The management of intractable vasomotor rhinorrhea by transnasal vidian neurectomy

C. M. C. FERNANDES

Summary

The performance of transnasal vidian neurectomy in cases of intractable vasomotor rhinorrhea is described. Of the 66 patients who underwent the procedure, 58 have been followed up and 96% of these reported total or marked improvement in nasal obstruction, 87% reported total or marked improvement in rhinorrhea and sneezing and 90% reported improvement in post-nasal drip. The procedure is recommended for patients in whom medical treatment has failed.

Intractable rhinorrhea in both allergic and vasomotor rhinitis, despite adequate therapy, is a problem which is faced by all medical specialists handling these conditions. The primary approach is medical, with a combination of allergen elimination, desensitisation, antihistamines and topical steroids or chromoglycate. There are a small number of patients who are resistant or develop resistance to medication. These patients suffer a miserable existence and move from one specialist to another in the hope of relief.

Vidian neurectomy offers hope of relief to these patients, yet the operation has been met with mixed feelings by otorhinolaryngologists. Since its description by Golding Wood,1 he and subsequent authors have reported up to a 94%2 long-term success rate, but there has been strong resistance to performing this operation because of fear of poor results and the belief that the results are only temporary.

The operation described and popularised by Golding Wood1 was performed via a transantral approach. This is a daunting procedure and, while we have found patients sufficiently troubled by their symptoms to accept this operation, its magnitude, complexity and morbidity are sufficient to deter both surgeon and patient alike. The transnasal approach to vidian neurectomy was first described by Patel and Gaikward3 in 1975 and offers an easy, quick and safe approach to bilateral neurectomy. Our results, using a modified version of this technique, are presented.

Patients and methods

Since 1983, 66 patients have had transnasal vidian neurectomy performed in 4 hospitals in the Durban metropolitan area. Their ages ranged from 14 to 61 years (mean 30 years). The sex incidence was equal, with 33 male and 33 female patients.

Patients with rhinorrhea and occasionally those with nasal obstruction and who had had symptoms for many years were selected for operation. Duration of symptoms was over 10 years in most patients. One patient had recurrent nasal polyposis despite 7 operations.

A detailed history was taken for all patients and, where indicated, skin, IgE, and radio-allergosorbent tests and radio-
Discussion

The efficacy of vidian neurectomy in controlling the symptoms of vasomotor rhinitis has been well established by several workers and the results, as reported by Golding Wood, Patel and Gaikward, and Kirtane et al., have been excellent, Golding Wood describing a 94% 5-year success rate. Malcolmson first recommended vidian neurectomy and used a transantral approach but only avulsed the fibres coming out of the sphenopalatine foramen. In 1961 Golding Wood perfected the transantral approach with excellent results. The difficulty of performing this operation and the morbidity, including the fact that only one side at a time could be operated on, led other authors to search for a less daunting approach. A transpalatal approach was described by Chandra in 1969 and improved by Mustafa et al. in 1973, and a transseptal approach which had good results was described by Minnis and Morrison in 1971.

Both the transseptal and transpalatal approaches have gained limited acceptance because they are cumbersome and give poor exposure. The transnasal approach, as described, offers many advantages over other methods of vidian neurectomy, for example: (i) it is quick and easy to perform; (ii) both sides can be done at the same time; (iii) it is free from the complications of other approaches — ophthalmoplegia has been described in transantral vidian neurectomy (3 out of 292 patients in Golding Wood's series) owing to the cautery probe protruding through the posterior end of the vidian canal, which is impossible in the transnasal approach with a rigid probe owing to the angle of the canal, bleeding and damage to the structures of the pterygomaxillary fissure are unlikely since these structures are laterally situated, damage to the foramen rotundum is impossible because of its lateral position (Fig. 3) and dental anaesthesia and infra-orbital neuralgias and maxillary sinusitis are avoided; (iv) it destroys preganglionic fibres and thus long-term results are likely to be good; (v) it can be easily repeated if the procedure fails on the first attempt; and (vi) hospitalisation is not required beyond the postoperative period since no major incisions are made.

Results (Fig. 3)

All patients were contacted telephonically and reviewed. Eight patients were lost to follow-up. Of the remaining 58 patients, 96% reported total or marked improvement in their nasal obstruction, 87% reported total or marked improvement with runny nose, 87% reported total or marked improvement with sneezing and 90% reported improvement with postnasal drip. Recurrence of symptoms developed after 18 months in 3 patients (5%).

On examination, all patients in whom the operation had been successful had a good airway, the turbinates were of a neutral size with a dry, red mucosa and no crusting was present.

There were no major complications. During surgery there might be some troublesome bleeding which can be controlled by suction diathermy. Headache was a common postoperative complaint and rarely lasted more than 1 - 2 weeks. Transient numbness of the upper teeth was noted by some patients.

There have been no long-term complications and all patients were asked particularly about ocular symptoms; none was reported.

Two patients developed sinusitis which responded to treatment. The patient with chronic polyposis has had no recurrence 18 months after surgery.

Results (Fig. 3)

The efficacy of vidian neurectomy in controlling the symptoms of vasomotor rhinitis has been well established by several workers and the results, as reported by Golding Wood, Patel and Gaikward, and Kirtane et al. have been excellent, Golding Wood describing a 94% 5-15-year success rate. Malcolmson first recommended vidian neurectomy and used a transantral approach but only avulsed the fibres coming out of the sphenopalatine foramen. In 1961 Golding Wood perfected the transantral approach with excellent results. The difficulty of performing this operation and the morbidity, including the fact that only one side at a time could be operated on, led other authors to search for a less daunting approach. A transpalatal approach was described by Chandra in 1969 and improved by Mustafa et al. in 1973, and a transseptal approach which had good results was described by Minnis and Morrison in 1971.

