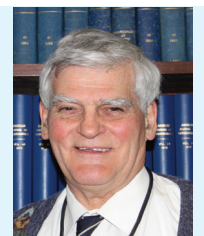


# A delicately balanced team is essential

SADJ July 2017, Vol 72 no 6 p246

WG Evans



The Health-Care profession shares with distraught parents the heart-rending distress at the arrival of an eagerly awaited baby who presents with an oro-facial cleft. How wonderful it is that, worldwide, teams of dedicated health professionals are immediately on hand to advise and to counsel the parents and family and to provide expert care for the infant.

July was designated National Cleft and Craniofacial Awareness and Prevention Month in the USA, an initiative which appears to have been promoted in 1943 by the American Cleft Lip and Palate Association, based in Chapel Hill.<sup>1</sup> South Africa has followed that lead and the past month was indeed an opportunity for South Africans to focus on the defect. Gillian Adonis, a Speech Therapist in Cape Town, comments in a website "the month is an observance by people and organisations to help raise awareness of and provide information about cleft and craniofacial defects."<sup>2</sup>

It is recognised that cleft lip and palate is one of the most common congenital abnormalities. Worldwide the prevalence ranges between 1/1000 to 2.69/1000 births.<sup>3</sup> Whilst the data varies considerably with reports from different regions and countries and is also affected by the methods of collection, it may be stated that on average clefts occur in about one in every 500 to 750 live births.<sup>3</sup> Studies in South Africa cite prevalence rates of 0.3/1000 to 0.33/1000 births.<sup>4</sup>

These bland data can in no way reflect the concern of the parents of a CLP baby for whom of course the prevalence is One Hundred percent. Enter now the team who will deliver over several years the intricate treatment which will ensure that the affected patient can lead a normal and happy and healthy life.

The disturbance in development which leads to facial clefts is one of a delicate balance. In the embryonic stage the frontonasal process should fuse with the maxillary components of the first branchial arch to form the primary palate. In the second stage, forming the secondary palate, occurs the marvel of the elevation of the palatal

shelves, and the subsequent fusion of the primary palate, the shelves themselves and the nasal septum, all requiring the intriguing process of cell apoptosis... and all demanding an intricate system of balance with the controlling genes. Recent work has shown that the Epithelial Adhesion Molecule (CEACAM1) is associated with the initiation of palatal fusion.<sup>5</sup> There may be a critical role for the enzyme GSK-  $\beta$  in the osteogenic differentiation of palatal mesenchyme.<sup>5</sup> The fusion of the processes demands both adhesion and a transformation of epithelia to mesenchyme and transforming growth factor (TGF  $\beta$ 3) is an essential.. without which cleft palate results.<sup>5</sup> Other genes have been identified as contributing directly or indirectly to the failures of fusion which result in facial clefting.<sup>5</sup> These meticulous studies point to the intricacies of timing and activation which allow for normal development, but an upset in that delicate balance may mean years of involved and demanding treatment for the child who presents with facial clefting.

A vastly encouraging thought is that as the delicate balances are investigated and their mysteries unravelled, so will there be the possibilities of prevention of these disturbing anomalies. That is indeed one of the objectives of the National Cleft and Craniofacial Awareness and Prevention Month.

Dedicated people have identified with the considerable problems of cleft patients and organisations have emerged which offer invaluable assistance. The Smile Foundation (which is supported by the South African Society of Orthodontists), the American Cleft Lip and Palate Association, Transforming Faces and many others contribute. Recognition is accorded in this issue of the Journal to the Wentworth Foundation in Durban which has over several years offered free treatment to cleft patients who may not otherwise have

**Bill Evans:** Managing editor, E-mail:bill.evans@wits.ac.za





been able to access the necessary therapy. There are teams of specialists in major centres and at Dental Hospitals in South Africa who combine their expertise in handling the complexities of the anomaly. This is indeed a problem which requires teamwork delivered in a *balanced* fashion.

Just as *balance* has also been the requirement of the team that organised the 2017 Congress of the South African Dental Association. The diversity of the programme

demanding that the schedule be delicately balanced to ensure that the equally diverse interests of the members be satisfactorily accommodated. With more than fifty separate lectures, courses or discussions, there should have been no tight rope walking necessary to enable attendance at the topics of individual choice. It is that precise combination of delicate balance and team work that ensures success for both Congress organisers and cleft palate experts. Sincere congratulations go to both these dedicated teams.

#### References

1. ACPA Community. [Community.acpa-cpf.org/contacts](http://community.acpa-cpf.org/contacts).
2. Adonis G. <http://speechtherapycapetown.com/2015/07/cleft-and-craniofacial-awareness-month/>
3. Peterson-Falzone SJ, Hardin-Jones MA, Karnell MP. Cleft Palate Speech., Third edition. 2001. St Louis, Mosby, Inc.
4. Butali A, Mossey PA. Epidemiology of orofacial clefts in Africa: Methodological challenges in ascertainment. Pan Afr Med vJ. 2009; 2:5
5. Palate development. [wikipediaiahttps://embryology.med.unsw.edu.au/embryology/index.php/Palate\\_Development](https://embryology.med.unsw.edu.au/embryology/index.php/Palate_Development).