The Journal of Laryngology and Otology
May 1994, Vol. **108**, pp. 406–409

Day case surgery in otolaryngology: The setting up and first year of a freestanding unit

T. H. J. LESSER, A. H. H. AL-JASSIM

Abstract

A freestanding day case surgery unit for ENT cases is described and the first year's experience reviewed. Special attention is paid to the variety, and complications, of surgery as the freestanding unit is 17 miles from the main ENT centre. The difficulties of running the unit are reviewed. The problems encountered include arranging training for the staff and maintaining optimum throughput of cases. Consideration is also given to the setting up and running costs of the unit.

Four hundred and seventy-seven patients were treated from 46 lists. This accounted for 64 per cent of the total number of patients having ENT surgery in 1992 from our area.

Key words: Day care; surgery; Otolaryngology

Introduction

Benefits of day case surgery are well documented and have been previously reviewed for ENT (Lesser *et al.*, 1986). This previous paper dealt wth the first 10 years of ENT day case surgery in a University teaching hospital backed-up by fully equipped inpatient facilities on site. It was the first paper to document what was actually performed in a single unit for adult day case surgery in otolaryngology in the UK. Since then further papers have documented specific operations, addressing their suitability for day case surgery for example, fat graft myringoplasty (Kaddour, 1992), submucous resection of the nasal septum (Buckley *et al.*, 1991), and also tonsillectomy, adenoidectomy and adenotonsillectomy (Yardley, 1992). As well as reviews of specific operations there has been general guidance, more on theoretical grounds, than on actual experience. This has been sent out by the learned bodies on what should be done, but with no actual documentation of what is being done. The Royal College of Surgeons of England has produced a report from the working party on guidelines for day case surgery (1985) and the Audit Commission (1990) has also produced a report. Other specialities such as Ophthalmology have reviewed the overall work loads of dedicated day case units (Strong *et al.*, 1992).

As an outpost of the Aintree Hospitals Department of Otolaryngology/Head and Neck Surgery, a day case surgery unit was set up in Southport General Infirmary, some 17 miles away. This was in response to the local need. There had been no ENT surgery within this Health Authority, with a population of approximately 125 000, for the preceding five years. There was therefore no facility, equipment or trained staff to provide this service. In this paper we deal with the setting up of a freestanding day case surgery unit for otolaryngology and review the workload of the unit for its first calendar year.

Methods and materials

All the patient data was collected prospectively using a card index for day case otolaryngology patients. The index recorded the demographic data, reason for surgery, nature of surgery, any immediate or late complications of surgery, disposal of patients, time of discharge after the operation and allowed space for feedback from the GP or patient if any.

The unit opened in October 1991 and the first calendar year, with which this paper deals, is 1992. The unit had been open for three months, so that any teething troubles should have been ironed out by the beginning of 1992.

Facilities

A fully equipped theatre was made available. A modern ward was refashioned to provide two six-bedded subwards. This provided six beds for adults and six for children, two of which were cots for children under three years. Two single rooms were upgraded for private patients. A waiting room for relatives, a kitchen, and a playroom for children, as well as the usual ward facilities were provided.

Staff

The theatre required a complete set of ENT instruments and operating facilities, including the appropriate headlights, microscopes, video cameras and still camera, as

From the Aintree Department of Otolaryngology/Head and Neck Surgery, Walton Hospital, Rice Lane, Liverpool.
Accepted for publication: 2 February 1994.

well as the revision of the anaesthetic equipment to enable children to be anaesthetized and monitored safely.

The ward is open from 8 a.m. until 8 p.m. It may close earlier if all the patients have gone home. There are no inpatient facilities in this unit. The closest inpatient facilities are two miles away at a small district general hospital. The closest ENT facilities are at the main hospital 17 miles away.

Staffing levels are documented in Table I. With the exception of the medical staff, none of the staff had previous experience in the care of ENT inpatients, or ENT theatre work. To provide continuity of care the ENT outpatient nurses were trained by seconding them to the main unit at Aintree Hospital for a minimum of a week each. This secondment included the ODAs.

Costs

The costs of setting up the unit were £90 000. The running costs including the salaries of the staff and the cost of maintaining the unit is £1500 per session.

Pre-operative clinic

The patients are assessed in a dedicated pre-operative clinic. Their social suitability, their medical fitness for anaesthesia and their indications for surgery are checked. Routine ECGs, chest X-rays, full blood count and urea and electrolytes are performed on all patients over 60 years of age with ECGs and chest X-rays on patients over 45 years of age. Audiograms and tympanograms are repeated. The patients are then shown the day ward, so that they are familiar with the set-up.

A short notice list of patients is kept in case there are patients who cancel. These patients are called the following day to be assessed and the list is kept full.

