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Simple method with periodontal probe for intraoral removal of recurrent deep hilar/intraparenchymal submandibular gland stone under local anesthesia



KEYWORDS

Intraoral removal;
Local anesthesia;
Periodontal probe;
Recurrence;
Submandibular gland
stone

Recently, the treatment of submandibular gland (SMG) sialolithiasis has been performed in minimally invasive procedures including sialendoscopy. However, larger SMG stones are commonly removed intraorally with/without sialodochoplasty which creates a new ductal opening, and the intraoral stone removals are indicated not only for distal but also for deep hilar/intraparenchymal stones.¹ Although distal stones can be removed under local anesthesia, deep hilar/intraparenchymal stones require commonly general anesthesia. In particular, submandibular sialoadenectomy may be performed in an invasive approach with skin incision, when intraoral removal of deep hilar/intraparenchymal stones is difficult.

Even if sialodochoplasty simultaneous with intraoral removal of SMG stones is performed, recurrent stones or duct stenosis occur in a low incidence.¹ The recurrence or duct stenosis after intraoral removal of deep hilar/intraparenchymal SMG stones requires surgical procedures in general anesthesia. Therefore, we reported a simple

method with periodontal probe for intraoral removal of recurrent deep hilar/intraparenchymal SMG stone under local anesthesia.

A periodontal probe which can measure the depth of the periodontal pockets was inserted into the narrowed orifice after sialodochoplasty during the primary intraoral removal of the SMG stone, and the recurrent SMG stone was touched with the probe (Fig. 1A, B and C). After local anesthesia, the periodontal probe was moved forward and backward, and the orifice was enlarged (Fig. 1D and E). Further enlargement of the orifice was performed using the long mosquito forceps, and then the recurrent SMG stone was removed with a dental curette (Fig. 1F and G).

The periodontal probe that we used has a 0.5 mm tip diameter, scale (3, 6, 8, 11 mm), and color coding (3–6, 8–11 mm), but various periodontal probes are commercially available. The thin periodontal probe can be inserted into the narrowed duct and the orifice can be enlarged by the probe movement. When there are recurrent stones, the

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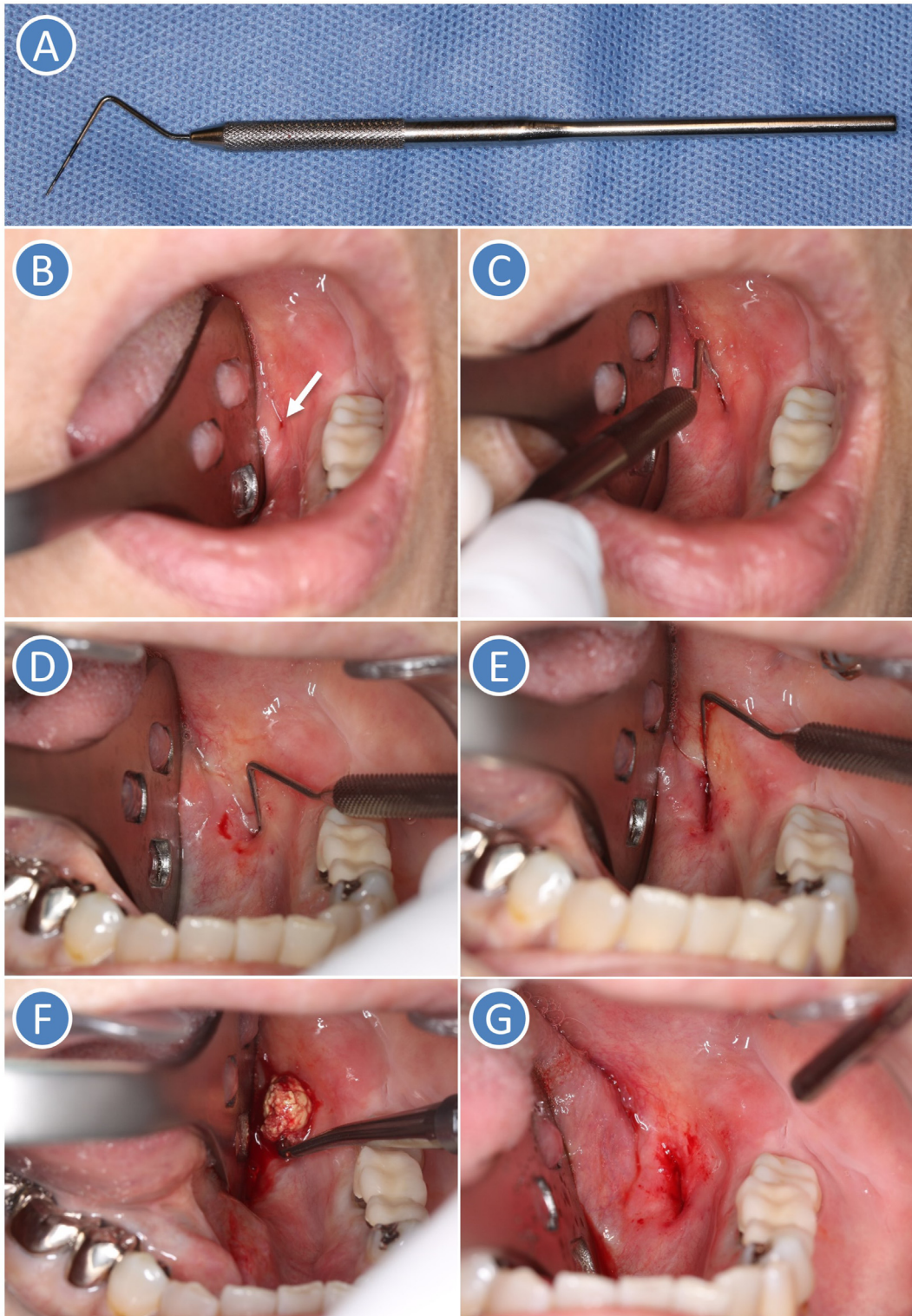


Figure 1 The clinical photographs of our patient for the intraoral removal of recurrent deep hilar/intraparenchymal submandibular gland stone under local anesthesia. (A) A periodontal probe. (B and C) The periodontal probe was inserted into the narrowed orifice (arrow) after sialodochoplasty during the primary intraoral removal of submandibular gland stone. (D and E) The periodontal probe was moved forward and backward, and the orifice was enlarged. (F) After the enlargement of the orifice was performed using the long mosquito forceps, a recurrent submandibular gland stone was removed with a dental curette. (G) The enlarged orifice after removal of the submandibular gland stone.

depth to the stone can be measured with the periodontal probe. Therefore, our method with the periodontal probe can allow the outpatient intraoral removal of the recurrent deep hilar/intraparenchymal SMG stone under local anesthesia.

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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