DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT

OF MINOR HEAD INJURY - 31

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INTRODUCTION

Dubai Health Authority (DHA) is the responsible entity for regulating, licensing and monitoring health facilities and healthcare professionals in the Emirate of Dubai. The Health Regulation Sector (HRS) is an integral part of DHA and was founded to fulfil the following overarching strategic objectives:

Objective #1: Regulate the Health Sector and assure appropriate controls are in place for safe, effective and high-quality care.

Objective #2: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high-quality service delivery system.

Objective #3: Direct resources to ensure happy, healthy and safe environment for Dubai population.

ACKNOWLEDGMENT

This document was developed for the Virtual Management of Minor Head Injury in collaboration with Subject Matter Experts. The Health Policy and Standards Department would like to acknowledge and thank these professionals for their dedication toward improving the quality and safety of healthcare services.

The Health Regulation Sector

Dubai Health Authority

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

This guideline is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management. Identification of 'Red Flags' or serious conditions associated with the disease is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals to ER, family physicians or specialists for a face to face management.

Minor head injuries are common in people of all ages and rarely result in any permanent brain damage. The most common causes of head injuries are falls, assaults, and road traffic collisions.

Each year millions of adults and children attend emergency departments with a head injury all over the world but more than 80% have only a minor injury.

Children are more likely to sustain a minor head injury because they're very active.

The symptoms of mild head injury are usually mild and short lived. They may include a minor headache, nausea, mild dizziness, mild blurred vision.

DEFINITIONS/ABBREVIATIONS

Virtual Clinical Assessment: Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

Patient: The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

ABBREVIATIONS

DHA	:	Dubai Health Authority
EBP	:	Evidence Based Practice
ER	:	Emergency Room
HRS	:	Health Regulation Sector
EBP	:	Nonsteroidal Anti-Inflammatory Drugs
TBI	:	Traumatic Brain Injuries

1. BACKGROUND

1.1. In general, head injuries can be divided into two categories based on what causes them. They can either be head injuries due to blows to the head or head injuries due to shaking.

1.1.1. Head injuries caused by a blow to the head are usually associated with:

a. Motor vehicle accidents

b. Falls

c. Physical assaults

d. Sports related accidents

1.2. In most cases, skull usually protect the brain from serious harm. However, injuries severe enough to cause head injury can also be associated with injuries to the brain and spinal cord.

1.3. Head injuries caused by shaking are most common in infants and young children but they can occur any time you experience violent shaking.

2. SCOPE

2.1. Telehealth services in DHA licensed Health Facilities.

3. PURPOSE

3.1. To support the implementation of Telehealth services for patients with complaints of Minor Head Injury in Dubai Health Authority (DHA) licensed Health Facilities

4. APPLICABILITY

4.1. DHA licensed physicians and health facilities providing Telehealth services.

4.2. Exclusion for Telehealth services are as follows

4.2.1. Emergency cases where immediate intervention or referral is required

4.2.2. Prescribe Narcotics, Controlled or Semi-Controlled medications

5. RECOMMENDATION

5.1. Virtual Clinical Assessment

5.1.1. Signs of minor head injuries

Often cause a bump or bruise. As long as the person is conscious and with no deep wounds, it's unlikely there will be any serious damage. Other symptoms of a minor head injury may include:

a. A mild headache

b. Nausea (feeling sick)

c. Mild dizziness

d. Mild blurred vision

5.1.2. Signs of serious head injury

a. Unconsciousness, either briefly or for a longer period of time

b. Difficulty staying awake or still being sleepy several hours after the injury

c. Clear fluid leaking from the nose or ears – this could be cerebrospinal fluid, which normally surrounds the brain
d. Bleeding from one or both ears
e. Bruising behind one or both ears
f. Any sign of skull damage or a penetrating head injury
g. Difficulty speaking, such as slurred speech
h. Difficulty understanding what people say
i. Reading or writing problems
j. Balance problems or difficulty walking
k. Loss of power or sensation in part of the body, such as arm or leg
l. General weakness
m. Vision problems, such as significantly blurred or double vision
n. Having a seizure or fit
o. Memory loss amnesia
p. Persistent headache
q. Vomiting since the injury
r. Irritability or unusual behavior