Results

From January 1st to December 31st 1992, 477 patients were treated as day cases. They underwent 594 procedures. During this time 46 lists were performed. The average number of patients treated per list was 10.4. The patients ages ranged from 8 months to 88 years: 206 were female and 271 male. Two hundred and sixty-two (55 per cent) were under the age of 14 years, 45 (9 per cent) were aged over 65 years. Twenty-eight (6 per cent) of the operations were done under local anaesthesia and the remainder under general anaesthesia.

TABLE I
STAFFING LEVELS AT THE DAY CASE UNIT

Medical staff		
Surgeons	Consultant	1
	Staff grade	1
Anaesthetists	Consultant	1
	Registrar or Experienced SHO	1

Nursing and allied staff	Ward	Theatre	Recovery
Grade			
Sister/Charge	1	1	–
Staff nurse	3	1	1
Enrolled nurse	–	3	2
Auxillary nurse	2	–	–
Nursery nurse	1	–	–
ODA	–	2	–
ODO/Porter	1	1	–
Receptionist	–	1	–

Scope of surgery

This is shown in Tables II–V.

Complications

During 1992 no patients needed admitting overnight and none of the patients required admitting or readmitting to the main ENT centre. Complications reported by patient or GP were; epistaxis after turbinectomy (1), analgesia needed after rhinoplasty (1), post-operative (grommet insertion) nausea/vomiting call out (1), nose infection after SMD (1), throat infections (1). This is a total of one per cent minor complication rate: no major complications were reported.

In the three months before this study when the unit had first opened, three patients did require admitting, one to the local general hospital and two to the main ENT centre, 17 miles away. One patient had to have the operation cancelled on the operating table; a patient who had a submucous resection of the nasal septum developed signs of ischaemic heart disease on the ECG whilst in the theatre. He was transferred to the local hospital. The ECG changes were not confirmed using a 12 lead ECG and the ECG was the same as his pre-operative one. He was sent home the next day and no further complication occurred. Another patient was a thalidamide victim who had a submucous resection of the nasal septum and had low blood pressure following the anaesthetic. He was admitted to the main ENT centre at Aintree and was discharged home the next morning. The third patient was a 60-year-old nervous lady, who had a submucous diathermy and refused to go home, because she had some oozing from her nose. Despite reassurance she demanded to be kept in and was transferred to the main ENT centre 17 miles away and was then sent home the following morning.

One patient had to have his operation cancelled. A 70-year-old gentleman developed a reaction to the nasal application of cocaine paste before polyp removal. The operation was cancelled and he was sent home without further complication.

Discussion

The complexity of procedures gradually increased over the year. For the first six months that the unit was open

TABLE II
NASAL SURGERY

SMR	48
Septoplasty	11
Nasal polypectomy	34
Submucosal diathermy	44
Rhinoplasty	4
Nasal Biopsy/EUA of nose	11
Manipulation of fractured nose	17
Cautery to nose	12
Bilateral antral washout	30
Turbinectomy	8
Functional endoscopic sinus surgery	12

https://doi.org/10.1017/S002221510012691X Published online by Cambridge University Press

TABLE III
OTOLOGICAL SURGERY

Grommet insertion	177
EUA or suction of ear	19
Biopsy of ear	2
Myringoplasty	10
Stapedotomy	2
Ossiculoplasty	2
Tympanoplasty	1
'T' tube insertion	26
'T' tube removal	23
Removal of foreign body from ear	2

there was no middle ear surgery performed in the unit and no functional endoscopic sinus surgery. These have been gradually introduced, as the nurses have become familiar with the new techniques and instrumentation.

As there are two fully trained surgeons (one consultant and one staff grade surgeon) doing the surgery this has allowed the high turnover and lack of complications to occur. Two experienced anaesthetists, two ODAs and a dedicated theatre porter are also required for this turnover to be maintained.

The day ward is run by the sister, who is in charge of the outpatients for ENT, which is in the same hospital. The staff have remained constant throughout the year and have gained experience in dealing with the post-operative ENT problems knowing that there is always an experienced doctor in the same building while the ward is open. The district nurse liaison officer is contacted at the end of each session and the GP, in the usual manner. The patients are sent home with explicit written instructions and a helpline contact number for the main ENT centre.

The costs of treating the patients in the day unit are the lowest in Merseyside. The issues of patient satisfaction and quality of care, however, were not specifically examined in this study.

The recovery from day case anaesthesia has been dramatically improved in recent years thanks to advances, such as the laryngeal mask and propofol (Diprivan) allowing the surgery, rather than the anaesthetic to be the determinant of the suitability for day case surgery. Submucous resections, septoplasty, nasal polypectomy, rhinoplasty etc., are done without nasal packing. This is mainly in an effort to avoid the increased incidence of septal perforation and cilial motility damage that packing causes. Usually posterior septal drainage holes are made in septal surgery and occasionally quilting.

