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## Letter to the editor



## Minimally invasive benign parotid surgery in selected patients: An adaptation example to compensate for COVID19 backlog or new era?

COVID-19 pandemic has spawned an unprecedented financial and health crisis. The need for hospitalisation and even provision in ICU level as a result of high patient influx and disease severity, in addition to staff shortages due to redeployment, illness and concerns of viral transmission have overwhelmed most healthcare systems globally. Consequently, system constraints have resulted in significant delays in head and neck cancer surgery. New guidelines from institutional to international level have been issued for prioritising head and neck cancer patients, treating them in the most effective and safe way [1].

Nonetheless, this adaptation has resulted in disruption of routine hospital operations worldwide and a tremendous backlog of patients with benign conditions has already ensued. According to COVIDSurg Collaborative there is an 81.5% 12-week cancellation estimate (3.95 million cancelled cases out of 4.85 million 'planned' cases) for benign head and neck cases worldwide, with North America and EU being severely affected [2]. Governments will face substantial increases in baseline surgical volume to clear waiting lists, requiring extra surgical lists, more staff and facilities which will have financial sequelae. For example, based on an average cost of £4000 per operation, it would cost over £2 billion to clear the UK's backlog [2].

From a surgical standpoint, resources should be exploited in the most time and cost-efficient way. This is exemplified in Figs. 1, 2 wherein a 41-year-old otherwise healthy female patient with radiologically suggestive and cytologically confirmed ESGS level II PSA (2.7 cm × 2.3 × 1.5 cm) underwent ECD II [3]. Modified Blair incision was used, and flap raised above SMAS layer preserving the posterior branch of GAN. The tumour was scored in target fashion. Once tumour was removed Floseal was used and the fascial edges sutured. The wound was closed drainless. Nerve monitoring was used throughout the procedure. Pressure bandage was applied for 12 h. The patient was uneventfully discharged next day as deemed to live far from hospital.

ECD has been popularised in the UK and Germany over the last 3 decades. It has been proved to be as safe as partial parotidectomy in terms of recurrence (3.4% vs. 1.8%,  $p = 0.1$ ) with better outcomes in terms of temporary facial nerve injury rates (3–6% vs 16%), Frey's syndrome (3% vs 10%) [4]. Recently, Mantsopoulos et al. reported that ECD did not require higher rates of revision surgery (1.1%) compared to facial nerve dissecting parotidectomies (1.4%) after studying 2465 cases. Most revision cases were due to a malignancy diagnosis in the final specimen. Also, their study has attested to the fact the revision surgery has no worse outcomes in terms of facial nerve palsy [5]. However, ECD is not a "one fits all" method, and certain criteria should be fulfilled in order to be achievable [4,6].

The application of haemostatic materials in parotid surgery has been known for 2 decades. Nonetheless, there is lack of large prospective randomised trials. Chua and Goh prospectively randomised 70 patients

that underwent superficial parotidectomy. 35 had Tisseel without drain, and the remainder had a 12 French redivac drain. The average length of stay was 2.3 days in the drain group compared to 1.1 days in the Tisseel group. In addition, there was no statistically significant difference in complication rates between two groups [7].

Similarly, Coniglio et al. retrospectively studied 91 patients that underwent superficial parotidectomy. 42 of them underwent drainless outpatient parotidectomy. Treatment selection was not based on radiological tumor volume cutoff, but rather on patient or tumor location factors. The drainless group had minimised antero- or retrograde nerve dissection to the involved area sparing unnecessary fascia and gland removal. In addition, fascia was approximated after tumor removal or additional material was placed to replenish the dead space and jaw bra was applied for at least 48 h. The mean intraoperative blood loss was significantly less in the drainless group (16.9 mL vs 34.9 mL  $P < .001$ ). There was lower rate of facial nerve injury in the former group (7% vs 16.3%  $P = .18$ ). Drains were removed after 1.7 days on average in the second group. Tumour pathologies as well as seroma formation and infection rates were similar. Nonetheless, the authors highlighted that the drain-free group had smaller tumours (average tumor size 24.5 mm (SD 11.3) vs 32.8 mm (SD 14.6)  $P < .001$ ) [8]. Ninety-one patients underwent parotidectomy (42 drainless; 49 drained). Intraoperative blood loss was lower in the "drainless" group (16.0 mL vs 34.9 mL,  $P < .001$ ). There was a lower rate of facial nerve paresis in the "drainless" group compared with the "drained" cohort (7% vs 16.3%,  $P = .18$ ). Seroma formation and infection rate was similar.

In addition, the vexed question of "same day" parotidectomy was recently addressed in a meta-analysis by Flach et al. after reviewing 6 studies yielding 3664 patients in total. 1646 had outpatient (mainly with drain to take home) parotidectomy, and 2018 were inpatients. The authors concluded that outpatient cohort compares favourably in terms of risk of hematoma (OR 0.45; 95% CI:0.11–1.92;  $P = .28$ ), facial nerve weakness (OR 0.39; 95% CI 0.14–1.08;  $P = .07$ ), or hospital readmission (OR 0.58; 95% CI:0.33–1.04  $P = .07$ ). In one recent study that was quoted in this paper the average hospital cost was \$1200 less and the profit was \$1500 more, in the outpatient cohort [9].

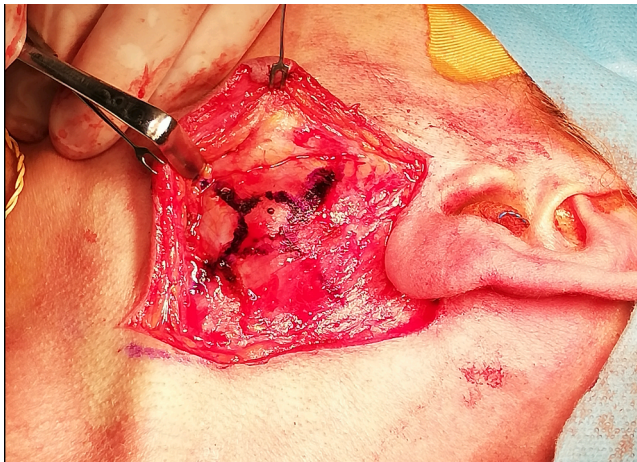
In conclusion, as elective head and neck cases are projected to soar until this pandemic is resolved, health services will need to adopt new strategies for care delivery. Benign parotid surgery represents a significant workload in this context. Although there is no current guidelines or large prospective randomised trials to underpin our management, there is plausible evidence to suggest that minimally invasive benign parotid surgery, akin to thyroid surgery, even as day case surgery in selected patients (good cognitive status, adult support after discharge, proximity to hospital, minor co-morbidities) should be the way forward. The use of absorbable sutures, phone consultations or telemedicine could further

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**Fig. 1.** The tumor is scored in target fashion. The circular part is left attached to the tumour to facilitate its manipulation, whereas the linear parts are dissected and retracted away from it.



**Fig. 2.** Final result at day 1 postoperatively. The use of dissolving sutures would be preferable to obviate an additional outpatient visit.

minimise our contact with patients in the outpatient setting.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence

the work reported in this paper.

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