
The Sentinel Loop	142
Acute Gastric Dilatation	144
Abnormal Extraluminal Gas Patterns	144
Pneumoperitoneum (Free Peritoneal Air)	145
Retroperitoneal Free Air	148
Intramural Air (Pneumatosis Cystoides Intestinalis)	148
Portal Vein and Biliary Tract Gas	151
Thickened and Pseudothickened Bowel Walls	154
Abdominal Fluid Collections (Ascites, Peritonitis, Hemoperitoneum)	154
Abdominal Abscess	161
Acute Inflammatory Problems	164
Pneumonia Causing Acute Abdomen	164
Acute Gastroenteritis	165
Appendicitis	166
Conditions Mimicking Acute Appendicitis	179
Other Intra-Abdominal Inflammations or Infections	180
Miscellaneous Acute Abdomen Problems	188
Acute Mechanical Problems	189
Intussusception	189
Volvulus (Midgut, Colon, Gastric, Small Bowel)	193
Hernias	200
Visceral Torsion (Spleen, Liver)	203
Abdominal Trauma	203
General Approach	203
Specific Organ Injury	204
Ingested and Inserted Foreign Bodies and Materials	222
Corrosive Fluid Ingestion	222
Ingested Foreign Bodies	222
Miscellaneous Ingested Foreign Bodies and Substances	226
Genitourinary Foreign Bodies	228
Miscellaneous Abdominal Problems	228
Bezoars	228
Abdominal Ascariasis	230
Abdominal Masses, Tumors, and Pseudotumors	232
Abdominal Wall Hematoma	234

Abdominal Calcifications	234
Peptic Ulcer Disease and Hiatus Hernia	236
GI Bleeding	237
Intramural Intestinal Bleeding or Edema	238
Intestinal Infarction	238
Infarction of the Omentum or Mesentery	238
Acute Urinary Retention	238
Renal Colic	238
Ovarian Cysts	238
Pregnancy	238
Normal Findings Causing Problems	238
Chilaiditi's Syndrome (Hepatodiaphragmatic interposition)	241
Duodenal Air Mimicking Air under the Liver	241

CHAPTER FOUR

The Extremities

General Considerations	242
What Views Should Be Obtained?	242
Utilizing the Soft Tissues	242
What Type Of Bony Injuries Are Seen in Children?	243
What to Look for in Acute Osteomyelitis	248
What to Look for in Septic Arthritis and Traumatic Hemarthrosis	248
Isotope Bone Scanning in Acute Trauma and Infection	251
Upper Extremity Problems	252
The Shoulder	252
Normal Soft Tissues of the Shoulder	252
Detecting Fluid in the Shoulder Joint	253
Clavicular Injuries	253
Injuries of the Upper Humerus	255
Scapular Fractures	259
Septic Arthritis, Osteomyelitis, and Cellulitis of the Shoulder	260
Miscellaneous Shoulder Problems	260
Normal Findings Causing Problems	260
The Humeral Shaft	263
The Elbow	265
Normal Soft Tissues and Fat Pads	265
Detecting Fluid in the Elbow Joint—Displaced Fat Pads	267
Other Abnormal Fat Pad Configurations	267
Injuries of the Distal Humerus	267
Injuries of the Radial Head	272
Fractures of the Proximal Ulna and Olecranon	282
Dislocation of the Elbow	282
Septic Arthritis, Osteomyelitis, and Cel-	

Artefacts Mimicking Calvarial Fractures	421	Actual Fracture Visualization	447
Facial, Orbital, and Mandibular Fractures	421	Types and Mechanisms of Cervical Spine Injuries	448
Types of Fractures	423	Flexion Injuries of the Lower Cervical Spine	448
Nasal Bone Fractures	423	Flexion Injuries of the Atlas and Axis	452
Orbital Fractures	423	Extension Injuries of the Lower Cervical Spine	453
Fractures of the Zygomatic and Maxillary Bones	428	Extension Injuries of the Lower Cervical Spine	453
Mandibular Fractures	428	Extension Injuries of the Atlas and Axis	453
Soft Tissue Changes with Facial Injury	430	Lateral Flexion Injuries of the Cervical Spine	457
Normal Findings Causing Problems	430	Rotation Injuries of the Cervical Spine	462
Detecting Increased Intracranial Pressure (Spread Sutures)	434	Rotation Abnormalities of the Atlas and Axis	464
Miscellaneous Skull and Face Problems	435	Axial Compression Injuries of the Cervical Spine	468
Ocular Foreign Body Localization	435	Determining Instability of a Cervical Spine Injury	471
Proptosis and Orbital Cellulitis	435	Cervical Cord and Nerve Root Injuries	471
The Swollen Jaw	435	Brachial Plexus Injuries	471
Seizures	437	Central Cord Syndrome	471
CHAPTER SIX		C₁-Occipital Injuries	472
The Spine and Spinal Cord		Normal Findings and Anomalies of the Cervical Spine Causing Problems ..	473
Cervical Spine Injuries	438	Thoracolumbar Spine Trauma	477
What Views Are Necessary?	438	Flexion Injuries	477
Visualize All of the Cervical Spine	438	Extension Injuries	477
What to Look for in Cervical Spine Injuries	438	Lateral Flexion Injuries	477
Loss of Normal Cervical Spine Curvature	438	Rotation Injuries	477
Prevertebral Soft Tissue Thickening ..	439	Axial Compression Injuries	478
Increase in the Predental Space (C ₁ to Dens Distance)	442	Other Injuries of the Thoracolumbar Spine	478
Displacement of the Vertebral Bodies ..	442	Sacroccygeal Spine Trauma	480
Alterations in the Width of the Disc Space	445	Miscellaneous Problems of the Spine ..	480
Abnormal Apophyseal Joint Configurations	446	Infections of the Spine	480
Widening of the Joints of Luschka	446	Pathologic Fractures	480
Interspinous Distance Widening	446	Calcified Intervertebral Discs	482
Lateral Deviation of the Spinous Processes	447	Intervertebral Disc Herniation	483
Interpedicular Space Widening	447	Normal Variations Causing Problems in the Thoracolumbar Spine	484
Lateral Mass of C ₁ to Dens Relationships	447	Index	485