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Neuro-muscular Impairments in Prolapsed Lumbar Intervertebral Disc (PLID) according to Structural Diagnosis and Management (SDM)

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ABSTRACT

The study aims to determine the Neuro-muscular Impairments in Prolapsed Lumbar Intervertebral Disc (PLID) according to Structural Diagnosis and Management (SDM). Structural Diagnosis and Management (SDM) of musculoskeletal medicine focuses on a comprehensive approach to assess both the contractile and non-contractile structures to generate a hypothesis to solve the specific sources hindering normal activities in the lumbar spine. This has been developed through 15 years' experience of Dr. M Shahadat Hossain treating diverse cases of musculoskeletal medicine. The SDM assessment directs conservative management procedure in a way of taking history, examination of arthokinemetic and osteokinemtic motions of lumbar spine, stretching the series of muscles in lumbopelvic and lower extremities with biomechanical rationale, strength test to relative prime, segmental and regional stabilizer, neurological examination to the biomechanical contributor, myotomes and isolated neural structures to generate a diagnosis.

EXTERNAL LINK

https://www.sdmassessment.com/login

ATTACHMENTS

SDM.docx

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KEYWORDS

Lumbar Disc Herniation, Structural Diagnosis and Management, PLID

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GUIDELINES

Aim of the study
The study will be aiming to find out the Neuro-muscular Impairments in Prolapsed Lumbar Intervertebral Disc (PLID) according to Structural Diagnosis and Management (SDM)

Objectives of the Study
The objectives of the study will be
1. To determine the socio-demographics of the respondents
2. To find out the musculoskeletal impairments of PLID as per SDM
3. To elicit the Neurological presentations of PLID as per SDM
4. To document the diagnosis and management protocol of PLID as per SDM

Methodology

Study Design
The study will be a cross-sectional study design.

Study setting
The study setting will be the Agrani Specialized Physiotherapy centre in Dhaka.

Study Period
The study period will be December 2020 to May 2021 (6 months). Data collection will be started prior to ethical approval. Data will be collected once with this time frame.

Study Population
The diagnosed case of Prolapse Lumbar Intervertebral Disc attended at Agrani Specialized Physiotherapy Centre from December 2020 to May 2021.

Eligibility Criteria for Inclusion
1. Diagnosed case of Prolapse Lumbar Intervertebral Disc as per International Classification of Disease (ICD-10-CM Code M51)
2. PLID evident with an MRI
3. Clinical Manifestation(s) as per clinical guideline of North American Spine Society (https://www.spine.org/Portals/0/assets/downloads/ResearchClinicalCare/Guidelines/LumbarDiscHerniation.pdf)
4. Respondents of both gender
5. Age range 25 years to 45 years

Exclusion Criteria
1. Patient with a history of surgery for PLID

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MATERIALS TEXT

The assessment procedure begins with some subjective information and cues, history and duration. The body chart represents a graphical presentation of symptom and posture in anterior, lateral and posterior aspects. The kinetic and kinematic motions are also assessed accordingly with the screening of other relative key points in the integrated body system. The passive stretch test evaluates the pain and tightness for extensibility and strength test examines the strength of muscles in lumbopelvic and lower extremities with biomechanical rationale. Neurological examination examines the myotomes, dural signs, and specific neural sensitive structures. The clinical examination comprises the radiological examination to conclude to a diagnosis.

The diagnosis is categorized as muscular dysfunction, muscular and neurological dysfunction or complete mechanical dysfunction of the lumbar spine. The treatment approach in SDM focuses primarily on stretching or releasing the adherent or neural sensitive structures to create a facilitating environment to enhance the bodily healing process, strengthening or restoring the functions of contractile structures, regional and biomechanical stabilizers and maintenance of normal static or dynamic biomechanical alignment.

SAFETY WARNINGS

Structural diagnosis and management (SDM) is conceptualized by Dr. M Shahadat Hossain, and copyrighted by the Institute of Advanced Mechanical Correction Therapy. The assessment is further developed and validated by M Shahdat Hossain, K M Amran Hossain, and Sapia Akter. The SDM Assessment is open to use in the following terms

The assessment is copyrighted by Creative Commons CC BY 4.0

The SDM is free to use but restricted to reproduce without the author's consent

The further versions will be notified and developed in a systematic approach.

Training and dissemination of the assessment or module can be done with the consent of Dr. M Shahadat Hossain

The data of the assessment will be stored and used in further development and research by the Institute of Advanced Mechanical Correction Therapy

By accepting the terms and agreement, you and your patient are giving consent for assessment, treatment through SDM concept, evaluation, documentation, and research-based on your confidential data as per Helsinki declaration from the World Medical Association and other applicable ethical guidelines.

BEFORE STARTING

Structural diagnosis and management (SDM) is a comprehensive approach to conservative management in musculoskeletal medicine that implies a biomechanical correction to soft tissues to enhance maximum functioning conceptualized by Dr. M Shahadat Hossain's 20 year's experience in Musculoskeletal Physiotherapy practice and teaching.

Fundamentals of Approach The SDM ® concentrates on sequels of muscular, neurological, and arthrokinemetic and/or osteokinemetic evaluation for diagnosing Musculoskeletal dysfunctions.

The Muscular evaluation examines the stretched tissues and weak structures to improve flexibility to stretched muscles and/or soft tissues and subsequently strengthening and/or stabilizing the weak structures.

The neurological examination concentrates on assessing for the cord or dural compression, root compression, and specific neural compression and/or sensitivity and function.

In the final phase, arthrokinemetic and osteokinemetic examination focuses on the quality of movement and uninterrupted functions in daily living and livelihood activities.

The Assessment is unique in creating a positive environment to enhance recovery rather than treating the dysfunction only.

Observation and Validation

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1 Finalizing Protocol

2 Application for Ethical Approval

3 Planning and Preparation for Data Collection

4 Assessment and Documentation of PLID patients according to SDM

5 Data Input and Audit

6 Result preparation

7 Manuscript preparation

Intervention

8 Designing intervention and prepare of experimental trials

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