Long-term clinical outcomes of Iranian veterans with unilateral transfemoral amputation

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**Background:** Long-term clinical symptoms and functional status of above-knee amputees are not well documented. This study documents the long-term outcomes of war related above-knee amputations.

**Objective:** To study the long-term outcomes of unilateral above-knee amputation.

**Materials and Methods:** The study consisted of a comprehensive assessment, examination, and review of history and wartime medical records of 31 Iranian above-knee amputees from the Iraq–Iran war by using a detailed questionnaire. The average follow-up was 17.5 years (range from 15–22 years). All patients were males and all were combatants.

**Results:** The most common agent of war injury was a mortar shell with an incidence of 45.1%, while land mines and direct bullet shots were the following causes of war injury resulting in amputation in 41.9% and 12.9%, respectively. Clinical symptoms included phantom sensation in 27 patients (87%), phantom pain in 14 patients (45.1%), phantom movement in 5 patients (16.1%) patients, and stump pain in 20 patients (64.5%). Additionally, 19 patients (61.2%) suffered from back pain, 17 patients (54.8%) complained of contralateral (non-amputated) knee pain, and 4 patients (14.8%) complained of ipsilateral hip pain. Seventeen patients (54%) reported psychological problems. Eighteen cases (58%) were employed or had been employed for multiple years after amputation. All patients (100%) were married and 30 (96.7%) had offsprings.

**Conclusions:** The study showed that our patients had significant rates of amputation symptoms after an average of two decades of amputation, but good family and social function of the patients were recorded. Amputation is not a static disability but a progressive deteriorating condition that affects the health condition of the amputee over time.

**Keywords:** War injury, amputation, PTSD, back pain, phantom pain, phantom sensation, stump pain, functional status, landmine