

# Anesthetic Implications in a Patient with Sjogren's Syndrome: A Case Report

Preeti Gehlaut<sup>1</sup>, Nitu Yadav<sup>2</sup>, Deepika<sup>3</sup>, Manisha Manohar,<sup>4</sup> Rohit<sup>5</sup>

<sup>1</sup>Professor, Department of Anesthesiology, Pt. BD Sharma PGIMS, Rohtak, India

<sup>2</sup>Senior Resident, Department of Anesthesiology, Pt. BD Sharma PGIMS, Rohtak, India

<sup>3</sup>Associate Professor, Department of Anesthesiology, Pt. BD Sharma PGIMS, Rohtak, India

<sup>4</sup>Assistant Professor, Department of Anesthesiology, Pt. BD Sharma PGIMS, Rohtak, India

<sup>5</sup>Postgraduate Student, Department of Anesthesiology, Pt. BD Sharma PGIMS, Rohtak, India

## Abstract

We report anesthetic management of a 34 year old female with Sjogren's syndrome complicated with herpetic gingivostomatitis and oral candidiasis undergoing ureteroscopic removal of renal stone. Sjogren's syndrome is characterized by dryness of skin, respiratory mucosa, eyes, oral cavity and other exocrine glands of the body. Surgery was done under spinal anesthesia to avoid side effects of general anesthesia such as airway instrumentation, drying of mucosa by volatile anesthetics, oral bleed during intubation, risk of aspiration, anesthetic drug interactions and renal insult from anesthetic agents. Agents causing dryness of mouth, like atropine, were avoided during anesthesia. Humidified oxygen therapy was given to prevent dryness of the respiratory tract mucosa. Pressure areas were padded with extra care. Anesthesia was accomplished successfully.

**Keywords:** Sjogren's syndrome, oral candidiasis, anesthetic management, herpetic gingivostomatitis.

**Corresponding Author:** Dr. Nitu Yadav, Senior Resident, Department of Anesthesiology, Pt. BD Sharma PGIMS Rohtak, India

## Introduction

Sjogren's syndrome is an autoimmune, chronic systemic disorder.<sup>[1]</sup> It can involve multiple organs including connective tissue, lungs, liver and kidneys.<sup>[2-4]</sup> In Sjogren's there is B cell hyperactivity and lymphocytic infiltration of exocrine glands.<sup>[5]</sup> We present the anesthetic management of a 34 year old female with Sjogren's syndrome undergoing ureteroscopic removal of renal stone. This case highlights preoperative preparation, drug interactions and various intraoperative considerations in these patients.

## Case Description

A 34 year old female patient weighing 48kg was scheduled to undergo ureteroscopic removal of renal stone. She was a known case of Sjogren's syndrome since 12 years. She had history of heart burns, chronic fatigue, dry mouth and eyes. She was on tablet pilocarpine 0.5mg and tablet nodosis. She had recently developed fever, painful oral lesions and white spots over tongue since one week.

Dermatologist opinion was sought and she was diagnosed with herpetic gingivostomatitis and oral candidiasis. She was put on tablet acyclovir, tablet fluconazole, mupirocin ointment, benzydamine mouth wash before meals and choline salicylate plus lidocaine gel for local application. After subsidence of fever, she was posted for renal stone removal. During preanesthetic evaluation she had normal vital parameters. She had no signs of autonomic dysfunction. Her non contrast computed tomography scan showed a 12mm stone in right kidney with grade III hydronephrosis. Other biochemical and hematological investigations were within normal range.

Patient was premedicated with injection pantoprazole and choline salicylate plus lidocaine gel was applied over mouth ulcers. On arrival in operating room, all routine monitors were attached. Difficult airway cart was kept ready. Patient was made to sit. Under adequate aseptic precautions, subarachnoid block was given using 25 gauge quincke's spinal needle, 2.4 ml of 0.5% bupivacaine heavy was injected in subarachnoid space. After achievement of adequate spinal anesthesia level (T8), patient was placed in lithotomy position for surgery. All the pressure areas were carefully padded with cotton. Humidified oxygen therapy was given to moisturize the respiratory tract. Fluid therapy was given using balanced salt solution. Surgery went uneventfully. Patient was shifted to post anesthesia care unit with stable hemodynamic parameters.

