

**Question. Read the following occupational history, and answer the questions below.**

Thank you for referring Mr Jones for an occupational review and health assessment.

He has had problems with his left wrist and hand for about four years now, the problem starting in around 2005 with tingling in his fingers and a loss of power especially in the left wrist. The tingling occurred especially in the index, middle and ring finger, but it occasionally spread to the little finger and also the thumb. The loss of power was associated with a cramping sensation in the left forearm, and with continued use the left arm during his job, this cramp and muscle spasm would become so severe he would be unable to straighten his fingers.

The tingling eventually became present during most of the day but it also awoke him from sleep at night.

He has also had problems in his right hand although the symptoms here were much less severe, and of slightly later onset. He was referred to the orthopaedic department, for assessment and report, who in turn referred him for neurophysiological studies. This showed mild lesions in both the right and left median nerves at the wrist.

A diagnosis of a carpal tunnel syndrome resulted and his consultant recommended that he have a left carpal tunnel release, which was carried out on the 29<sup>th</sup> of May 2007. At operation a mild synovitis was noted, but the procedure was otherwise uneventful.

Following the surgery the symptoms did improve, he then had a right carpal tunnel release in October 2007, from which he also made a good recovery.

The discomfort in his left forearm and hand however did not settle, it gradually became worse. This was related to work on his hedge-cutting machine, with the muscle spasm in the forearm, loss of power in the fingers, and flexion of the wrist making it impossible to do his job.

These symptoms usually occurred about an hour or two after he started to operate the machine but on one occasion it became so severe and disabling that he had to stop work altogether.

He then went back to outpatients again. After this he began to experience more extensive symptoms: pins and needles in the forearm and also in the little and ring fingers.

This was also a significant problem at night, the time when an individual is likely to put pressure on the ulnar nerve where it crosses the medial side of the elbow.

Because of the significant motor symptoms, and the spread of the symptoms to involve the ulnar side of the hand, an ulnar nerve lesion was suspected.

At present he continues to have problems in his left hand, the main problem being paraesthesiae in the left hand along with the muscle spasm and weakness, which continues to occur in a very short time, about an hour or so, after starting work.

### **Occupational History**

Mr Jones is a trained automotive mechanic, but he has spent most of his working life in his own business as an agricultural hedge cutter. He has done this for the last fifteen years.

### **Medical history.**

As far as I can ascertain there is no other medical history of note. Mr Jones had a right shoulder problem, his consultant described it as in impingement syndrome, which settled without intervention.

His hands do tend to go white when he gets cold, but there is no abnormal history of vascular spasm, which would be associated with a later stage vibration white finger.

### **Family History.**

There is no family history of any significant musculoskeletal disorder, nor is there any history of vascular disorder including Raynauds disease.

### **Hobbies/ Psycho-social**

He is single and drinks about two or three stubbies once or twice a week but does not smoke. His hobbies are riding his Harley Davidson motorcycle, and he has recently acquired a jet boat. There is no other history of note, He shows no signs of anxiety or depression, and tends to be a fairly optimistic character, who doesn't get overly anxious about life's problems.

### **On Examination**

His upper-limb girdle is essentially normal, there is no sign of small muscle wasting but he does have bi-lateral carpal tunnel release scars. Sensation in both of his hands are essentially normal and he has good power and tone in all muscle groups.

- a. What are the possible diagnoses 5 marks.
- b. Give an opinion, stating the criteria which you use to do so, on whether or not his present condition(s) is/are work related. 10 marks.
- c. Are there any factors in the non-work history which may be relevant? Describe these. 5 marks.
- d. Describe any further investigations that you would carry out 5 marks