



## Heterotopic Ossification in Spinal Cord Injury Patient and the Role of the Plastic Surgeon in Management of this Disease

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### Commentary

H.O. has been recognized as a pathological condition which can affect the S.C.I. patient during their life from the time of injury and later on. This devastating disease has been recognized and published in many journals due to its importance in the life of S.C.I. patient. Twenty percent of spinal cord injury patients can be affected with this disease. This disease is different from the classic heterotopic ossification which is described in the text book of pathology, for example, calcification in lymph node or surgical scar. The H.O. which is seen in S.C.I., burn and brain injury patients involved many joints, example elbow, hips and knees.

As a result of this involvement it will affect the function of these joints and eventually these joints will be ankylosed and fixed, patient cannot sit in the wheelchair and as a result patient will stay in one position like the supine position and this will lead eventually to development of pressure ulcer injury. Of course the most important to the patient is the quality of life. The plastic reconstructive surgeon has an important role to play in the management of this disease considering the advancement of muscle flap. The etiology of H.O. formation are multi factors, example immobilization for long periods of time in bed, infection especially from pressure ulcer close to the joint, and trauma to the tissue. H.O. can manifest as an acute occurrence when the joint will swell and is warm to touch with an important blood test, which is the alkaline phosphatase enzyme which does increase tremendously in that face. The diagnoses based on a nuclear medicine test but the differential diagnoses should be from D.V.T. and acute septic arthritis which should be considered. In the acute face of the H.O. which may take six months to become mature H.O. Alkaline phosphatase enzyme test is considered the indicator when the H.O. become completely solidified and it does mean the H.O. will have a cortex and medulla and can be recognize at that stage by routine x-ray.

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The management of acute H.O. is conservative by medication. The medication in which we use is Didronel and Indomethacin as a non-steroidal medication. The treatment may take 6 months to a year.

The management of the complete mature H.O. when there is a strong indication is surgery, which includes excision of the complete H.O. and muscle flap. Post-operative management to prevent reoccurrence of the H.O. is the immediate post-operative radiation, which should be performed in the first 24 hours post-surgery and medication as we mentioned the Didronel and Indomethacin. Post wound healing which is about 3 to 4 weeks post-surgery, aggressive physical therapy should be applied.

### References

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