

# Anaesthetic hazards of the 'passion gap'

## A case report

R. W. J. ALLEN, J. V. GASSON, J. C. VIVIAN

### Summary

Dental abnormalities cause problems for both dentist and anaesthetist. The anaesthetic hazards associated with the 'passion gap' — a term used in the western Cape Province for removal of the top four incisor teeth, a practice widespread among members of the Cape Coloured community — are discussed. Recommendations are made to assist the anaesthetist when dealing with such a patient.

*S Afr Med J* 1990; **78**: 335-336.

When intubating a patient the anaesthetist must always be careful to avoid damaging the patient's teeth, especially in our present litigation-conscious society.<sup>1</sup> The risk of injury to teeth is greatly increased in the presence of dental disease or abnormalities, crowns, bridges, or heavily restored teeth, in the very young and in the elderly. By the same token such conditions can make intubation difficult and persisting with instrumentation in difficult cases is more likely to lead to damage.<sup>2</sup> Furthermore, attention to the perfect preservation of teeth should not be such as to place the patient's life at risk.

The 'passion gap' as seen in the Cape Coloured people, can be the cause of unexpected difficulty at the time of intubation. Having graduated outside South Africa, the authors were unfamiliar with this phenomenon on starting clinical anaesthetic practice in the Cape and so experienced some problems initially. A simple regimen has consequently been devised to help overcome the potential anaesthetic hazards of the 'passion gap'.

---

Department of Anaesthetics, University of Cape Town and Groote Schuur Hospital, Cape Town

R. W. J. ALLEN, M.B. B.CH. F.F.A. R.C.S. (IREL.) (Present address: Royal Victoria Hospital, Belfast, N.I.)

J. V. GASSON, M.B. CH.B.

J. C. VIVIAN, M.B. B.S., F.F.A.R.C.S., M.R.C.P.

---

Accepted 4 Dec 1989.

### Case report

A 25-year-old Cape Coloured woman presented to the Maternity Unit, Groote Schuur Hospital, for elective caesarean section. The pre-operative assessment revealed nothing of anaesthetic significance other than the presence of an 'innocent' frontal dental palate.

Induction of anaesthesia (using the 'rapid sequence induction' technique) proceeded normally until intubation was attempted. This proved unexpectedly difficult. The laryngoscope blade had slipped into the gap (Fig. 1) revealed on removing the dental plate before entering theatre, thus preventing easy manipulation of the tongue and epiglottis. The right lateral canine obscured visualisation of the larynx, hindering easy introduction of the endotracheal tube into the mouth, and the inflatable cuff snagged constantly on this tooth and was thus at risk of being punctured. A second tube with a long stylet in place was made ready and used to facilitate eventual successful intubation. The rest of the operation proceeded uneventfully and neither baby nor mother suffered ill-effects. The anaesthetist was alarmed that an apparently innocuous dental abnormality could cause such difficulty and embarrassment.

### Discussion

Some 86% of the 2 800 000 members of the coloured community live in the Cape Province, mainly in the urbanised parts of the Cape Peninsula. They are the product of miscegenation between the original Hottentot tribes of the Cape, slaves imported by the Dutch East India Company from the East, the early white settlers and, later, blacks. Within this population there are two small distinctive communities: the Griquas and the Cape Malays.<sup>3,4</sup>

Why does the 'passion gap' exist among the Cape Coloureds? The popular belief is that the teeth are removed for sexual reasons. Perhaps this is true in some cases, but the main reason for the gap is dental decay with the front teeth being particularly susceptible and extraction being the commonest form of treatment (given the community's socio-economic background),



Fig. 1. Cape Coloured woman displaying her 'passion gap'.

although this is not always done professionally (Dr N. Myburgh, Faculty of Dentistry, University of the Western Cape — personal communication). In this community adequate dental services are not available, few fillings are provided, health education is poor and minimal appreciation of good dental hygiene exists.<sup>5</sup> Certainly there is a cultural aspect: the gap is a mark of beauty and a sign that adulthood has been attained. Furthermore, the wearing of dentures or plates is often viewed as a status symbol (Professor M. Whisson, Department of Anthropology, Rhodes University — personal communication).

Tooth mutilation is observed in other African racial groupings, being performed for numerous reasons: tribal identification, tribal tradition, sake of appearance, religious practices.<sup>6,7</sup>

The phenomenon is prevalent among obstetric patients at Groote Schuur Hospital where over a 6-month period in

1989 the average caesarean section rate was 125 per month. Over half of these section patients were coloured women and our own survey showed that almost 75% of them had a 'passion gap', with most wearing dental plates (unpublished data). The gap is also seen among coloured men, especially among the lower social strata and gang members, but the incidence is difficult to determine. In this group homosexuality is offered as an explanation, especially in the prison setting, but simple dental decay is the most likely reason.<sup>5</sup>

A few simple manoeuvres are suggested to help overcome the anticipated intubation difficulties associated with the 'passion gap'. In order to 'fill the gap', thereby preventing the laryngoscope or tube slipping into it, the following bridging techniques can be used: (i) placing a wooden spatula across the gap resting on the remaining teeth on either side; (ii) inserting an upside-down Guedel airway into the gap; or (iii) allowing the dental plate/bridge to stay in place. The use of swabs to fill the gap is not recommended, since these do not provide a solid bridge.

Modifying the intubation technique as follows can prove helpful: (i) introducing the tube laterally thereby both avoiding the sharp canine teeth and the problem of the tube lodging between the laryngoscope and the canine; (ii) introducing the laryngoscope laterally so avoiding the gap — but this may make visualisation of the cord difficult; and (iii) using a long, preformed stylet and railroading the tube over it.

As with any difficult intubation, awareness and anticipation of the problem and the planning of some precautionary measures can help avoid serious mishaps.

#### REFERENCES

1. Wright RB, Manfield FFV. Damage to teeth during the administration of general anesthesia. *Anesth Analg* 1974; 53: 405-408.
2. Harman M. Complications of tracheal intubation. In: Latta IP, Rosen M, eds. *Difficulties in Tracheal Intubation*. London: Baillière Tindall, 1985: 36-47.
3. Bureau for Information. *South African Profile*. Pretoria: Promedia Publications, 1986.
4. Marais JS. *The Cape Coloured People, 1652-1937*. London: Longman Green, 1939: 1-31.
5. Louw NP, Moola MH. The dental needs and demands of the Cape Coloured people in the Cape Peninsula. *J Dent Assoc S Afr* 1979; 34: 715-718.
6. Van Rippen B. Practices and customs of the African natives involving dental procedures. *J Allied Dent Soc* 1918; 13: 1-22.
7. Briedenham SJ, Van Reenen JF. Tooth extraction and tooth mutilating practices amongst the Herero-speaking peoples of South West Africa (Namibia). *J Dent Assoc S Afr* 1985; 40: 531-536.