THE EFFECTIVENESS OF BUDDY-TAPING IN TREATING A SALTER I FRACTURE AT THE THIRD MCP JOINT IN A HIGH SCHOOL ATHLETE
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Introduction/Personal Data: The purpose of this study was to discuss the effectiveness of immobilizing a Salter I fracture at the right third MCP joint through an alternative method of buddy-taping the third and fourth phalanges rather than casting the third phalanx. This case study involved a 17 year-old, high school male football player, who arrived at the Athletic Training room with a primary complaint of a pain in his right hand due to a helmet hitting it during a JV football game. The patient reported no prior history of hand injuries.

Physical Signs and Symptoms: The patient had a significant decrease in ROM in his third finger and complained of hearing a crack when the injury occurred. Upon evaluation, the patient had severe point tenderness over the third MCP joint, and tap and compression tests were positive. The patient was immediately referred to the team physician.

Differential Diagnosis:
1. Fracture of the third metacarpal
2. Fracture of the fourth metacarpal
3. Fracture of the third proximal phalanx of the right hand
4. Third degree sprain of the third MCP joint

Results of Diagnostic Imaging: Radiographic views of the right hand revealed a Salter I fracture of the third proximal phalanx at the MCP joint. A Salter I fracture involves the shearing separation of epiphysis from metaphysis and the vital portions of the growth plate are still attached to the epiphysis.

Clinical Course: Typical course of treatment would be casting for immobilization. In this case, however, the third phalanx was buddy-taped to the fourth phalanx. The patient was required to wear the buddy-taping throughout the day and during activity. The patient was also advised to participate only in limited activity, with no contact drills. The physician affirmed healing should be the same for this condition, although the fracture was buddy-taped instead of casted.

Deviation from the Expected: The athlete was not casted for the area. Instead, the athlete had the third phalanx buddy-taped to the fourth phalanx. Buddy-taping was considered a better method than casting because of where the injury was located, the severity of the injury only being a grade one Salter fracture, and the activities the patient was going to be doing both during practice and during his activities of daily living. Overall, the buddy-taping method in treating a Salter I fracture was successful. It did help the athlete RTP after 3-4 weeks with full function in practice and games. The buddy-taping was kept on the patient during all his activities throughout the day for a period of 2 weeks to allow for proper healing. Then, the patient did go through some rehabilitative/strengthening exercises for a period of 1 week to strengthen the area after a re-evaluation by the doctor. After strengthening, the athlete did return-to-play without any complaints of pain. Therefore, the buddy-taping technique was a very effective method in treating a Salter I fracture.

Key Words: Salter I Fracture