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Physiotherapeutic Approach at Treating Luxatio Humeri Immediately After the Immobilization Period - Corrections at Previously Used Methods in the Specialized Rehabilitation Hospital Yasen Study Period from 2012-2014 Year

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Abstract: ***Aims & Objectives:*** *The purpose of the task is to show the necessity of prolonged treatment, physiotherapy and physical therapy at luxatio humeri in after the immobilization period. In order to secure the full functional recovery of the damaged joint and preventing joint and muscle contractures.* ***Materials & Methods:*** *The study was conducted with close observation of unilateral dislocations of art. humeri of 55 patients admitted to the hospital without comorbidities period of 2012 to 2014 years.* ***Results:*** *After completion of the ten-day treatment period, the results were unsatisfactory.* ***Conclusion:*** *Post immobilization treatment period is usually underestimated and insufficient in the treatment of dislocation of the shoulder joint. In hospitals for specialized treatment of locomotor system in our country is taken to continue treatment for 7 to 10 days, after which patients take care of the affected limb into their own hands.*

Keywords: Luxatio humeri, After immobilisation period, Muscle and joint contractures and Rehabilitation

1. Introduction

For the purpose, we examined the standard stages of recovery in 55 patients submitted for the first time in the hospital with a diagnosis luxatio art. humeri dextra without comorbidities in period period from 2012 to 2014 years. During the study We have found a problem phases that completely change the direction of recovery in this diagnosis. We found and confirmed by the treatment that for full recovery is needed this therapeutic approach:

1) The procedures for physiotherapy, massage and physical therapy must begin immediately after removal of immobilization.
2) The duration of the procedure depends not only on the severity of the lesion but also on the damaged anatomical structures, but they are of a duration from not less than 20-30 days.
3) In having accompanying vascular damage - the nerve bundle of the upper limb procedures continues to the complete elimination of the symptoms.

The luxation of art. humeri are common traumatic injuries due mostly to domestic injuries and road accidents [1, 3, 5]. For those there is no age limit, but usually affects children and people of working age [2, 4]. From years of treatment in specialized rehabilitation hospitals in Bulgaria is unchanged and often not very effective due to the short period of stay and hospital care, which is about 7-10 days. A large percentage of patients do not seek medical care unless it prevents them not to disturb their job. This is one of the reasons we can not make an accurate statistics of this trauma.

During the period after immobilization is important to prevent and / or fight with already formed joint and muscle contractures [2, 4, 6]. They are mean during the period of the joint in a long period of immobilization. In our study from 55 patients, at 45 were established contractures of muscles and joints.

2. Materials and Methods

The study was conducted with close observation of unilateral dislocations of art. humeri of 55 patients admitted to the hospital without comorbidities period of 2012 to 2014 years. With purpose the study to be complete and based on the current method of treatment We have observed recovery and noticed problems in the course of treatment, especially in the early termination, and sometimes later, starts due to careless attitude of the patient [3, 7]. The study was conducted with the active participation of patients and their consent as required by law in the Republic of Bulgaria and the European Union.

3. Results

After completion of the ten-day treatment period, the results were unsatisfactory.
Treatment consisted of:

1) Physiotherapy including- 15 min. Classic interference currents and 15 min. Magnet.
2) Massage was duration 15 min. Of which 7 to 10 min. Of the segment of the spine corresponding to the innervation of the upper limb. (C-5-Th-1) and 5 to 8 min. massage of the affected upper limb.

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3) Physiotherapy duration was from 15 to 30 min., And included exercises at the beginning of maximum relief starting position. After improvement starts active physical therapy leading to pain, as always in the healing gymnastics is included the healthy limb.

Besides the limited movement in the joint a swelling appeared on the upper limb, located in the forearm, the wrist and fingers of the affected limb. Subtle movements were difficult and impossible. There was numbness in the fingers.

In general dislocation, the most common potential problems are associated with contractures of the joints, tendons and muscles. There are also observed trophic and neurogenic.

The purpose of the proposed treatment is that the standard of after immobilizing procedures to be changed with the proposed from Us improvements to prevent complications. Patients should be fully recovered from the treatment in the hospital.

In the shoulder joint luxation most often impairment is in the joint capsule, nerves innervating the upper limb originating from the plexus brachialis (C_5- Th_1), the muscles of the shoulder girdle and thoracic surface and back muscles. Muscles are as follows:

a) muscles of the free upper limb: m. deltoideus- at breaking or damage suffered abduction, ante- and retro-flexion, internal rotation. M. supraspinatus - in injury reflects on abduction. M. infraspinatus - impacted external rotation. M. teres minor - impacted adduction and external rotation. M. teres major- impacted adduction, internal rotation and the extension. M. subscapularis- suffers internal rotation.
b) From arm muscles maybe affected these muscles and movements:
   - Front group-m. biceps brachii - flexion and supination of the forearm in the shoulder joint anteflexion. M. coracobrachialis- adduction of the forearm. M. brachialis - flexion in art. cubiti.
   - The rear group-m. triceps brachii - the extension of the forearm in the art. cubiti, the long head in the shoulder pulls the joint backwards and puts the arm; m. anconeus- extension in art. cubiti.
   - superficial back muscles m. trapezius - the entire muscle pulls the shoulder blade and the shoulder backwards and medial to the spine, upper arm lifts the shoulder up, the lower pulls it down; m. latissimus dorsi- brings pulling back and rotate the arm inward, there is a inspiratory action; m. rhomboideus (major et minor) - pulls the blade up and medial to the spine; m. levator scapulae- raises the shoulder blade.
c) superficial pectoral muscles: m. pectoralis major- rendering and internal rotation and support when lifting the arm forward, and has participation as an additional respiratory muscle; m.pectoralis minor- moves the shoulder blade forward and down and has a function as an additional respiratory muscle; m. serratus anterior- presses the shoulder blade to the chest, upper part pulls forward and the lower part moves the lower angle forward and laterally and participated as an extra respiratory muscle; m. subclavius- pulling collarbone down.

