

with palpation of a right large neck mass and peripheral nerve disorders of the right upper limb.

**Discussion.**— To our knowledge, no previous description of cervical para-osteoarthropathy following traumatic brain injury has been reported in the literature. Para-osteoarthropathy of the scapular region usually affects the glenohumeral joint with functional impairment, which can be more important than when the coracoclavicular joint is affected [2]. HO, in particular in unusual localizations, should always be searched after traumatic brain injury, especially if multiple trauma is associated, to allow an earlier, and more efficient, medical or surgical treatment.

#### References

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### Functional outcomes after surgery for neurogenic heterotopic ossifications: 17 cases collected at the Department of physical medicine and rehabilitation, Casablanca University Hospital

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**Keywords:** Heterotopic ossification; Functional surgery; Continues passive mobilization

The aim is to determine functional outcomes of patients undergoing surgery for neurogenic heterotopic ossifications (NHO)

**Material and methods.**— This was a prospective study of patients who underwent surgery for NHO followed by intensive rehabilitation care in our department from January 2009 to December 2011. The evaluation included a joint assessment and a functional assessment for each affected joint.

**Results.**— There were 17 patients (27 operated joints). The sex ratio was 1.4 and the average age 31.6 years (19–41 years). Operated joints were: knee (n = 11, 40.7%), elbows (n = 10, 37%), hips (n = 6, 22.3%). All patients received physical therapy based mainly on continuous passive mobilization of the elbow or knee in addition to functional work. For operated hips, the Postel Merle d'Aubigné (PMA) score improved from 6.5 to 8. In patients who had knee surgery, the functional status improved: one patient recovered ability to walk and the others a good sitting position. For patients who had elbow surgery, the functional assessment revealed improved possibilities for global nutrition (hand-mouth), hygiene (hand-face) and grooming (hand-neck).

**Discussion and conclusion.**— The main objective of surgery for NHO is to restore joint mobility and function. The results are generally good as confirmed by our outcomes. Appropriate rehabilitation in an experienced PRM unit greatly contributes to improved functional capacities.

#### Further reading

- Pélessier J, et al. Prise en charge des para-ostéoarthropathies neurogènes (POAN) chez le traumatisé crânioencéphalique : étude de la littérature. *Ann Readapt Med Phys* 2002;45:188–97.  
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### The heterotopic ossifications in the traumatic limb amputation by war wounds: Case report

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**Keywords:** Heterotopic ossification; Traumatic amputation; Blast injuries; War

**Introduction.**— The heterotopic ossifications in the traumatic war amputations are the object of some historic descriptions. Their incidence increased considerably in the current conflicts (Iraq, Afghanistan) among the American soldiers, with the frequency of wounds by explosion [1].

**Case report.**— We report the case of a 24-year-old mountain infantryman, who activated with his foot the explosion of an improvised explosive device, causing the direct distal left tibial amputation, and a polycrissage of the right lower limb and the left hand. He had two debridements and two negative pressure wound therapies before the regularization of the amputation at day 8, which was complicated by a voluminous haematoma.

Pain of the residual limb appeared at the eighth week and let discover distal heterotopic ossifications on the external and internal borders, deforming the residual limb. The adaptation of the prosthesis allowed an improvement of pain and a good functional result.

**Discussion.**— Approximately 60% of the amputees in the American and English conflicts present heterotopic ossifications [2], among which 1/3 are asymptomatic. Contributing factors are the severity of all the initial wounds and the amputation in wounded zone. It seems that the associated traumatic brain injury, the blast, the number of days before the skin closure, the number of wound cares and the use of a negative pressure wound therapy could be associated [2]. The appearance of heterotopic ossifications in the secondary amputations and their link with the severity of all the initial wounds are elements for the intervention of specific biomarkers of wounds, not yet identified.

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