## Discussion

Sjogren's syndrome is an autoimmune disorder of unknown etiology; it can involve any organ system leading to variable clinical manifestations. Sjogren's can be associated with autoimmune thyroid disease, autoimmune adrenal disease, autoimmune ovary disease, lymphomas and central nervous system vasculitis, peripheral neuropathy and cutaneous vasculitis.<sup>[5]</sup> It is of two types primary and secondary. Primary Sjogren's syndrome is not associated with any other disease while secondary Sjogren's occurs along with other autoimmune connective tissue disorder like rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE).<sup>[6]</sup> B cell

hyperactivity and lymphocytic infiltration of exocrine glands lead to dry eyes, dry mouth, respiratory tract and enlargement of salivary glands. Swedish ophthalmologist Henrik Samuel Conrad Sjögren first described the triad of keratoconjunctivitis sicca, polyarthritis and xerostomia.<sup>[7]</sup>

Preoperative evaluation should be done carefully in these patients. Anesthesiologists should check for associated autoimmune diseases like SLE, RA, grave's disease, CNS vasculitis, interstitial lung disease and chronic hepatitis. Autonomic nervous system dysfunction has been reported in Sjoren's syndrome.<sup>[8]</sup> So autonomic function tests such as valsalva maneuver should be done. History of immunosuppressive agents or steroids, allergy to antibiotics and sedatives should be taken. Examination includes careful assessment of organ involvements to avoid further damage due to anesthetic agents and enlarged salivary glands can cause difficult airway. Drying agents like volatile anesthetics, atropine should be avoided wherever possible. Respiratory tract mucosa of these patients remains dry, so oxygen and anesthetic gases should be humidified. Eyes and pressure areas should be padded. Great care should be taken while prescribing antimicrobial agents. Our patient had Sjogren's syndrome complicated with herpetic gingivostomatitis and oral candidiasis so we chose regional anesthesia to avoid complications of general anesthesia like airway instrumentation, mucosal bleed, drug interactions and use of drying anesthetic agents. Patient remains awake during regional anesthesia so chances of pressure injuries are less likely.

### Conclusion

This case outlines the benefit of regional anesthesia over general anesthesia, various preoperative and perioperative considerations in patients with Sjogren's syndrome.

### References

1. Nocturne G, Mariette X. Advances in understanding the pathogenesis of primary Sjogren's syndrome. *Nat Rev Rheumatol*2013;9:544- 56.
2. Skopouli FN, Dafni U, Ioannidis JP, et al. Clinical evolution, and morbidity and mortality of primary Sjögren's syndrome. *Semin Arthritis Rheum*2000;29:296-304.
3. Skopouli FN, Barbatis C, Moutsopoulos HM. Liver involvement in primary Sjögren's syndrome. *Br J Rheumatol*1994;33:745-8.
4. Goules A, Masouridi S, Tzioufas AG, et al. Clinically significant and biopsy-documented renal involvement in primary Sjögren syndrome. *Medicine (Baltimore)*2000;79:241-9.
5. Mavragani CP, Moutsopoulos HM. Sjögren syndrome. *CMAJ*. 2014;186:E579-86.
6. Negrini S, Emmiz G, Greco M, Borro M, Sardanelli F, Murdaca G, Indicveri F, Puppo F. Sjögren's syndrome: a systemic autoimmune disease. *Clin Exp Med*. 2022;22:9–25.
7. Henrik S. Zur Kenntnis der keratoconjunctivitis sicca. Keratitis filiformis bei Hypofunktion der Tränendrüsen [On knowledge of keratoconjunctivitis sicca. Keratitis filiformis due to lacrimal gland hypofunction]. *Acta Ophthalmol*. 1933;2:1–151.
8. Newton JL, Frith J, Powell D, Hackett K, Wilton K, Bowman S, et al. Autonomic Symptoms are Common and Are Associated With Overall Symptom Burden and Disease Activity in Primary Sjogren's Syndrome. *Ann Rheum Dis*. 2012;71:1973-9.