

# Developments in Clinical Management of Sialadenitis in Africa

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## Abstract

Sialendoscopy is a relatively new technique that offers the potential to be both diagnostic and therapeutic. It follows the principle of gland sparing therapy to manage conditions such as ductal stenoses and sialolithiasis. The procedure is relatively easy to learn and more affordable than the traditional methods of intervention. It is well suited to the African continent in that the equipment is relatively portable and may be taken to peripheral and rural areas, while still providing world-class care and minimal disruption to the patients. We hereby present the evolution of sialendoscopy.

## Keywords

sialendoscopy, salivary gland disease, salivary duct stenoses, salivary, stones

Within the area of salivary gland pathology, obstructive sialadenitis is the most common inflammatory condition of the salivary glands.<sup>1</sup> Initial treatment of sialadenitis includes hydration, anti-inflammatory medication, and antibiotics when a bacterial infection is suspected. However, when initial treatment fails, further intervention is needed. The traditional external approach is sialadenectomy. However, with this exists, the potential for injury to the lingual and facial nerves exists. Further complications including bleeding, infection, and an unsightly scar are also found with this procedure.<sup>2,3</sup> Sialendoscopy presents a viable alternate in resource limited environment (prevalent in Africa) and has the dual purpose of being both diagnostic and therapeutic.

The basic sialendoscopy procedure falls into three steps: the first of which involves the papillary dilation, followed by the passing of the sialendoscope, diagnosis, and lastly, the treatment of the obstruction. The papilla is more readily located using a microscope or magnifying loupes.

The “classic technique” to dilate the papilla is with the use of salivary probes. These are similar to lacrimal dilators. A conical dilator that is less traumatic to the ductal lumen can also be used instead of salivary probes. This is possible only when the papilla opening is large and clearly visible.

The “guided puncture technique” begins with the introduction of probes of increasing size followed by a guidewire. A conical dilator is “railroaded” over this guide to expand the papilla. The dilatator is then removed and the

endoscope working channel is once again “railroaded” over the guidewire.

In cases where the submandibular duct papilla is difficult to find, a more invasive “surgical” technique can be useful. An incision is made parallel to the course of the duct. The duct is then identified and incised by 1 mm to allow the insertion of the endoscope. In terms of the location of stones, for mobile stones less than 5 mm located in the distal duct/papilla, sialendoscopy with calculus retrieval via stone basket may be attempted. If located in the proximal duct/hilum, in the case of small, mobile calculi less than 5 mm, retrieval of the calculus with a wire basket or grasping forceps is indicated. In the case of calculi that are greater than 7 mm which are palpable, the stones can be fragmented using laser, lithotripsy or a transoral incision of the duct can be performed. Intraparenchymal, mobile stones less than 7 mm can be removed using the sialendoscope. With impacted calculi greater than

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7 mm up to 10 mm, fragmentation is recommended, thus allowing for endoscopic removal.

The success rates of sialendoscopy in South Africa vary between 50% and 90% which is in line with the international literature.<sup>4</sup> Sialendoscopy is a relatively inexpensive, portable, and easy to learn modality that has a lower morbidity compared to traditional open salivary gland surgery. It may be performed under local anesthetic, and in a resource-limited setting, it should be incorporated into clinical care algorithms to provide better patient care.<sup>5</sup>

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