Oral Presentation

1. Prevalence of Infections Following Orthognathic Surgery at Mid-Yorkshire Hospitals Trust and risk factors contributing to this.

Aims: The purpose of this service evaluation was to investigate the prevalence of infections following orthognathic surgery at Mid-Yorkshire Hospitals trust and to investigate risk factors.

Methods: All patients (n=55) undergoing orthognathic procedures between January 2015 and August 2016 were included in the retrospective evaluation. Medical records were assessed and where patients were noted to have suffered any postoperative infection, factors including age, smoking status, type and duration of operation were recorded.

Results: 16% (n=9) of patients developed infections postoperatively. Within these 9 patients, 4 operations were on the mandible alone and 5 were bimaxillary osteotomies. 3 infections occurred in the maxilla and 5% (n=3) of patients had infections at two different sites. 55% of patients who developed infections were smokers (n=5). 33% were noted to have poor oral hygiene postoperatively, 1 was associated with an unfavourable split (11%) and 1 had suffered previous trauma to the mandible. 1 patient was diabetic. All patients received a single preoperative and two postoperative intravenous doses of antibiotics. In 67% of the patients with infection, this necessitated hardware removal. The average length of surgery (including anaesthetic time) for patients who did not have an infection was 4 hours 11 minutes in comparison to 3 hours 48 minutes for patients who did have an infection.

Clinical Relevance:

We are following the national clinical guideline on antibiotic prophylaxis in surgery recommended by SIGN. Postoperative infections can be associated with smoking and poor oral hygiene. Patients undergoing orthognathic surgery should be screened and encouraged to cease smoking, at least perioperatively. The mandible is more prone to infection than the maxilla. Patient demographic and operation duration were insignificant.

2. Is it justifiable to admit Orthognathic surgical patients for less than 23 hours? A single surgeon’s experience

Introduction: To assess how long, on average orthognathic patients are admitted to a ward following their surgery and to investigate if there were any immediate re-admissions or complications after discharging these patients.

Method: 32 patient records were assessed and the number of hours patients were admitted to a ward following surgery was investigated. Hospital admissions were examined to investigate if there were any immediate readmissions or complications.

Results: 91% of patients were discharged within 23 hours or less. 78% (n=25) of patients were discharged after being admitted to a ward for 20 hours or less. This ranged from 16 to 20 hours. 3 patients were discharged after spending 2 nights in hospital due to medical problems such as high blood pressure. Of the surgeries 72% were bimaxillary osteotomies and 28% had single jaw surgery.

Conclusion: 91% of our patients were discharged within 23 hours and there were no immediate readmissions. In the current NHS climate, treating orthognathic patients as 23 hour admissions could help to reduce bed pressures, helping to alleviate stretched NHS resources and reducing the risk of last-minute procedure cancellations. It would facilitate a more efficient and effective use of resources while maintaining patient safety. Shortened hospital stays and earlier mobilisation also can help to reduce the risk of hospital acquired infections and venous thromboembolism.

Posters

1. Patient aftercare and the orthognathic journey at Mid-Yorkshire Hospitals Trust- Can we improve it?

Introduction: The Orthognathic Procedures Commissioning Guide recommends two surgical outpatient reviews in the immediate postoperative period and a period of postsurgical orthodontics is then required on a 6 weekly basis for up to 12 months. The aim of the audit was to check if this maxillofacial unit was within recommendations and see can we improve the service. The average time to recover was also investigated to help us ensure that we can tell our patients more accurate recovery times.

Methods

Patient notes were used to review patient attendances and appointments following surgery. The average time to recover was also investigated via patient phone calls and notes.

Results:

Over the 6 weeks postoperative period-2 surgical reviews were provided on average (n=123/55-2.2). Our Orthodontic Department provided 2 appointments on average within 6 weeks (99/55). In addition to this there were 32 joint Orthognathic clinic appointments. However there were 8% failed appointments. Average time to recover was 5 and half weeks.

Conclusions/Clinical Relevance

In conclusion this orthognathic unit is within the commissioning recommendations. Our orthodontic unit provided double the amount of appointments required within the first 6 weeks. However the change recommended from this audit is to try to coordinate more follow up appointments on the joint orthognathic clinic to improve efficiency of clinic time and reduce appointment failures. This would also help to improve interdisciplinary communication between consultants in regards to patient management and therefore improving patient care.

1. An Audit of Post Operative Complications following Orthognathic surgery at Mid-Yorkshire Hospitals Trust.

Introduction: In order to obtain meaningful consent it is important to audit local postoperative complications rather than stating national averages.

Methods

Immediate and longterm complications were recorded by reviewing patient notes postoperatively.

Results: Immediate complications include 2 patients (4%) failed to achieve class I occlusion, 1 postoperative bleed (1.8%), 1 patient had a lisp (1.8%), 1 (1.8%) had a deviated nasal septum as a result of surgery. 1 patient (1.8%) had an unfavourable split of the mandible. Long term complications include nine infections postoperatively (16%), 1 case of progressive condylar resorption (1.8%) and 1 relapse (1.8%) one year later. 1 patient had Myofascial pain (1.8%) one year post operatively. No complications were fatal.

Clinical Relevance: In comparison to various studies, our post-operative infection rate is higher than infection rates stated in the Orthognathic Commissioning guide of 11.2% to 3.8%. Our complications were lower on other aspects such as unfavourable osteotomy (3.7%), excessive bleeding (2.0%) and soft tissue damage (2.0%). We need to investigate why the infection rate is higher than the national average. Despite the great variety of severe complications reported, their frequency seems to be extremely low. It can be concluded that Orthognathic surgery appears to be a safe procedure.

Questionable whether to submit?

Perioperative Measures during Orthognathic Surgery: A retrospective service evaluation from a maxillofacial surgery unit.

Introduction: It is essential to regularly assess perioperative care for patients undergoing orthognathic procedures in order to improve patient care and experience. A prophylactic antibiotic regimen is considered to be useful for infection prevention in orthognathic surgery. Literature reports show that dexamethasone decreases oedema and pain significantly in orthognathic surgery. Consent is essential with every surgery. Chlorhexidine (CHX) mouth rinse can still be considered the gold standard in the chemical prevention of plaque formation. Optimum oral hygiene during the postoperative phase is essential to maintain to avoid postoperative infections.

Methods: Data from patients’ medical records was collected and analysed on inpatient stay, consent, intravenous antibiotics, dexamethasone and chlorhexidine gluconate.

Results: The majority of cases (75%) had an inpatient stay of 1 night n=41, 18% 10 spent 2 nights, 3% (n=2) spent 3 nights and 3% (n=2) spent 4 nights. 55 cases were assessed; two cases were rejected as there was insufficient data. Consent was obtained in 100% of cases. Intravenous antibiotics (co-amoxiclav or if allergic metronidazole and clarithromycin) were prescribed at induction and 2 further doses postoperatively for all patients. Chlorhexidine Gluconate 0.2% was prescribed in 100% of cases. 100% had IV dexamethasone on induction and 2 postoperative doses.

Conclusions: It is concluded that our unit is below the national review of 3.2 days for inpatient stay. We are following the national clinical guideline on antibiotic prophylaxis in surgery recommended by SIGN. We are taking the same measures on every patient for perioperative care.