ABSTRACT

Objective: The facial nerve is the most susceptible to injury of all cranial nerves because of its complex course through the temporal bone confined within a prolonged bony canal in some cases not much greater in diameter than the nerve itself. Facial nerve palsy leads to a distorted aspect of the face both at rest and in activity with devastating social consequences for the patient.

Methods: We have done a retrospective study of the ten-years materials (2000-2009) of the Cluj-Napoca’s ENT Clinic, 21 patients. After a thorough clinical, imagistic end electromyographic evaluation was decided the surgical treatment which comprise in nerve decompression, termino-terminal anastomosis between the end of intratympanic segment and the distal segment of facial nerve by interposing sural nerve or n. auriculae magnus graft.

Results: The interposition of the graft in facial nerve was carried out in the mastoid, in 11 cases in the 72 hours after trauma, in 5 cases three months later and in one case twelve months later. Nerve decompression was performed in 4 cases.

The nerve graft and the nervous ends were prepared beforehand by cutting a few millimeters of the epineurium sheet. Then the graft was positioned in the bone canal, the ends were put together and the anastomosis was made with autologous fibrin adhesive.

Conclusions: Surgical therapy in peripheral traumatic facial palsy gives good functional results. Nerve decompression has statistically better results comparing to anastomosis and nerve transplant.

The choice of surgical technique and results directly depend on location and intensity of the lesion and the treatment time.

INTRODUCTION

Facial nerve is a mixed nerve with the origin in pons, consisting predominantly of motor fibers that provide mobility of facial muscles, parasympathetic secretory fibers and sensory fibers, contributing to the sense of taste.

Although the constitution and the path of nerve (a bone channel that crosses the petrous bone, the middle ear and the mastoid bone to the stylomastoid foramen which is also protected by styloid apophysis) seems a very well and safe path from the mastoid to the stylomastoid foramen, the nerve is very exposed to the disease processes confined within a prolonged bony canal in some cases not much greater in diameter than the nerve itself. Facial nerve palsy leads to a distorted aspect of the face both at rest and in activity with devastating social consequences for the patient.

MATERIAL, METHOD:

This is a retrospective study of 21 patients operated in our clinic during 2000-2009, which presented facial nerve palsy. We included only patients who required surgical treatment. The surgical treatment was decided after a thorough clinical and imagistic examination and after a electrophysiological examination. The treatment comprise by nerve decompression, termino-terminal anastomosis, using sural nerve or auriculares magnus nerve.

RESULTS:

For anatomical and functional repair was used the nerve graft interposition in 17 cases, in 11 cases in the first 72 hours and in 6 cases later, after 3 months (5 cases) or after 12 months (one case). For the intratympanic or mastoid part we used the great auricular nerve or n. auriculae magnus graft.

Signs of nerve continuity recovery was observed at 24 weeks in 4 cases, at 26 weeks in 2 patients and at 28 weeks in 4 cases. Electroneuronography is the one that helps to determine the timing of surgery. In the intratympanic and intramasoidian portion the nerve function restore was achieved up to 90% of normal in 3 cases, in which the palsy was obviously during active movements like speech but was absent in resting. Recovery was 75% of normal in 5 cases, being present at rest, from time to time, and in 3 cases was about 60% of normal function, incomplete paralysis being observed in rest. Five patients had the first sign of recovery of nerve function within 4 weeks, especially in orbicularis muscle. All patients maintained muscle tone by face massage, chewing and for nerve function restore were administrated vasotrope and neurotrophic medications.

DISCUSSIONS

Facial nerve paralysis could be congenital, idiopathic, neoplastic, infectious and traumatic. The most common causes are idiopathic, inflammatory and traumatic.

Best results were achieved in decompression cases comparing to anastomosis and nerve transplant complete recovery is impossible, residual weakness and synkinesis being observed in all the cases.

The obvious facial deformity has an important emotional impact on patient that leads to social isolation and affect the self-esteem so is welcome any solution and effort to enhance patient’s aspect and his quality of life.

References: