A 38 year old female presented with difficulty in chewing and swallowing, drooping of both eye lids, early fatigability of upper limbs during lifting of objects and on sustained effort for five months duration. She experienced worsening of symptoms toward evening and improvement in symptoms after getting up from sleep in morning and on taking rest. On examination there was ptosis of both eye lids, more in right eye than left (Figure 1) and rest of general physical and systemic examination was normal. Haematological and biochemical profile, X-ray chest, ultrasonogram of abdomen, CT scan thorax and CPK were normal. On Ice pack application on right eye for five minutes (Figure 2), patient experienced improvement in drooping of right upper eye lid by 3 mm (Figure 3), as measured by slit lamp beam. On applying ice pack on left eye similar improvement was experienced. Patients experienced improvement on neostigmine test also. She was treated with pyridostigmin 60 mg QID; her symptoms disappeared completely and she was advised regular follow up.

In Myasthenia Gravis (MG), ocular symptoms occur in almost all patients in some point during course of disease; 40% patients have extra ocular symptoms at onset. The most common the edrophonium test carries a risk of serious cardiac adverse reactions and false-positive results. Repetitive nerve stimulation, single fibre EMG and serum acetylcholine receptors antibodies are other tests available for diagnosis but are not easily available.1

Ice Pack Test: The ice pack test is a simple, safe and cheap bedside procedure and does not require medications or equipment and is free of adverse effects. It consists of the application of an ice pack on the patient’s symptomatic eye for 3 to 5 minutes. The response is positive when there is improvement of the diplopia or ptosis (increase in at least 2 mm of the palpebral fissure from before to after the test).

The clinical observation of improvement of myasthenic symptoms with cold and worsening with heat, and the electrophysiological finding that neuromuscular transmission may improve with local cooling form the theoretical rationale for the use of the ‘ice pack test’ and have no effect on ptosis of oculomotor nerve palsy or mitochondrial myopathy. The sensitivity of this test in ocular myasthenia with ptosis associated with or without generalised symptoms varies from 80 to 100%.1 Pooling of published studies suggests very high sensitivity; specificity but false-negative tests may occur occasionally.2 The exact place of this test in diagnosis of MG in routine clinical practice needs yet to be ascertained however in the right
symptomatology this can be an effective method of bedside diagnosis of MG and possibly prevent the use of expensive diagnostic medications with many unwanted and possibly dangerous side-effects.³

References