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HOSSAM MAGHRABY



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



HOSSAM MAGHRABY

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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Assessment of Injuries of Temporo-mandibular Joint by MRI

Thesis

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BY

Dr. Maged Ahmed Abdullah Bahatheq

Faculty of Medicine – MUST University

Under Supervision of

Prof. Dr. Sameh Mohammed Abdelwahab

Professor of Diagnostic Radiology

Faculty of Medicine – Ain Shams University

Dr. MennatAllah Hatem Shalaby

Assistant Professor of Diagnostic Radiology

Faculty of Medicine – Ain Shams University

Faculty of Medicine

Ain Shams University

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LIST OF CONTENTS

	<i><u>Page</u></i>
List of figures.....	ii
List of tables.....	vii
Introduction	1
Chapter 1: TMJ Anatomy	4
Chapter 2: Conventional MR study	12
Chapter 3: Normal Pathological apperonce of MRI	15
Patient & methods	47
Results	50
Discussion	60
Conclusion	66
References	68

LIST OF FIGURES

No.	Figs	Page
1	Normal anatomy of the TMJ. Lateral graphic image shows the relationship of the condylar head to the glenoid fossa of the skull base. The normal bowtie-shaped disc is located between the condylar head and glenoid fossa, separating the joint space into superior and inferior compartments (shaded yellow-green). The articular disc has thicker anterior and posterior bands and a thinner intermediate zone. The lateral pterygoid insertion attaches to the anterior band. The posterior band attachments are called the bilaminar zone. The superior strut of the bilaminar zone attaches to t	6
2	Cleland and Koppenhaver 2007	8
3	ormal MRI appearance of TMJ muscles (Robba 2020)	10
4	capsules don't show out word bulges. (Westesson PL O-YM 2011, Aiken, Bouloux et al. 2012)	17
5	(A) MRI, sagittal PDWI closed mouth, show the bow-tie disc shape (thick anterior band and posterior band with thin intermediate zone: (BZ) bilaminar zone. (b)mandibular condyle, (white arrowhead) inferior joint compartment, (red arrowhead) superior joint compartment	18
	(B) Sagittal, PDWI open mouth (red arrow) thin intermediate zone, (a) articular eminence, (b) mandibular head, (orange arrow head) temporal lamina, (black arrow head) inferior lamina.	18

6	<p>(A,B,C,D) Normal MR image of the TMJ. (A) Sagittal T1-weighted image in the closed mouth position shows the biconcave disc with posterior margin at 12 o'clock (arrow). The disc is hypointense on T1, but often the margins of the disc are not as well defined as on the T2-weighted image. Also note the normal position and T1-hyperintense marrow signal of the mandibular condyle (black asterisk) and articular eminence (white asterisk).</p> <p>(B) Sagittal T1-weighted image in the open mouth position shows adequate opening and normal anterior translation of the disc (arrow) and mandibular condyle (black asterisk) to a position under the articular eminence (white asterisk). (C) Sagittal T2-weighted image in the closed mouth position</p>	19
	<p>shows the biconcave disc with posterior margin at 12 o'clock (arrow) and the normal appearance of the articular eminence (white asterisk) and condyle (black asterisk). (D) Sagittal T2-weighted image in the open mouth position shows adequate opening and normal anterior translation of the disc (arrow) and mandibular condyle (black asterisk) to a position under the articular eminence (white asterisk). The posterior attachment (bilaminar zone) is also better appreciated (arrowhead).</p>	19
7	<p>roton density-weighted images. (a, e) Biconcave disc. (b, f) Flattened disc.</p>	20
8	(a,b) Anterior displacement with reduction.	25
9	(a,b) Anterior displacement with no reduction	25
10	(a) Posterior disk displacement. Sagittal proton density weighted magnetic resonance imaging (MRI) in the closed mouth position demonstrates posterior displacement of the disc in relation to the	25

	mandibular condyle.	
	(b) Lateral disk displacement. Coronal proton density weighted demonstrates lateral displacement of the disk in relation to the mandibular condyle.	25
11	Pseudodisc. Sagittal proton density weighted MRI in the closed mouth position, demonstrates anterior displacement of the disk in front of the mandibular condyle. The thickening of the posterior attachments superior to the mandibular condyle is seen as “pseudodisc”.	26
12	(a,b) Double disk sign. (a) Sagittal oblique gradient-echo T2-weighted MR image (closed-mouth position) of a symptomatic TMJ shows complete disk displacement. The thick insertional area of the inferior LPM (arrow) is parallel to the disk (arrowhead), creating the double disk sign. (b) Sagittal oblique gradient-echo T2-weighted MR image (closed-mouth position) of a symptomatic TMJ in a different patient demonstrates severe internal derangement (arrowhead). A thick inferior LPM attachment (arrow) is again seen. The double disk sign must be recognized to distinguish between disk and muscle attachment.	27
13	(a,b) Stuck disk. A: Sagittal proton density weighted magnetic resonance imaging (MRI) in the closed mouth position demonstrates apparently normal position of the disk in relation to the mandibular condyle. B: Sagittal proton density weighted MRI in the open mouth position	28

