KK Women’s and Children’s Hospital (KKH) has launched Singapore’s first sialendoscopy service to manage and treat salivary gland diseases in children as young as three years.

Traditionally, treatment of recurrent salivary gland infections entails hospitalisation and antibiotics, resulting in frequent and lengthy hospital stays. Sialendoscopy provides a minimally invasive approach for the diagnosis and treatment of salivary gland diseases, with the added advantages of improved treatment success, shorter hospital stays, decreased need for antibiotics and greatly reduced recurrence of the infection.

Recently introduced to hospitals in Singapore, sialendoscopy is mainly performed on adults and older children for the removal of salivary gland stones. However, sialendoscopy is also particularly useful to prevent the occurrence of juvenile recurrent parotitis (JRP), which is a common cause of recurring inflammation of the parotid gland (a type of salivary gland), in young children.

**What is sialendoscopy?**

During a typical sialendoscopic procedure, miniature endoscopes (0.89mm wide) are used to enter the small ducts of the salivary system in search of the cause of obstruction. Using fine instruments manipulated through the working ports of the endoscope, the surgeon can also perform therapeutic procedures such as the dilatation of strictures, biopsies and removal of debris or stones from the salivary gland. This minimally invasive procedure is performed through the salivary duct opening via the mouth, which avoids causing external scarring to the face.

**CASE STUDY**

Sialendoscopy for a three-year-old child with juvenile recurrent parotitis (JRP)

Three-year-old Alice (not her real name) experienced seven episodes of parotid gland infection over the course of a year, characterised by high fever, pain and swelling of her left parotid gland. Over three months, the frequency of infection increased to once every three weeks. Alice was treated with multiple courses of antibiotics, and was admitted to KKH for a week for treatment with intravenous antibiotics, following a particularly severe episode.

Alice was diagnosed as having possible JRP. She underwent a sialendoscopic procedure, and has not experienced a recurrence of parotid gland infection since. 

A paediatric patient undergoes a sialendoscopic procedure at KKH.

**SIALENDOSCOPY AT KKH**

A new treatment approach to manage salivary gland diseases in young children

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### Sialendoscopic Treatment for JRP

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**What is JRP?**

JRP is a recurrent parotid gland infection caused by the narrowing of the salivary ducts and debris within the parotid duct, resulting in obstruction of normal salivary flow in it. The condition has a worldwide incidence of about one percent, and is the second-most common cause of parotid gland swelling in children, after mumps.

**Symptoms of JRP**

The typical child with JRP suffers from multiple episodes of parotitis, which presents with fever, pain and swelling of the parotid gland. Symptoms are usually one-sided, but may affect glands on both sides of the face. JRP can occur at any age between 3 months and 16 years, with a higher incidence among children between the ages of five and seven.

**Treatment for JRP**

Prior to the advent of sialendoscopy, there was no definitive treatment for JRP to prevent recurrence, except for the removal of the entire parotid gland through a large incision over the face and neck. This procedure carried a significant risk of injury to the nerves supplying the face, resulting in weakness of the face on the affected side. With the introduction of the sialendoscopy service at KK Women’s and Children’s Hospital (KKH), minimally invasive intervention can be provided to children as young as three years, sparing them years of hospitalisation and the risk of open surgery.

Although JRP may resolve spontaneously at puberty, the child may have to suffer 10 to 15 years of recurrent attacks before it resolves, and may require multiple hospital admissions for intravenous antibiotics to manage the infection. In severe cases, an abscess may form and an incision and drainage may be required, resulting in a cosmetically unappealing scar over the face. This can have an adverse social impact on the child and their family.

**When should a physician suspect JRP?**

Physicians should consider JRP in a child with recurrent parotid gland infections, especially in the Singaporean context, where most children are vaccinated against mumps, with the majority gaining immunity against mumps for life. The indication for sialendoscopy for possible JRP is at least two episodes of parotid infections in a year.

**Conclusion**

In addition to its use for the treatment of JRP, removal of salivary gland stones and dilatation of strictures, sialendoscopy is also useful in the diagnostic evaluation and management of recurrent or chronic salivary gland infection and swelling from causes including autoimmune diseases such as Sjogren’s syndrome and systemic lupus erythematosus.