Abstract

Objectives: To elucidate the efficacy of the delayed transmastoid facial nerve decompression for Ramsay Hunt Syndrome (RHS) presenting complete paralysis which were performed later than three weeks after the onset of paralysis.

Study Design: Retrospective case review

Methods: Fourteen RHS patients with complete facial nerve paralysis underwent transmastoid facial nerve decompression at later than 3 weeks after the onset of paralysis by single surgeon without any major complications. Average post-operative follow up was a minimum of 6 months. The time between the onset of the symptom and surgery ranged from 25-115 days (mean=56 days). Main outcome measured were, pre- and post-operative HB grade at 6 months after surgery, and presence or absence of intraoperative neural response (INR) stimulated at the portion of horizontal segment before decompression procedure. Correlation between each parameter and duration between onset and surgery (within or later than 30, 40, 50, and 60 days) was statistically analyzed using chi-square test.

Results: Preoperative HB grade was all grade V or VI. Six months after surgery, six (42.8%) of the 14 patients showed a complete recovery (HB grade I or II), rest of the eight patients demonstrated grade of facial paralysis as followed. (6 for HB grade III, 2 for HB grade IV and none for grade V or VI). The timing of decompression did not statistically influence the outcome at all time points except for being compared between at shorter than 60 days and later than 60 days (p=0.0237). The INR statistically influences significantly the outcome evaluated by HB grade (p=0.0004). The intraoperative HB grade at 6 months post-operatively was significantly influenced by the duration within 60 days but not within 50 days. The INR stimulated at the portion of horizontal segment can be a good predictor of post-operative prognosis.

Methods and Materials

Fourteen RHS patients with complete facial nerve paralysis underwent transmastoid facial nerve decompression at later than 3 weeks after the onset of paralysis by single surgeon without any major complications. Average post-operative follow up was a minimum of 6 months. The time between the onset of the symptom and surgery ranged from 25-115 days (mean=56 days). Main outcome measured were, pre- and post-operative HB grade at 6 months after surgery, and presence or absence of intraoperative evoked electromyographic neural response (INR) stimulated at the portion of horizontal segment before decompression procedure. Correlation between each parameter and duration between onset and surgery (within or later than 30, 40, 50, and 60 days) was statistically analyzed using chi-square test.

Discussion and Conclusions

The outcome of the delayed transmastoid facial nerve decompression for RHS presenting complete paralysis at later than 3 weeks between onset and surgery was enhanced significantly by the duration within 60 days but not within 50 days. The intraoperative neural response (INR) at the portion of horizontal segment can be a good predictor for the post-operative prognosis of RHS. This perspective might be useful for considering the ideal timing of post operative rehabilitation in terms of synkretic regenerative process.

References


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Abstract

Introduction

In Ramsay Hunt Syndrome (RHS) patients, the favorable recovery rate has been reported to be a disappointing 10% in patients with complete paralysis, against 66% in those with incomplete paralysis [1]. Predicting the outcome of complete palsy and the surgical indication in RHS patients is clinically important, however, this was not well studied previously.

Decompression surgery of facial nerve is generally considered in patients with low recovery chance and Ganz previously presented that the surgical decompression in delayed timing for RHS is often no longer recommended for its lack of evidence.[2]

Recently, many authors have demonstrated the beneficial effects of delayed surgery [3,4]. Following the hospital ethical policy to prioritize patients of life threatening, relatively delayed facial nerve decompression surgery at later than three weeks from the onset is inevitable and mostly common in our institution.

The purpose of this study is

1) To elucidate the efficacy of the delayed transmastoid facial nerve decompression for RHS patients presenting the complete paralysis, performed at later than 3 weeks after the onset of paralysis.
2) To examine the significance of the intraoperative electrophysiologic test for predicting the prognosis of surgical outcome for RHS patients presenting the complete paralysis.

Methods and Materials

Fourteen RHS patients with complete facial nerve paralysis underwent transmastoid facial nerve decompression at later than 3 weeks after the onset of paralysis by single surgeon without any major complications. Average post-operative follow up was a minimum of 6 months. The time between the onset of the symptom and surgery ranged from 25-115 days (mean=56 days).

Main outcome measured were, pre- and post-operative HB grade at 6 months after surgery, and presence or absence of intraoperative evoked electromyographic neural response (INR) stimulated at the portion of horizontal segment before decompression procedure.

Correlation between each parameter and duration between onset and surgery (within or later than 30, 40, 50, and 60 days) was statistically analyzed using chi-square test.