

EVALUATION OF SIALENDOSCOPIC MANAGEMENT OF NON-CALCULAR OBSTRUCTIVE SIALADENITIS

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Introduction

Chronic obstructive sialadenitis is a disorder of salivary flow obstruction that may be either calculous (stone-related) or non-calculous. It is characterized by reduced or absent salivary secretion, often presenting with xerostomia, painful glandular swelling, or recurrent infections. Underlying causes include salivary duct stones, mucous plugs, ductal stenosis, strictures, autoimmune conditions (e.g., Sjögren’s syndrome), juvenile recurrent parotitis (JRP), and iatrogenic insults such as radio-active iodine treatment (RAI) or radiotherapy (RT). While calculous causes are commonly managed with stone removal techniques, non-calculous obstructive sialadenitis poses greater diagnostic and therapeutic challenges due to its often diffuse, inflammatory, or fibrotic nature. Traditional medical therapies provide limited symptom control and may not reverse glandular dysfunction. Sialendoscopy has emerged as a minimally invasive, gland-preserving technique that enables both diagnosis and therapeutic intervention in non-calculous cases. It allows direct ductal visualization, lavage, dilation of strictures, and intraductal steroid delivery — offering a promising approach to restoring salivary gland function and improving patient quality of life.

Aim of the Work

- To assess the effectiveness of sialendoscopic intervention for non-calculous obstructive sialadenitis by evaluating:
- Subjective outcome via MSGS questionnaire (xerostomia and sialadenitis domains)
 - Objective outcome via sialometry (measured salivary output)

Subjects & Methods

- Study Design:** Prospective clinical study
- Participants:** 21 patients (age range: 9–66 years)
- Inclusion:** Diagnoses included Sjögren’s syndrome (SS), JRP, post-RAI, and post-RT sialadenitis
- Exclusion:** Sialolithiasis, prior gland surgery, or unfit for general anesthesia
- Procedure:**
 - Sialendoscopy under general anesthesia
 - Ductal dilation, saline irrigation, and steroid instillation (triamcinolone acetonide)
 - Follow-up at 3 and 6 months
- Evaluation Tools:**
 - MSGS Q10 questionnaire (score range: 0–200)
 - Sialometry (gauze weight pre- and post-secretion)

Results

Demographic Highlights

- Female: 76.2%, Male: 23.8%, Mean age: 34.1 ± 16.6
- Most common diagnoses:
 - **Sjögren’s syndrome** (57%)
 - **Juvenile recurrent parotitis** (14%)
 - **Radiation-induced** (24%)

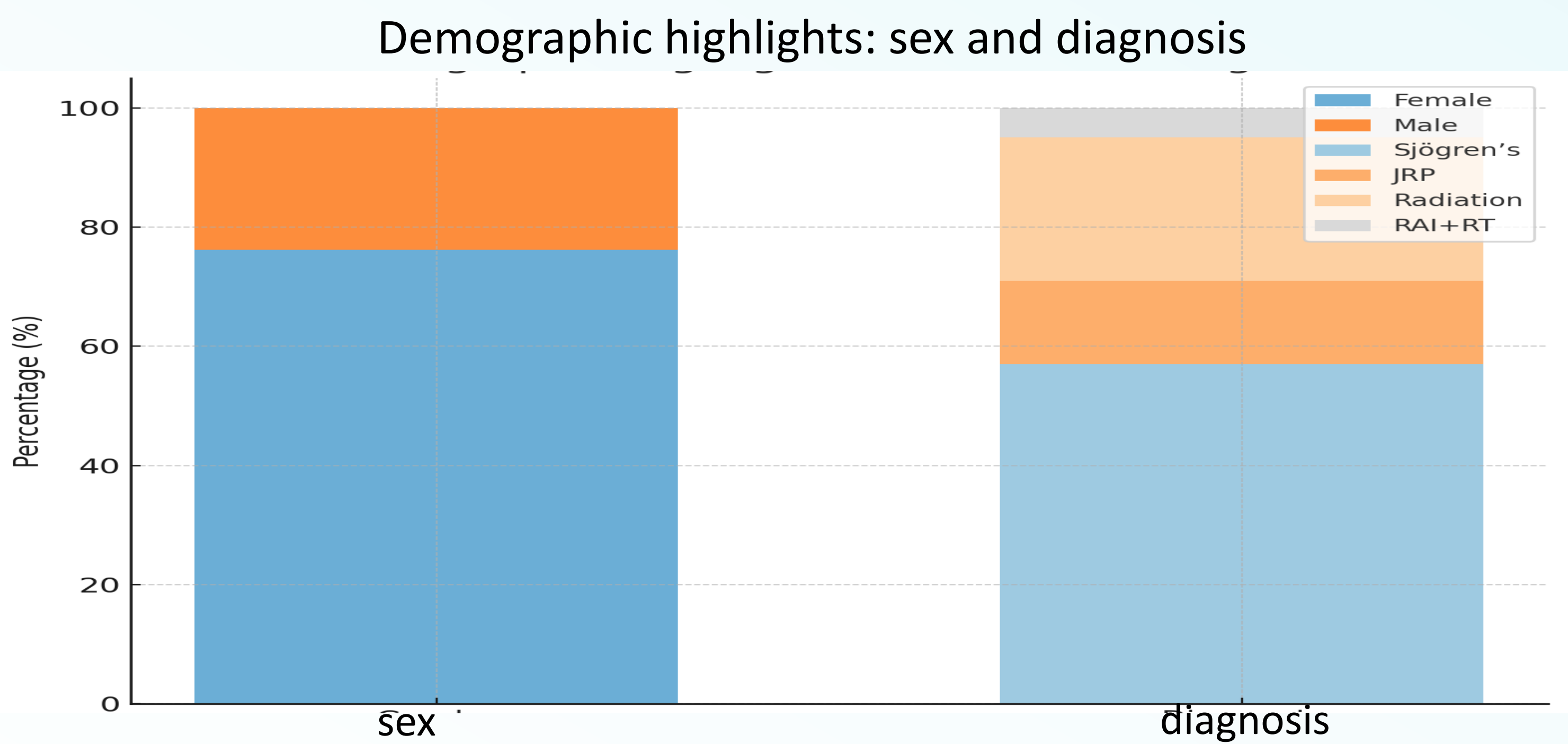


Table (1) : Symptom Improvement (MSGS Scores)

Timepoint	Xerostomia	Sialadenitis	Total MSGS
Pre-op	71.95	35.24	107.2
3 Months Post-op	25.90	6.95	33.0
6 Months Post-op	22.71	4.76	27.48

All reductions were statistically significant ($p < 0.001$) and mostly achieved within 3 months.

Table (2) : Functional Recovery (Sialometry, mL)

Gland	Pre-op	3mo	6mo	Δ
Rt+Lt Parotid	0.40	1.38	1.47	+1.08
Submandibular (SM)	0.52	0.89	0.99	+0.47
Total Output	0.87	2.30	2.46	+1.58

Parotid output improved significantly after steroid irrigation. SM glands also improved, though untreated directly.

Conclusion

Sialendoscopy significantly improved both subjective symptoms and objective gland function in patients with non-calculous obstructive sialadenitis. The greatest improvements occurred within 3 months and were maintained at 6 months. Patients with autoimmune or pediatric etiologies showed the strongest response, while radiation-induced cases showed modest improvement. This supports sialendoscopy as a safe, effective, and minimally invasive option for managing these chronic conditions.