6. RED FLAGS

While assessing a patient with minor head injury the following red flags symptoms must be ruled out:

6.1. Unconsciousness – either brief concussion or for a longer period of time

6.2. Fits or seizures

6.3. Problems with the senses – such as hearing loss or double vision

6.4. Repeated vomiting

6.5. Blood or clear fluid coming from the ears or nose

6.6. Bruising behind one or both ears

6.7. Memory loss amnesia

6.8. The injury was caused by a forceful blow to the head at speed

6.9. The person had brain surgery before

6.10. The person has had problems with uncontrollable bleeding or a blood clotting disorder, or is taking medication that may cause bleeding problems, such as Warfarin

6.11. The person is intoxicated by drugs or alcohol

6.12. It is possible the injury wasn't accidental – for example, child abuse and Munchausen syndrome by proxy

6.13. Irritability or unusual behavior

6.14. Difficulty staying awake or still being sleepy several hours after the injury

6.15. Any sign of skull damage or a penetrating head injury

6.16. Difficulty speaking or understanding what people say

6.17. Balance problems or difficulty walking

6.18. Loss of power or sensation in part of the body, such as arm or leg

6.19. Significantly blurred or double vision

6.20. Persistent headache

7. DIFFERENTIAL DIAGNOSIS

7.1. Most of the patients with mild traumatic brain injuries (TBI) recover full function within about 3 months, but a significant minority do not. Failure to recover as expected following a diagnosed or suspected mild TBI is most commonly related to a concurrent diagnosis or alternative diagnosis or condition. Consideration during the diagnostic process must be given to

7.1.1. Alternative organic conditions (prior or unsuspected severe TBI, pain, medication side effects or dementia)

7.1.2. Pre-existing non-organic conditions (active or dormant psychiatric conditions)

7.1.3. Pre-existing personality characteristics, or social/economic factors

7.1.4. Non-clinical conditions (compensation/litigation, malingering)

7.1.5. Post-injury psychiatric morbidity (notably depression, anxiety, post-traumatic stress disorder, panic disorder, or conversion disorder)

7.2. Rigorous care must be given during the clinical assessment of the patient to evaluate for different or contributory diagnostic possibilities.

7.3. Not all patients that have symptoms following a blow to the head have traumatic brain injury as the sole etiologic agent for their symptoms. Accurate diagnosis will lead to better treatment and optimal outcomes.

8. INVESTIGATIONS

8.1. Based on assessment, this will include CT Scan, MRI, X-ray skull.

9. REFERRAL CRITERIA

9.1. Seek immediate medical attention if, after a knock to the head, you notice any of these symptoms:

9.1.1. Unconsciousness – either brief concussion or for a longer period of time

9.1.2. Fits or seizures

9.1.3. Problems with the senses – such as hearing loss or double vision

9.1.4. Repeated vomiting

9.1.5. Blood or clear fluid coming from the ears or nose

9.1.6. Bruising behind one or both ears

9.1.7. Memory loss amnesia

9.1.8. The injury was caused by a forceful blow to the head at speed

9.1.9. The person had brain surgery before

9.1.10. The person has had problems with uncontrollable bleeding or a blood clotting disorder, or is taking medication that may cause bleeding problems, such as Warfarin

9.1.11. The person is intoxicated by drugs or alcohol

9.1.12. It is possible the injury wasn't accidental – for example, child abuse and Munchausen syndrome by proxy

9.1.13. Irritability or unusual behaviour

9.1.14. Difficulty staying awake or still being sleepy several hours after the injury

9.1.15. Any sign of skull damage or a penetrating head injury

9.1.16. Difficulty speaking or understanding what people say

9.1.17. Balance problems or difficulty walking

9.1.18. Loss of power or sensation in part of the body, such as arm or leg

9.1.19. Significantly blurred or double vision

9.1.20. Persistent headache

9.1.21. If symptoms persist two weeks after the head injury

9.2. If any of these symptoms are present, particularly a loss of consciousness – even if only for a short period of time – refer immediately to emergency department or call for an ambulance.

