

Fig. 1. Reconstruction after auriclectomy and placement of implant.

and place transmucosal extensions. As the flap was placed over the implants, they were not palpable and there were no scar lines to help locate them. We used an ultrasound probe (Venue 50, GE Healthcare) to confirm their position, which showed as a clear acoustic enhancement (Fig. 2). We made a small incision at the site, located the implants easily, and inserted the transmucosal extensions before closure.

Ultrasonography is a useful imaging tool with a broad range of applications in clinical practice. Although it is more commonly used in relation to soft tissue, previous studies have shown its usefulness in locating orthopaedic and hormonal implants,^{2,3} and reports on its use in the assessment of intraoral implants have also been published.⁴ Our procedure prevents the surgeon from creating blind incisions or relying on their interpretation of descriptions from previous operative notes. It facilitates real-time guidance for the surgeon, is low risk, and cost-effective. We think that it may be particularly useful if no previous scars are visible, or when a free flap has been used.

Ultrasound equipment is commonly available in theatres and although it is dependent on the skills of the operator, proficiency can be acquired quickly. Our method allows for less scar tissue, smaller, more accurate incisions, and a reduction in operating time.



Fig. 2. Implant seen through an ultrasound probe.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patients' permission

Ethical approval not required. Patients' permission was obtained both verbally and in writing.

References

1. Elledge R, Chaggar J, Knapp N, et al. Craniofacial implants at a single centre 2005–2015: retrospective review of 451 implants. *Br J Oral Maxillofac Surg* 2017;**55**:242–5.
2. Westerway SC, Picker R, Christie J. Implanon implant detection with ultrasound and magnetic resonance imaging. *Aust NZ J Obstet Gynaecol* 2003;**43**:346–50.
3. Lohmann CH, Rampal S, Lohengel M, et al. Imaging in peri-prosthetic assessment: An Orthopaedic Perspective. *EFORT Open Rev* 2017;**2**:117–25.
4. Culjat MO, Choi M, Singh RS, et al. Ultrasound detection of submerged dental implants through soft tissue in a porcine model. *J Prosthet Dent* 2008;**99**:218–24.

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Available online 18 March 2019

<https://doi.org/10.1016/j.bjoms.2018.11.018>

Scope for patient-led diagrammatic mapping of facial pain

Sir,

We describe the potential uses of diagrammatic mapping in patients with facial pain or temporomandibular dysfunction (TMD) to help plan both treatment and operation, which follows a recent initiative at Leeds Teaching Hospital Trust.

A 77-year-old man attended an outpatient clinic complaining of chronic orofacial pain. His preferred method of showing the location of his pain and the range of discomfort across the area was with his own diagrams (Figs. 1 and 2). Unfortunately, in his case it did not aid his treatment, but it did encourage us to consider whether other patients could benefit from this method of communication.

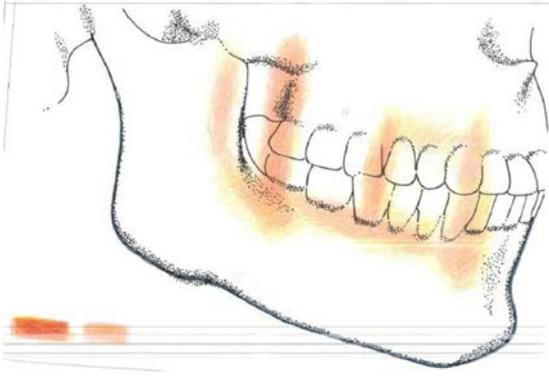


Fig. 1. Diagram showing facial pain in the mandibular division of the trigeminal nerve in our patient.

Pain diagrams are often used to assess musculoskeletal and chronic bodily pains,¹ but this has yet to be transferred into the management of facial or TMD pain. A cross-sectional study in 2016 found that drawings of sites of pain were simple adjunctive clinical and research tools for identifying comorbid pains in patients with TMD.² Geis et al³ also found merit in these diagrams for detecting other conditions that coexisted with facial pain, and concluded that using them for diagnosis did not place excessive demands on patients.

Physical and psychological comorbidities have a large impact on treatment outcomes in orofacial pain. The use of localised, regional, or whole-body pain drawings could allow patients to convey their history and symptoms more effectively, and to improve the sharing of information between them and their surgeons to improve the planning of treatment.

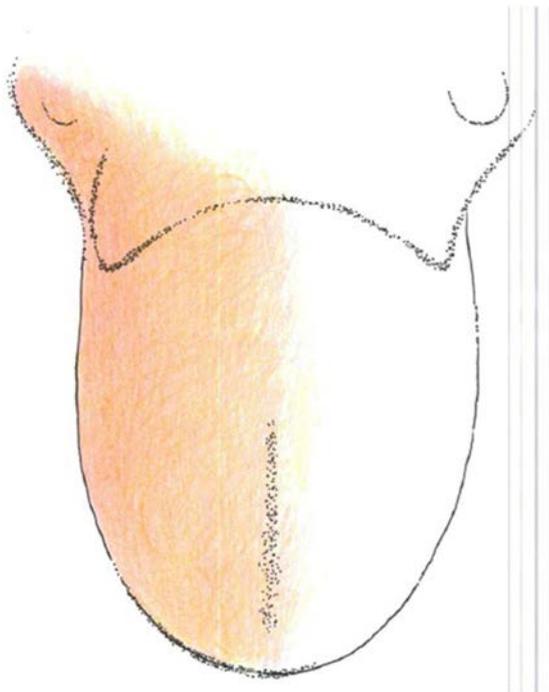


Fig. 2. Diagram showing the radiation of pain across our patient's tongue on the right side.

We consider patient-drawn pain diagrams to be of diagnostic value, as they may more accurately identify pain within a division or branch of the trigeminal nerve that may be amenable to a more localised procedure, particularly in those who struggle to portray their symptoms verbally.

Authors' contributions

Naeem Adam: Authorship of letter.

Emma Walshaw: Authorship of letter and submission.

Lachlan Carter: Authorship of letter and treating clinician.

Conflict of interest

We have no conflicts of interest.

Ethics statement/confirmation of patient's permission

No ethical approval required. No permission or consent was required from the patient.

References

1. Carnes D, Ashby D, Underwood M. A systematic review of pain drawing literature: Should pain drawings be used for psychologic screening? *Clin J Pain* 2006;**22**:449–57.
2. Suvinen TI, Kemppainen P, Le Bell Y, et al. Assessment of pain drawings and self-reported comorbid pains as part of the biopsychosocial profiling of temporomandibular disorder pain patients. *J Oral Facial Pain Headache* 2016;**30**:287–95.
3. Geis C, Feierabend S, Böhner W, et al. Pain drawings of patients with orofacial pain. Comparison of acceptance and gain of information. *Schmerz* 2006;**20**:498–508 (Paper in German).

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Available online 5 March 2019

<https://doi.org/10.1016/j.bjoms.2019.02.005>

A timely reminder of the importance of follow up

Sir,

Alveolar osteitis is a common reason for dental emergencies after the extraction of teeth. Dentists are well-equipped