Conclusions: Minimally invasive endoscopic parotid surgery provides a safer and aesthetic choice for the treatment of benign lesions located in the parotid tail. The advantages of this procedure include smaller operative scar with cosmetic results, shorter operation time, and less complication rate.

METHOD

The medical records of the patients receiving endoscopic or conventional parotid surgeries were retrospectively reviewed at a tertiary referral medical center-Changhua Christian Hospital from January 2002 to August 2007. A manual chart review was performed and a database was built including patient age, gender, wound size, length of surgery, pathology, complication, length of hospitalization and medical cost. Patients underwent parotid tumor excision, superficial parotidectomy or total parotidectomy by the otolaryngology physicians were collected into this study. Malignant parotid tumors, revision surgery and pre-operative facial nerve dysfunction were excluded from this research.

There were two series including the endoscopic parotid surgery and the conventional parotid surgery in this study. The indications for the endoscopic parotid surgery include chronic sialoadenitis and benign neoplasms located in the parotid tail. All endoscopic operations were completed with the designed endoscopic instrumentation and followed by the detailed procedures. A less than 35 mm skin incision was performed over the post-auricular skin crease (Figure 1) in the endoscopic group. For the conventional parotid surgery, a modified Blair skin incision (pre-auricular extending to submandibular incision) was made as a traditional exploration. Several parameters including gender, age, wound size, length of surgery, pathology, complication, length of hospitalization and medical cost were analyzed by SPSS system using the unpaired t test and \[\chi^2\] analysis in order to discover the differences and advantages of these two groups.

RESULT

Thirty two patients were underwent the endoscopic parotid surgery (23 males and 9 females). The endoscopic parotid operations were successfully completed by the corresponding author without any conversion to conventional procedure. The mean age was 49.66 years old with a range of 25 to 76 years old. One hundred ninety eight patients with benign parotid neoplasms received traditional parotid surgeries (114 males and 84 females). The mean age was 51.71 years old with a range of 11 to 88 years old. In the endoscopic group, the mean wound size was 3.0 centimeter, that was obviously shorter than the conventional group, ranging from 2.2 to 3.5 centimeter. 87 pleomorphic adenoma was the most common diagnosis in the conventional group followed by 73 Warthin’s tumor. On the contrary, 17 Warthin’s tumor dominated in the endoscopic parotid surgeries, comparing with 15 pleomorphic adenoma.

For the complication rates, only 4 patients had transient facial palsy after the endoscopic parotid surgery and all completely recovered within 6 months post-operatively without other complication. In the conventional group, there were 47 patients with transient facial palsy, 5 wound infection, 4 wound dehiscence, 2 post-operation seroma, 1 Frey syndrome and 1 pneumonia, respectively. The complication rates of the post-operation transient facial nerve weakness were 12.5% in the endoscopic group and 23.7% in the conventional group, which was statistically significant. There were 5 cases of permanent facial nerve weakness documented in the conventional group, but none in the endoscopic group. The endoscopic procedure was associated with a significant reduction in length of surgery (114.8 ± 25.2 min vs. 165.50 ± 31.3 min for the conventional group, \(P < 0.05\)). There were no significant differences between the two groups with respect to length of hospitalization (2.27 ± 0.25 days vs. 2.79 ± 0.65 days), or medical cost (1186 ± 304 USD vs. 1239 ± 522 USD).

CONCLUSION

Minimally invasive endoscopic parotid surgery provides a safer and aesthetic choice for the treatment of benign lesions located in the parotid tail. The advantages of this procedure include smaller operative scar with cosmetic results, shorter operation time, and less complication rate.

REFERENCES