10. MANAGEMENT

10.1. Refer to APPENDIX 1 for the Virtual Management of Minor Head Injury Algorithm

10.2. Treating a minor head injury

10.2.1. If the patient experiences a knock, bump or blow to the head, advise the patient/caregiver to:

a. Sit down, comfort the patient, and make sure they rest.

b. Hold a cold compress to their head – try a bag of ice or frozen peas wrapped in a tea towel.

c. For the first 24 hours after the injury, it's important for someone to stay with the injured person to keep an eye out for any new symptoms that develop.

d. It is also important to advise the patient to rest, avoid aggravating the injury with stressful situations, and avoid contact sports until fully recovered.

e. Mild headaches can be treated with paracetamol

f. Seek immediate medical advice if symptoms such as dizziness and a headache get worse.

10.2.2. Most people who attend hospital with a minor head injury are allowed to return home shortly afterwards and will make a full recovery within a few days.

10.3. Advice for adults

10.3.1. If a patient sustained a minor head injury:

a. Patient should not drink alcohol or take recreational drugs

b. Patient should not take sleeping pills, sedatives or tranquillizers

c. Take paracetamol or NSAID if have a mild headache

d. Patient should not play contact sport, such as football, for at least 3 weeks

e. Patient should not return to work, college or school until completely recovered and feel ready

f. Patient should not drive a car, motorbike or bicycle or operate machinery until completely recovered

10.4. Advice for children

10.4.1. If a child has got minor head injury:

a. Give them paracetamol or NSAIDs if they have a mild headache

b. Avoid getting them too excited

c. Don't have too many visitors

d. Don't let them play contact sports, such as football for at least 3 weeks

e. Make sure they avoid rough play for a few days

10.5. Prevention

10.5.1. Many head injuries are the result of accidents that are difficult to predict or avoid. But there are ways to reduce the risk.

10.6. Safety helmets

10.6.1. Cyclists and motorcyclists can protect their heads by wearing a properly fitting safety helmet

a. As well as wearing a helmet when cycling, one should also make sure:

b. Use lights and wear reflective clothing when cycling in the dark

c. Are aware of the dangers of the road and know how to stay safe

d. Check bikes are in good working order

10.7. Safety at home

10.7.1. Following sensible health and safety guidelines can help prevent accidents at home. Advice that will help keep home and garden as safe as possible includes:

a. Keeping stairways tidy so you don't trip over anything

b. Not standing on an unstable chair to change a light bulb – use a stepladder instead

c. Cleaning up any spillages to prevent someone slipping over

10.8. Childproofing the home

10.8.1. It's not possible to childproof all home completely. But one can take steps to keep toddlers and young children safe at home:

a. Check windows are lockable and can't be opened by your child, particularly bedroom windows

b. Move furniture, such as beds, sofas and chairs, away from windows to prevent child climbing up and falling out

c. Fit safety gates at the top and bottom of stairs

10.9. Safety at work

10.9.1. To reduce the risk of sustaining a head injury at work, always follow the following:

a. Wear a hard hat when working in potentially hazardous areas.

b. Only use ladders in a workplace environment for short-term light work.

c. Any work that requires spending a considerable amount of time at height or involves heavy lifting should be carried out on scaffolding or another suitable platform

d. Any work that involves going up on to a roof should also be considered high risk, and high standards of safety are therefore essential.

10.10. Sport safety

10.10.1. Advise the patient to wear any necessary safety equipment when playing sports, particularly contact sports.

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APPENDIX 1 – VIRTUAL MANAGEMENT OF MINOR HEAD INJURY ALGORITHM