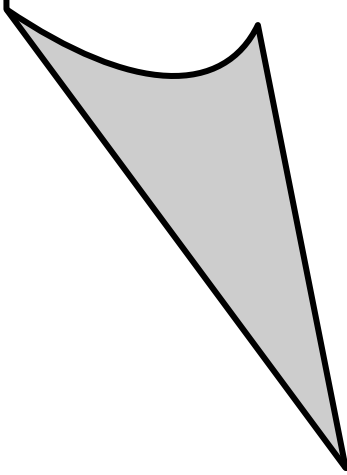
	demonstrates no anterior movement of the disk with the mandibular condyle	
14	T2 weighted images show joint effusions. (a) Grade 0. (b) Grade 1. (c) Grade 2. (d) Grade 3.	31
15	(a,b) (a) Sagittal PD with fat-saturated image. The disc is anteriorly displaced and globular in configuration (arrow). Erosion and size diminished of the Condyle. (b) Coronal T1-weighted contrast-enhanced fat-saturated image, shows joint effusion with enhancing synovitis, absence of normal appearing disc, and posterior pannus (arrow).	40
16	(a) Closed-mouth, Sagittal oblique gradient-echo T2WI. show internal derangement and flattening of the condyle.	41
	(b) Open-mouth, Sagittal oblique gradient-echo T2-WI obtained in a patient with internal derangement without reduction clearly depicts an osteophyte (arrow).	41
17	(a,b) (a) T1 weighted (W) sagittal image shows multiple loose bodies, most of which have small and low signal intensity (SI) within a soft tissue mass (arrows). The soft tissue mass shows high SI because of fluid collection in it which represents expanded articular cavity. (b) Post-contrast T1W coronal MR image shows a soft tissue mass (arrows) expanding into the right temporomandibular joint space. This mass shows peripheral wall enhancement representing thickened synovium. Further, masticator space and pterygoid muscle with solid	43
18	T2-weighted fat-saturated coronal image shows multiple round and punctate low-signal-intensity nodules with joint effusion (arrowhead) in left TMJ overlying condyle (arrow), consistent with synovial chondromatosis.	44

19	(A,B) Magnetic resonance imaging. A, Coronal T2-weighting, showing a low-signal lesion compressing the adjacent structures, including dura mater and medial and lateral pterygoid muscles (arrows). B, the lesion also displays some areas of intermediate signal in close proximity to the adjacent dura mater (arrow, coronal T1-weighting with contrast)	45
20	Figure, 20 (a,b) Coronal T1-weighted magnetic resonance image (A) and coronal reformatted CT image (B) showing bilateral bifid condylar head in the mediolateral position. Note erosion at the groove of the right bifid mandibular condyle. (Tutar, Bas et al. 2012)	46

LIST OF TABLE

No.	Table	Page
1	Distribution of patients' injuries of temporomandibular joint according to their demographic data regarding gender and age (n = 43)	51
2	Distribution of patients' injuries of temporomandibular joint according to their clinical symptoms regarding sensation of pain, joint noise, deflection / deviation and limited mouth opening (n = 43).	52
3	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding anterior disc dislocation "With reduction and with no reduction when opening the mouth" (n = 43).	53
4	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding Posterior disc dislocation "With reduction and with no reduction when opening the mouth" (n = 43).	54
5	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding lateral disc dislocation "With reduction and with no reduction when opening the mouth" (n = 43).	55
6	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding medial disc dislocation "With reduction and with no reduction when opening the mouth" (n = 43).	56
7	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding degenerative changes of the disc "With reduction and with no reduction when opening the mouth" (n = 43)	57
8	Distribution of patients' injuries of temporomandibular joint according to their finding by MRI regarding other finding "Osteoarthritic change, joint effusion, hyper mobility, sclerosis, congenital anomalies and mass or tumor like lesions" (n=43).	58

Introduction



Introduction

TMJ is the most frequently widely used in the body, for example in chewing and talking. Injuries of TMJ is a common condition affecting around 28% of population. The incidence of TMJ disorders are highly reported on female and the ratio may reach up to 8:1 compared to male. Moreover, the symptoms may present between 20 – 50 years of age in most patients. (Solberg, Woo et al. 1979, Wilkes 1989, Martins-Júnior, Palma et al. 2010)

TMJ injuries or disorders are musculoskeletal degeneration with association of functional and morphological conditions either caused by abnormalities of TMJ components or related to structures such as ligaments, muscles, periodontal tissue and teeth. (Laskin, Greenfield et al. 1983, Zarb and Carlsson 1999)

Internal derangement (ID) is the most common TMJ disorder. It may affect around 70% of patients. It characterized by dislocated disc or pathology (Farrar and McCarty 1979). Other causes of TMJ injuries including, osteoarthritis, inflammatory condition such as juvenile inflammatory arthritis and rheumatoid arthritis, trauma, and rarely development abnormalities, and neoplasms. (Westesson 1993). Factors such as trauma, occlusal abnormalities, sleep abnormality, systemic predisposing factors, para functional habits and psychosocial deleterious changes, considered as risk factors of TMJ disorders. (Carrara SV 2010, Hunter and Kalathingal 2013)

Signs of TMJ disorders may be present as muscular or joints pain, limitation of mouth activities, or clicking sounds usually painless. The patients suffer from pain or clicking sound during mouth opening or closing movement, limitation of jaw opening and TMJ locking, migraine,

headache, or pain around the area. Sometimes especially in early stages of TMJ disorders, the patients may be asymptomatic. (Westesson 1993)

MRI is the modality of choice for diagnosis of TMJ injuries because of its ability for better visualization of small structure of TMJ component as retrodiscal layer and lateral pterygoid attachment, also MRI can evaluate the morphological state of TMJ and analysis of dynamic process (it is pseudo dynamic MR imaging obtained from serial multiple static images).

Other advantages of MRI include, detection of soft tissue changes, necrosis, joint effusion, and bone marrow abnormalities, non-invasive procedure, no risk of radiation exposure, diagnostic accuracy, high sensitivity and specificity. MRI is the most advanced imaging modality of choice for diagnosis of TMJ injuries or disorder and the gold standard in disc displacement diagnosis. (Tomas, Pomes et al. 2006)

Chapter 1

TMJ Anatomy