INTRODUCTION

Inclusion Body Myositis (IBM) is classified as a form of muscular dystrophy and the most common cause of inflammatory myopathy in people over 50 years of age. There are two types of IBM, inherited (iIBM) or sporadic (sIBM). Sporadic inclusion body myositis (sIBM) features inflammation in the muscle and deterioration of the muscle. sIBM occurs more frequently than iIBM. The cause of sIBM is not known. The incidence of s-IBM is 15/1,000,000 in the overall population with the incidence rising in people over 50 years of age to 50/1,000,000. Men are affected 2:3 times more than women.

IBM is a slowly progressive skeletal muscle disease that typically is diagnosed 6 years after the onset of symptoms. There is no cure for IBM and there is no medical/pharmacological treatment option for sIBM that affects the progressive weakening of the muscle. The common pattern of weakness affects the quadriceps, dorsiflexors, deltoids and finger flexors. Quadriceps weakness is reported as the most common first noticeable symptom in 65% of the patients. 73% of patients with IBM report periods of increased falling and decreased ambulation with increased use of a wheelchair. Orthotic intervention is typically sought due to increased falls.

Patients with IBM can be candidates for utilizing a gait activated Stance Control Orthosis (SCO). A gait activated SCO is indicated when a patient has weak quadriceps; weak dorsiflexors; adequate range of motion at hip, knee and ankle; and the ability to ambulate with a reciprocal gait. Since IBM does not affect the patient’s cognitive function, sensation or proprioception this population can be ambulatory utilizing a SCO.

The goal for the patient in this case study was to be a community ambulator and prolong bipedal ambulation as long as possible and to avoid use of a wheelchair.

METHOD

This is a single case study of patient who presented at a patient care facility with a prescription for an “HKAFO”. He was diagnosed with sIBM two years ago by muscle biopsy. At initial evaluation two years ago, the patient was 76 years old and had been exhibiting symptoms of lower extremity weakness for 13 years. His chief complaint was “knee pain”. He also complained of increased falls and difficulty getting up from the floor.

Clinical evaluation revealed bilateral genu recurvatum with quadriceps weakness and dorsiflexor weakness. His range of motion at hip and ankle were within normal limits. The patient was ambulating with a reciprocal gait utilizing 2 single point canes or a walker depending on terrain.

The treating orthotist recommended bilateral gait activated stance control orthoses utilizing a knee joint that locked in full extension at terminal swing with the aid of a pneumatic knee extension assist.

Clinical evaluation data will be presented and video will be used to demonstrate patient use of bilateral SCOs.

RESULTS

This patient has continued to ambulate with bilateral gait activated SCOs. His muscle strength has decreased in the past 2 years and he only uses a walker with his SCOs for community ambulation. He has met his goal for using SCOs by not using a wheelchair has his primary mode of ambulation. He no longer has knee pain.

DISCUSSION

Awareness of IBM and SCO provides orthotists with treatment options that address the progressive nature of this disease which leaves the ventral skeletal muscles of the lower extremity non-functional for ambulation or preservation of joint integrity. There have been few orthotic options available to patients with IBM that allow for a reciprocal gait while providing stance phase knee stability while limiting plantarflexion during swing. Gait activated SCO is an orthotic option for patients with IBM and should be considered as an early treatment option to preserve joint integrity and increase ambulation.

CONCLUSION

Gait activated SCO is a viable orthotic option for patients with IBM for continued ambulation and preservation of joint integrity.

REFERENCES