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# A Classical Case of Juvenile Recurrent Parotitis

KUNDAN MEHTA[1], K MITHUN NILGIRI[2]



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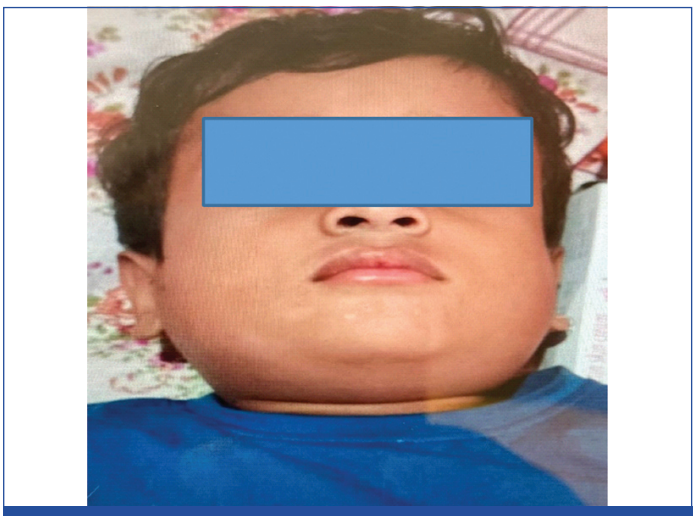
A five-year-old child presented with the chief complaint of bilateral neck swelling (more on the left side) [Table/Fig-1], accompanied by episodes of intense pain and intermittent fever since one year. Over the course of one year, the child experienced recurring episodes of bilateral neck swelling. These episodes were accompanied by intense pain, fever, and a pervasive sense of being unwell. Despite the child being immunocompetent and having no significant medical history, these episodes persisted. Each recurring episode unfolded roughly 6-7 times annually and spanned 5 to 10 days, mandating the administration of antibiotics, antipyretics, and analgesics to alleviate the prevailing symptoms.

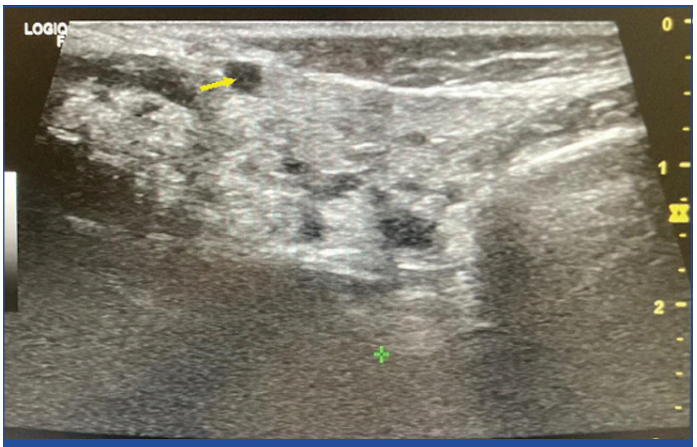
On examination, the child was conscious, oriented to time, place, and person. The patient was febrile (100°F), Pulse rate: 120 beats per minute, Respiratory rate: 22 breaths per minute, Blood pressure: 90/60 mmHg, Oxygen saturation: 99% on room air. Systemic examination was within normal limits. Local examination of the parotid glands revealed bilateral enlargement (left > right). The parotids were tender to touch, and a local increase in temperature over the parotids was noted. No obvious discharge of pus was observed.

Extensive tests examining connective tissue and serological markers such as Rheumatoid Factor (RF), Antinuclear Antibody (ANA) Blot, Anti Ro (SSA), Anti La (SSB) Antibodies, Mumps IgM and IgG, Epstein Barr IgM and IgG Antibodies, Cytomegalovirus (CMV) IgM and IgG Antibodies, Complete Blood Count (CBC), C-Reactive Protein (CRP), Serum amylase, Salivary amylase, Human Immunodeficiency Virus (HIV), Hepatitis B surface antigen (HBsAg), etc., did not reveal any significant findings.

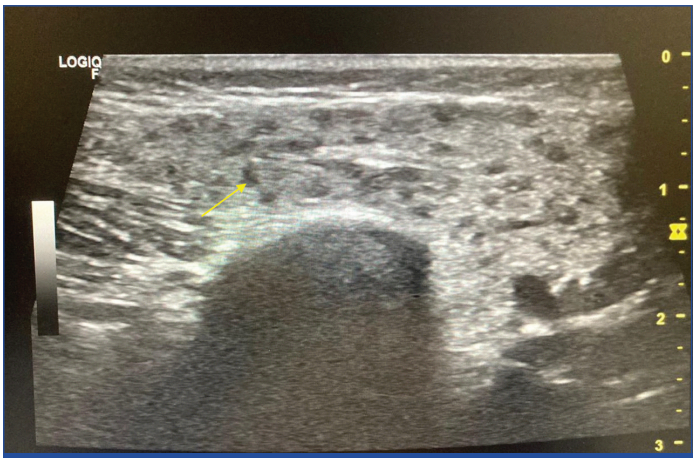
The High-Resolution Ultrasound of the Neck (HR-USG) provided detailed insights into the condition. It indicated that both parotid glands were enlarged [Table/Fig-2,3]. Within these glands, multiple hypoechoic areas were observed. No obvious abscesses, stones, or masses were noted. Parotid ducts were not dilated. In the left parotid gland, there was an indication of increased blood flow, as evidenced by heightened signals observed on power Doppler imaging [Table/Fig-4].



