

Contents

1 Congenital and Developmental Disorders

DAVID WILSON and RUTH CHEUNG	1
1.1 Introduction	1
1.2 Developmental Dysplasia of the Hip	1
1.2.1 Clinical Background	1
1.2.2 Role of Imaging in Detection	2
1.2.3 Role of Imaging in Treatment	4
1.2.4 Potential Developments	5
1.3 Focal Defects	7
1.3.1 Clinical Background	7
1.3.2 Role of Imaging	8
1.3.3 Potential Developments	9
1.4 Talipes Equinovarus	9
1.4.1 Clinical Background	9
1.4.2 Role of Imaging	9
1.4.3 Potential Developments	10
1.5 Neural Tube Defects	10
1.5.1 Clinical Background	10
1.5.2 Role of Imaging	11
1.5.3 Potential Developments	16
References and Further Reading	16

2 Trauma and Sports-related Injuries

PHILIP J. O'CONNOR and CLARE GROVES	19
2.1 General Principles	19
2.1.1 Biomechanics	19
2.1.2 Imaging	20
2.2 Acute Trauma	20
2.2.1 Acute Fracture Patterns	20
2.2.2 Foreign Bodies	24
2.2.3 Haematoma	25
2.2.4 Muscles and Tendons	26
2.3 Chronic Trauma	28
2.3.1 Chronic Fracture Patterns	28
2.4 The Osteochondroses	32
2.4.1 Osteochondritis Dissecans	32
2.4.2 Panner's Disease	33
2.4.3 Medial Epicondylitis (Little League Elbow)	34

2.5	Accessory Ossicles.....	34
2.6	Bursae.....	34
2.7	Summary.....	37
	References and Further Reading.....	37
3	Ultrasonography of Tendons and Ligaments	
	MAURA VALLE, STEFANO BIANCHI, PAOLO TOMÀ, and CARLOS MARTINOLI.....	39
3.1	Introduction.....	39
3.2	Normal Anatomy.....	39
3.2.1	Tendons.....	39
3.2.2	Ligaments.....	40
3.3	Examination Techniques and Normal Imaging Findings.....	40
3.3.1	US.....	40
3.3.2	MR imaging.....	42
3.4	Tendon Abnormalities.....	43
3.4.1	Overuse Injuries.....	43
3.4.2	Avulsion Injuries.....	43
3.4.3	Snapping Hip.....	46
3.4.4	Degenerative and Inflammatory Conditions.....	47
3.5	Ligament Abnormalities.....	50
3.6	Conclusion.....	51
	References and Further Reading.....	51
4	Inflammatory Disorders	
	DAVID WILSON.....	53
4.1	Introduction.....	53
4.2	Irritable Hip.....	53
4.2.1	Clinical Background.....	53
4.2.2	Role of Imaging in Detection.....	54
4.2.3	Role of Imaging in Treatment.....	57
4.2.4	Management Protocol.....	57
4.2.5	Potential Developments.....	58
4.3	Synovitis.....	58
4.3.1	Clinical Background.....	58
4.3.2	Role of Imaging.....	58
4.3.3	Potential Developments.....	59
4.4	Osteomyelitis and Soft-tissue Infection.....	59
4.4.1	Clinical Background.....	59
4.4.2	Role of Imaging in Detection.....	60
4.4.3	Role of Imaging in Treatment.....	64
4.4.4	Potential Developments.....	64
	References and Further Reading.....	64

5 Soft Tissue Tumours in Children

GINA ALLEN	67
5.1 Introduction.....	67
5.2 US	67
5.2.1 Plain Radiographs.....	69
5.2.2 Magnetic Resonance Imaging	69
5.3 Computed Tomography	70
5.4 Nuclear Medicine	70
5.5 Disease characteristics.....	71
5.5.1 Benign Lesions Seen On US.....	71
5.5.2 Vascular Anomalies.....	76
5.6 Potential Developments	82
References and Further Reading.....	82

6 Interventional Techniques

DAVID WILSON.....	85
6.1 Introduction.....	85
6.2 Biopsy	85
6.2.1 Soft Tissue Masses.....	85
6.2.2 Bone Masses.....	87
6.3 Aspiration.....	88
6.4 Local Anaesthetic Blocks	89
6.5 Osteoid Osteoma Ablation.....	89
References and Further Reading.....	90

Subject Index	93
---------------------	----

List of Contributors.....	98
---------------------------	----