The described muscles and their actions it is clear that the long immobilization is impossible these muscles not to be affected. In general, after the overthrow of the patient's immobilization he has a poor posture due to compensatory posture of the body. The shoulder is very approximate to the back and chest, dorsal surface and pectoral muscles are visibly reduced in the entire upper limb is close, almost "glued" to the body of the patient. Important rule in the medical procedures in this period is not recommended the extension with adduction of the shoulder joint.

4. Discussion

Timely and appropriate treatment of luxatio humeri is important in order to prevent permanent disability and immobilization of the patient. Particular attention should be paid to the subtle movements that often suffer the most and recover the most difficult. Their involvement and that of the shoulder joint resulting in difficulty in the performance of routine activities of daily life and disabilities. Last but not least is the psycho-emotional tone of the patient due to the long period of treatment, the pain and slower results is-heavily affected.

Our proposed treatment:

1) The procedures required to start immediately after the overthrow of immobilization.
2) Physiotherapy treatment is as follows:
   a. 20 min. Classic interference currents
   b. 30 min. Magnet
   c. If there is pain along the upper limb 20 min. Electrophoresis with Potassium iodide (KI) and lidocaine as it is on the affected side.
3) Massage treatment to be 30 min. Preferably have included massage collar Particular attention should be paid to the affected limb, wrist and fingers are swollen and sometimes numb. Massage should affect the good hand as well in order to be able to influence a nervous reflex time.
4) Physiotherapy is of at least 30 min. Daily movement of both the affected and unaffected joints of the limb. Exercise of relief starting position are recommended. Gradually proceed to passive exercises for the full movement of the joint. In active monitor for compensatory movements. It is imperative to pay attention to posture and gait of patients who are often friendly. In the course of therapy, the duration of the procedures increases. Emphasis and exercises for fine movements as they recover difficult.

The course of treatments should not be less than 20 days and if necessary- 30, even 40 The goal is full recovery of the affected limb and removal of any compensatory habits built during the post immobilization period.

5. Conclusion

Post immobilization treatment period is usually underestimated and insufficient in the treatment of dislocation of the shoulder joint. In hospitals for specialized treatment of locomotor system in our country is taken to continue treatment for 7 to 10 days, after which patients take care of the affected limb into their own hands. But in the

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course of everyday life, most often the fate of the injured joint is adrift. Often, the results are returned to the starting position, because the leading chronic pain syndrome force the patients to find the simplification of their position in the upper limb, in particular clamped to the body and possibly with At least friendly movements. Poor knowledge of anatomy in the back, chest and left upper limb leads to unsatisfactory results after treatment and often to the detriment of the patient due to return of the results.

Prolonged treatment led by competent personnel leads to complete recovery of the affected areas and remove all contractures, temporary nerve damage and compensatory body positions. In all 55 patients in this study following an increase in the duration of the stay in the hospital and found that 54 of them will recover fully, but only one patient has been written with a satisfactory result. This was due to his unwillingness to be treated strictly and comply with doctor's instructions. Treatment until full recovery of the patient removes the risk of permanent damage and prevents disability, which has great economic and social importance.

References

[1] Brady WJ, Knuth CJ, Pirrallo RG. Bilateral Inferior Glenohumeral Dislocation: Luxatio Erecta, an Unusual Presentation of a Rare Disorder. J. Emerg Med. 1995;13:37–42. [PubMed]
[2] Greaves RC, Shih RD. Clinical pearls: Shoulder Pain. Acad Emerg Med. 2001;8:739, 745–46. [PubMed]
[3] Groh GI, Wirth MA, Rockwood CA Jr. Results of treatment of luxatio erecta (inferior shoulder dislocation). *J Shoulder Elbow Surg*. 2010;19(3):423-426
[4] Musmeci E, Gaspari D, Sandri A, et al. Bilateral Luxatio Erecta Humeri Associated With a Unilateral Brachial Plexus and Bilateral Rotator Cuff Injuries: A Case Report. J. Ortho Trauma. 2008;22:498–500. [PubMed]
[5] Nho SJ, Dodson CC, Bardzik KF, et al. The Two-Step Maneuver for Closed Reduction of Inferior Glenohumeral Dislocation (Luxatio Erecta to Anterior Dislocation to Reduction) J. Ortho Trauma.2006;20:354–7. [PubMed]
[6] Padgham M, Walker JS. Inferior Glenohumeral Dislocation (luxatio erecta humeri) J. Amer Osteo Assoc.1996;96:478–481. [PubMed]
[7] Tornetta P, 3rd, Simon GS, Stratford W, et al. Luxatio Erecta: Persistent Displacement of the Greater Tuberosity After Reduction. Ortho Review. 1993;22:857–8. [PubMed]

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