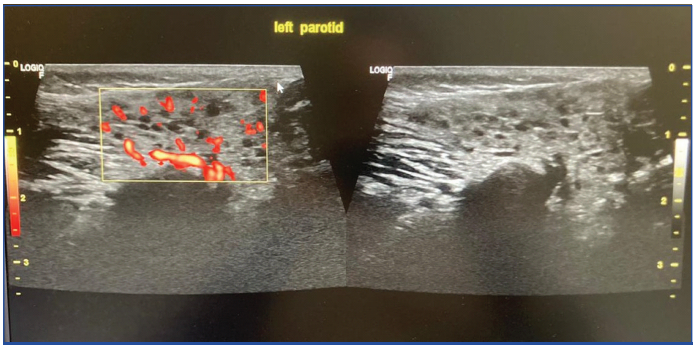
**[Table/Fig-1]:** Clinical picture with bilateral enlarged parotid glands.



**[Table/Fig-2]:** High resolution Ultrasonography (USG) right parotid gland- appears enlarged and shows multiple hypoechoic areas, marked using yellow arrow.



**[Table/Fig-3]:** High resolution Ultrasonography (USG) left parotid gland- appears enlarged and shows multiple hypoechoic areas, marked using yellow arrow.




**[Table/Fig-4]:** High resolution Ultrasonography (USG) of left parotid gland on applying power doppler (left)- shows increased flow.

The differential diagnoses for the child's symptoms and USG findings included acute bacterial parotitis (bacterial infection causing gland inflammation), HIV parotitis (viral infection in HIV-positive individuals),

parotitis associated with tuberculosis (tuberculosis-related gland swelling), sialolithiasis (salivary stones causing blockage), Sjögren's syndrome (autoimmune disorder leading to gland enlargement), and sarcoidosis (systemic inflammatory disease causing granulomas in glands).

After ruling out every condition through investigations, the final confirmatory diagnosis of Juvenile Recurrent Parotitis (JRP) was established.

The patient was initiated on a seven-day course of amoxicillin-clavulanic acid, administered at a dosage of 30 mg/kg/day. Intravenous fluids were provided to maintain adequate hydration, and analgesia and antipyresis were managed with paracetamol and ibuprofen. Symptomatic relief was achieved through the application of warm compressions to the inflamed parotid glands. Upon completing the antibiotic regimen, the patient was discharged and is currently undergoing routine follow-up in the outpatient department. Furthermore, the patient received counseling on more aggressive treatment options, including parotid duct ligation, parotidectomy, and tympanic neurectomy, in the event of recurrent and persistent symptoms. JRP is characterised by recurrent, non obstructive, and non suppurative episodes of pain and swelling in the parotid gland, often accompanied by fever and malaise. The exact cause remains uncertain, with factors such as hereditary genetics, congenital ductal malformations, bacterial or viral infections, allergies, and autoimmune manifestations being proposed [1]. This case involving a five-year-old was consistent with the typical onset of JRP between three and five years of age. While unilateral parotid gland enlargement is prevalent in 66-74% of cases, rare instances of bilateral enlargement can occur, resulting in varying degrees of discomfort, as observed in this specific case [2].

The diagnosis of JRP is confirmed through recurrent parotid swelling, typically observed through USG, considered the gold standard for diagnosis and follow-up. USG reveals an enlarged gland with multiple small hypoechoic areas corresponding to sialectasis, excluding possibilities like stones, abscesses, or mass lesions. Hypoechoic areas on USG typically appear darker than surrounding tissues, suggesting differences in tissue density or composition. Increased blood flow in the context of an enlarged gland could signify inflammation, infection, or another vascular issue within the glandular tissue [3]. Additional diagnostic tools include conventional sialography, sialendoscopy, magnetic resonance sialography, and magnetic resonance imaging, which can provide more details, but due to financial constraints, they were not used in the present case. Early recognition and accurate diagnosis, often facilitated by USG, are crucial for appropriate management and follow-up care [4]. The approach to treating JRP has shifted from invasive procedures to more conservative methods. The use of antibiotics remains controversial due to the rare purulent nature of the condition. In acute episodes, antibiotics and analgesics are administered to prevent further glandular damage and alleviate symptoms [5]. JRP typically resolves spontaneously after puberty in most cases, but it can persist into adulthood, leading to progressive destruction of the parotid gland and transforming into chronic parotitis in some instances. While the prognosis is generally favourable, JRP significantly impacts a child's quality of life, causing feeding difficulties during attacks and leading to school absenteeism, affecting both academic performance and social interactions [6]. This case underscores the diagnostic challenge posed by JRP and highlights the significance of HR-USG as a key diagnostic tool. The rarity of bilateral involvement and the shift towards conservative treatments are notable aspects. Despite a generally favourable prognosis, the potential for morbid recurrences emphasises the need for early recognition and appropriate management.

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**PARTICULARS OF CONTRIBUTORS:**

1. Associate Professor, Department of Respiratory Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Dr. D. Y. Patil Vidyapeeth University, Pune, Maharashtra, India.
2. Junior Resident, Department of Respiratory Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Dr. D. Y. Patil Vidyapeeth University, Pune, Maharashtra, India.

**NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:**
Dr. K Mithun Nilgiri,
Junior Resident, Department of Respiratory Medicine, Dr. D. Y. Patil Medical College, Hospital and Research Centre, Pimpri-Chinchwad, Pune-411018, Maharashtra, India.
E-mail: mithunnilgirik@gmail.com



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