Functional endoscopic sinus surgery is performed under general anaesthesia, but only on patients with disease limited to the anterior and middle ethmoid areas as shown on their CT scans. The otological surgery has mainly been grommet insertion. No children wait longer

TABLE IV
THROAT SURGERY

Examination of post-nasal space ± biopsy	19
Microlaryngoscopy	11
Teflon injection	2
Pharyngoscopy	17
Direct laryngoscopy	22
Uvulectomy	3
Oesophagoscopy/Bronchoscopy	11
Tongue tie	2
Oral cavity operations	2

TABLE V
MISCELLANEOUS PROCEDURES

Fine needle aspiration	6
Pinnaplasty	2
Plastic facial surgery	1
Biopsy of neck node	1

than six weeks for their grommets to be inserted. The middle ear surgery is done under local anaesthesia, using a regional block, and an endaural approach. There have been no complications from endoscopy in the year 1992, but since then we have had one perforated cervical oesophagus. The patient was transferred to the main ENT centre and treated conservatively.

The staff in the main ENT centre are aware of the procedures that are being carried out in the peripheral unit and are available for telephone advice after hours, and for the occasional patients that require admission. They also cover a similar unit in Ormskirk District General Hospital.

The day case unit operated on 64 per cent of the patients from the Southport and Formby Health Authority, who had ENT operations in 1992. This is a large figure but is slightly misleading because the inpatient waiting list numbers increased during that year whilst the day case surgery numbers waiting list did not. During 1992 54 per cent of patients were listed for day case surgery and 46 per cent were listed for inpatient surgery for this Health Authority. The surgery performed in this unit is not a comprehensive list of day case procedures. No adenoidectomies were performed in this unit, whereas the unit in Ormskirk routinely does day case adenoidectomies.

The list system has proved satisfying for the surgeons, who are enjoying a high turnover of routine cases with one or two more interesting cases from each list. The patients have greeted the service warmly and with enthusiasm backed by recommendations from their GPs. There have been no complaints from the local GPs, despite the increased involvement that they have in the first few days of post-operative care for their patients.

Conclusions

It is possible to run a day case surgery unit in a freestanding hospital, even though it is 17 miles from the main centre and two miles from the nearest general hospital.

To optimize the throughput of patients, a pre-operative clinic has been held in the middle of the preceding week to allow the familiarization of the patients with the unit and procedures, the necessary investigations (allowing time for the results to be obtained) and for replacement of any patients not attending, or patients being cancelled. Experienced anaesthetists and surgeons are required for maximum safety and minimum complications. Enthusiasm is what is required from the theatre nursing staff and support staff, this is enhanced by treating the local population and keeping the staff constant.

For the 477 patients treated in the day unit in 1992, the setting up of a freestanding day case unit has been of benefit.

Acknowledgement

The authors would like to thank Miss Joanne England for typing the manuscript.

References

Audit Commission for local authorities and the NHS in England and Wales (1990). *A Short Cut to Better Services – Day Surgery in England and Wales*, HMSO.

Buckley, J. G., Mitchell, D. B., Hickey S. A., O'Connor, A. F. (1991) Submucous resection of the nasal septum as an outpatient procedure. *Journal of Laryngology and Otology* **105:** 544–546.

Kaddour, H. S. (1992) Rapid communication myringoplasty under local anaesthesia: day case surgery. *Clinical Otolaryngology* **17:** 567–568.

Lesser, T. H. J., Clayton, M. I., Carlin, V. W. (1986) Day case surgery in otolaryngology: a 10-year analysis. *Clinical Otolaryngology* **11:** 239–246.

Royal College of Surgeons of England (1985). *Commission on the Provision of Surgical Services – Guidelines for Day Case Surgery*, RCSE, London.

Strong, N., Wigmore, W., Rhodes, S., Smithson, B., Woodruff, G., Rosenthal, R. (1992) Ophthalmic day case surgery, the role of a dedicated day case unit. *Health Trends* **24:** 148–150.

Yardley, M. P. J. (1992) Tonsillectomy, adenoidectomy and adenotonsillectomy: are they safe day case procedures? *Journal of Laryngology and Otology* **106:** 299–300.

Address for correspondence:
Mr T. H. J. Lesser,
ENT Department,
Southport and Formby NHS Trust,
General Infirmary,
Scarisbrick New Road,
Southport,
Merseyside PR8 6PH

Editor's note

I am most interested to receive correspondence in relation to this article, particularly to gain national experience of day case surgery.