

## The Use of Dorsal Tongue Flap in Recurrent Palatal Fistula

Usama Abdel Naseer\* and Fahmy Abdel Aal Hassanein\*\*

Recurrent oronasal fistula following surgical repair is a rather common problem. In this study, thirteen cases complaining of such condition were treated with the use of dorsal tongue flap. Eleven cases achieved complete closure, one case had partial detachment of the flap resulting in a smaller fistula, and the remaining case showed air leakage upon positive pressure. We conclude that dorsal tongue flap is a reliable and effective source of vascularized soft tissue for closure of recurrent oronasal fistula.

**PRIMARY** treatment of cleft palate should result in an intact palate with separation of the oral and nasal cavities. However, even in the best hands, an oronasal fistula may occur in a significant number of patients. Oronasal fistula may occur as frequently as 11.3 to 22% of cases following cleft palate repair [(Abyholm et al.,1979), (Schultz,1986) and (Amaratunga,1988)]. Moreover, recurrence rate following palatal fistula repair ranges from 16-65%. A fistula may also be caused by trauma, tumor, irradiation, or rare infections [(Rintala,1980), (Cohen et al.,1991) and (Ohsumi et al.,1993)].

Palatal fistula produces a variety of distressing symptoms, including regurgitation of fluid into the nasal cavity and interference with normal speech.

Breakdown of palatal repair is usually related to tension at the site of closure because of inadequate local tissues, flap necrosis due to compromised blood supply, infection or mechanical trauma before flap healing (Posnick and Getz,1987).

Attempts at closure using only local transposition flaps may be successful, although frequently this is not achieved and a smaller oronasal fistula will recur. Additional attempts to gain closure with local tissue alone often result in repeated failure as the thick and immobile scarred palatal mucoperiosteum leads to closure under tension with subsequent flap necrosis and wound dehiscence (Grotepass et al.,1990).

A variety of both surgical and prosthetic solutions to the problem of inadequate local tissue have been sought. Tissues from distant sites have been used, including tubed pedicle flaps from the abdomen, arm, neck or cervicothoracic regions [(Kostrubala,1950) and (Longacre and Gilby,1954)]. Others have used cheek and nasolabial flaps to close these palatal defects (Georgiade et al.,1969). Although these staged techniques of distal tissue transfer may be effective, they require multiple operations, are always cumbersome, leave multiple scars, are bulky, and finally transfer skin rather than mucosa to the roof of the mouth.

Different designs of tongue flaps have been used successfully for closure of palatal fistulas. The tongue offers several advantages as a donor site including the use of local tissue, excellent blood supply and low morbidity [(Kinnebrew and Malloy,1983), (Posnick and Getz,1987), (Argamaso,1990), (Guzel and Altintas,2000) and (Posnick and Ruiz,2000)].

The purpose of this work is to evaluate the use of a dorsal tongue flap for closing recurrent palatal fistula.

\* ENT Department, Faculty of Medicine, Cairo University.

\*\* Department of Oral Surgery, Faculty of Oral and Dental Medicine, Cairo University.