Both the transseptal and transpalatal approaches have gained little acceptance because they are cumbersome and give poor exposure. The transnasal approach, as described, offers many advantages over other methods of vidian neurectomy, for example: (i) it is quick and easy to perform; (ii) both sides can be done at the same time; (iii) it is free from the complications of other approaches — ophthalmoplegia has been described in transantral vidian neurectomy (3 out of 292 patients in Golding Wood's series) owing to the cautery probe protruding through the posterior end of the vidian canal, which is impossible in the transnasal approach with a rigid probe owing to the angle of the canal, bleeding and damage to the structures of the pterygomaxillary fissure are unlikely since these structures are laterally situated, damage to the foramen rotundum is impossible because of its lateral position (Fig. 3) and dental anaesthesia and infra-orbital neuralgias and maxillary sinusitis are avoided; (iv) it destroys preganglionic fibres and thus long-term results are likely to be good; (v) it can be easily repeated if the procedure fails on the first attempt; and (vi) hospitalisation is not required beyond the postoperative period since no major incisions are made.
Antenatal detection of small-for-gestational-age babies

Choice of a symphysis-fundus growth curve

R. C. PATTINSON

Summary

By using symphysis-fundus measurements serially and plotting them on a curve, small-for-gestational-age babies can be detected. To determine which symphysis-fundus curve to choose for our population, the predictive values of three of the commonly used of these growth curves were compared using serial measurements obtained from 97 low-risk obstetric patients with accurate gestational ages. The curves of Calvert and Quaranta had the best sensitivities of 92.9% each compared with Belizan’s (85.7%). However, the specificity of Calvert’s and Quaranta’s curves were poorer being 74.7% and 50.6% compared with 89.2% for Belizan. The positive predictive value for the curves were Belizan 57.1%, Calvert 38.2% and Quaranta 24.1%. The results indicate that for a Third-World urban population Belizan’s curve is most suitable.

The use of symphysis-fundus (S-F) measurements for the detection of small-for-gestational-age (SGA) babies requires only a tape measure and training, and thus is an ideal method to use in screening a low-risk obstetric population. Various S-F growth curves have been drawn up and a decision on which curve to use for a specific population can be confusing. To be effective, the S-F growth curve should give a high positive predictive value, i.e. a high likelihood of an SGA baby if the S-F curve is abnormally low. If one selects a curve not suited to the population a low pick-up rate for SGA babies (i.e. poor sensitivity) or a too high pick-up rate of normal babies thought to be SGA (i.e. poor specificity) could result, devaluing the potential of S-F measurements. Ideally, an original S-F curve should be established for the population being dealt with but to formulate a stable curve requires data from thousands of patients and is beyond the scope of most hospitals. No such curve has been established in South Africa. A study was undertaken to select which one of the curves at present available was best suited to our mainly Third-World urban population. The method used can be easily applied to any population.

Patients and methods

Ninety-seven low-risk coloured obstetric patients were randomly selected from patients that booked early at the Bishop Lavis Mobile Obstetric Unit (MOU). These patients were followed-up antenatally by 2 specially trained midwives every 4 weeks until 28 weeks, every second week until 36 weeks and then weekly until labour commenced. At each visit the S-F measurement was taken and recorded but not plotted on a curve. All patients booked by 22 weeks’ gestation and had an ultrasonographic examination to confirm gestational age. If there was a difference between dates and extrapolation of the biparietal diameter (BPD) reading > 2 weeks’ gestation, the BPD was used to estimate gestational age.

REFERENCES


The use of symphysis-fundus (S-F) measurements for the detection of small-for-gestational-age (SGA) babies requires only a tape measure and training, and thus is an ideal method to use in screening a low-risk obstetric population. Various S-F growth curves have been drawn up and a decision on which curve to use for a specific population can be confusing. To be effective, the S-F growth curve should give a high positive predictive value, i.e. a high likelihood of an SGA baby if the S-F curve is abnormally low. If one selects a curve not suited to the population a low pick-up rate for SGA babies (i.e. poor sensitivity) or a too high pick-up rate of normal babies thought to be SGA (i.e. poor specificity) could result, devaluing the potential of S-F measurements. Ideally, an original S-F curve should be established for the population being dealt with but to formulate a stable curve requires data from thousands of patients and is beyond the scope of most hospitals. No such curve has been established in South Africa. A study was undertaken to select which one of the curves at present available was best suited to our mainly Third-World urban population. The method used can be easily applied to any population.

Patients and methods

Ninety-seven low-risk coloured obstetric patients were randomly selected from patients that booked early at the Bishop Lavis Mobile Obstetric Unit (MOU). These patients were followed-up antenatally by 2 specially trained midwives every 4 weeks until 28 weeks, every second week until 36 weeks and then weekly until labour commenced. At each visit the S-F measurement was taken and recorded but not plotted on a curve. All patients booked by 22 weeks’ gestation and had an ultrasonographic examination to confirm gestational age. If there was a difference between dates and extrapolation of the biparietal diameter (BPD) reading > 2 weeks’ gestation, the BPD was used to estimate gestational age.