

SURGICAL TREATMENT OF THE ISOLATED CLEFT PALATE

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SUMMARY

Data on the surgical treatment of isolated cleft palates in 92 cases at the department of ENT, Head and neck surgery, Hayat Shaheed Teaching Hospital, Peshawar is presented. The assessment and management in these cases is outlined, and the importance of timely surgical intervention is emphasized. Of the 92 patients on whom primary operation were performed, the healing process was complicated in 7 percent. The subsequent development of the face, jaws and teeth was hardly influenced. Out of 92 patients who had been operated, 63 percent had normal, 10 percent acceptable and 27 percent defective speech. Of the 25 patients with unsatisfactory speech after primary operation on the palate, a favourable improvement in speech could be achieved in 4 cases by reoperation on the palate.

INTRODUCTION

Cleft of the lip and or palate are one of the most frequent congenital deformities, being second in frequency only to talipes equinovarus (club foot). The frequency is higher in caucasians (1.34 per 1000 birth) than in Negroids (0.41 per 1000¹). There are certain American Indian tribes who also have a high frequency of clefts.²

Cleft were formerly thought to represent a failure in fusion of one or more of adjacent embryonic processes of the face but it is now apparent that isolated cleft palate is embryologically derived in a different fashion than that of a cleft lip, with or without cleft palate.³ Specific configuration of the base of the skull, size and migration aberrations of the tongue and or mandible, and innumerable other factors, not yet indentified, may be responsible for interrupting normal development and result in an isolated cleft of the palate.⁴

MATERIAL AND METHODS

In the ENT, head and neck surgery department of Hayat Shaheed Teaching Hospital, Peshawar, operations on isolated cleft palate were performed on 92 of 502 patients with cleft lip, jaw and palate from 1985 to 1996.

Closure of the cleft palate is generally done between the second and third year of life. This favourable time, chosen after many years of experience,⁵ enables the children to employ normal speech before they enter school. The bridge flap method (V. Langenbeck),⁶ introduced by Axhausen,⁷ is the treatment of choice. Large cleft of the palate are operated on in two steps first the hard and then the soft palate.

The methods of Veau,⁸ Wardill,⁹ and Schweckendiek¹⁰ were considered in selected cases. They have, however, proved to offer no advantages over the bridge flap method as regard improvements in speech. In patients with unilateral total cleft of the palate, closure is more fre-

quently done by means of a pedicled flap and a bridge flap in one operative procedure.

For wide total clefts of the palate with hypoplastic vomerine cartilage and obvious shortening of the soft palate, a well-tried method is reported,¹¹ which makes it possible also in this type of cases to accomplish closure by permitting use of the vomerine mucous membrane and mucomuscular flap from posterior pharyngeal wall.

RESULTS

Of the 92 patients on whom primary operations were performed, the healing process was complicated in 7 percent. In 4 cases, small fissure like dehiscences occurred in the hard palate. In 2 cases there was total dehiscence (post-operative infection) of the velum.

The subsequent development of the face, jaws and teeth was hardly influenced. Of 92 patients who had been operated, 63 percent had normal, 10 percent acceptable and 27 percent defective speech.

Of the 25 patients with unsatisfactory speech after primary operation on the palate a favourable improvement in speech could be achieved in 4 cases by reoperation on the frequently dehiscent palatal soft tissue by the bridge flap method. In 3 cases a push-back operation of Dorrance¹² was carried out. In 12 patients, improved speech could be obtained only after Velopharyngoplasty. The methods of Schonborn – Rosenthal^{13,14} and Sanvenero – Roselli¹⁵ were employed in 80 percent and 20 percent of the cases respectively. Four patients were reoperated according to individually adjusted methods. In 2 cases of extensive defects in the palate, closure of the pharyngonasal communication could be achieved only with the help of a transported flap.

DISCUSSION

Some of the salient principles of some well known operative procedure of the past, with modifications and improvements, are currently still used in cleft palate surgery, which today are fairly well standardized.

The only treatment is surgical and the aims of surgery are threefold; to produce an acceptable cosmetic result, good facial growth, and normal speech. The first can be achieved at any age, but closure of the soft palate must be carried out before speech develops to prevent hypernasal speech (talking through the nose). This essentially means before the child is 2 years old. Studies of facial growth on children who have closure of the hard cleft palate at this age, however, show under development of the upper jaw and, conversely teenagers with clefts who have not had the hard palate closed have practically normal upper jaw growth.

A conflict has thus grown up between those who feel that hard cleft palate closure should be delayed and those who favour early closure. As the speech results are significantly worse in the former group, we feel that early closure of the cleft palate (hard and soft) should be aimed for, and this should produce intelligible speech in up to 70% of those operated upon.

Cleft palates must be repaired surgically before the age of 3 years to produce normal speech. The key to understanding cleft surgery is that no tissue is missing and rearrangement of the tissues in the anatomically correct position is what is required. Simple methods carried out by those who are doing the most cases give the best results.

It is pointed out that the primary operation should be confined to closure of the palatine velum palatine. Only after defective speech will the necessity of corrective operation be established. A primary velopharyngoplasty is therefore

considered in cases of short soft palate. Closure of the cleft palate, performed with anatomic precision and at a favorable time, offers the best assurance that the patient will have the ability to speak naturally. The subsequent quality of his speech is, to a great extent, the touchstone of the primary surgical treatment.

Secondary operations also can improve or even normalize peripheral speech function in many cases. In the presence of large defects, however, help is possible only by employing all the available resources of plastic surgery.

The future development and future improvement of the surgical treatment of this condition is dependent upon an agreement upon the fundamental principles of repair of this deformity. Much research and study is now being done, and much will be required, to relieve the goal of perfect anatomic, functional and cosmetic closure, with good speech.

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