Acute Suppurative Parotitis

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The parotid is the salivary gland most affected by inflammatory process. The authors reviewed the records of 36 patients with acute suppurative parotitis admitted between July 1996 and June 2002. All patients had unilateral swelling of the cheek that extended to the angle of the jaw; 23 had fever (64%) and 6 diabetes (17%). Even though Staphylococcus aureus is the usual pathogen in acute suppurative parotitis; in the present study, alpha-hemolytic streptococci predominated. Adequate hydration and administration of parenteral antimicrobials are essential managements of suppurative parotitis. In the event a well formed abscess, surgical drainage was necessary. The choice of antibiotics depends on the causal microbes.

Keyword : *Acute suppurative parotitis*

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The parotid is the salivary gland most affected by the inflammatory process. Acute suppurative parotitis may originate from a septic focus in the oral cavity, such as chronic tonsillitis or dental infection. Although persons of all ages may be affected, the disease occurs principally in the elderly debilitated by systemic illness or having recently undergone surgery[1,2]. Other predisposing factors include dehydration, malnutrition, oral neoplasm, sialectasis, and taking medications that diminish salivary flow such as antihistamines, tranquilizers and diuretics[1,3]. Diminution of salivary flow enables the ascent of indigenous flora may lead to suppurative parotitis[4]. The authors' aim was to describe the clinical presentation, microbiology and treatment outcomes of suppurative parotitis.

Material and Method

The authors reviewed the clinical records of patients diagnosed with acute suppurative parotitis between July 1996 and June 2002 at the Department of Otolaryngology, Srinagarind Hospital, Khon Kaen University, Thailand. The presented sample included 36 patients, of whom complete clinical records were available. Age, sex, duration of symptoms and hospitalization, presenting symptoms, underlying disease, culture for aerobic bacteria, outcome of treatment and complications were analyzed.

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Results

The patients included 21 females and 15 males, whose ages ranged from 2 to 68 (average, 37.3 years). The mean duration of symptoms prior to diagnosis was 15.3 days (range, 3 to 30). Hospitalization averaged 9 days (range, 3 to 32). All of the patients had unilateral swelling of the cheek that extended to the angle of the jaw; 23 had fever (63.9%) and 6 had diabetes (16.7%). Intravenous cloxacillin was administered to all patients empirically after admission. Fine needle aspirations were performed on all of the patients and 28 (77.8%) yielded pus, and underwent surgical drainage later. The pus was sent for routine aerobic culture (Table 1) and the antibiotic prescribed reflected the culture result. Three patients had post-operative complications, one had upper gastrointestinal bleeding and two had temporary facial palsy in the marginal branch.

Table 1. Microbiology of operated cases

No growth	18
Alpha-hemolytic streptococci	5
Staphylococcus aureus	2
Burkholderia pseudomallei	1
Xanthomonas maltophilia	1
Klebsiella pneumoniae	1

One patient with temporary, post-operative, facial palsy had a second surgery to improve pus drainage.

Discussion

Parotitis complicated by parotid abscess is a potentially life-threatening condition. Septicemia, trismus, deep neck space infection are caused by infection of the carotid sheath, which is fatal if not treated[5]. Fine needle aspiration may benefit the patient with acute suppurative parotitis by helping to determine whether surgical drainage is needed. In the present study, fine needle aspiration was done in all patients and those yielding pus underwent surgical drainage.

Aerobic cultures were routine for all surgically drained patients and results were positive in ten patients (34.5%) and negative in nineteen (65.5%). *Staphylococcus aureus* was the most common pathogen associated with acute parotitis, however, streptococci and gram-negative bacilli also occurred[1,3,6]. In the present study, alpha-hemolytic streptococci predominated in five patients and *Staphylococcus aureus* in two. Pus from three other patients grew *Burkholderia pseudomallei, Xanthomonas maltophilia* and *Klebsiella pneumoniae*.

Melioidosis, caused by *Burkholderia pseudomallei*, is endemic in Southeast Asia and northern Australia[7,8]. The clinical manifestation of melioidosis are protean, ranging from chronic abscess formation to fulminant sepsis[7]. Infection occurs predominantly in adults with diabetes or renal failure[9,10], whereas children with *Burkholderia pseudomallei* parotitis frequently present no evidence of any underlying disease[11].

Melioidosis of the parotid occurred in a 5 year old. Pus from the incision and the drained parotid abscess grew *Burkholderia pseudomallei*. The patient had no underlying disease. The antibiotic was changed after receiving results of the culture. Intravenous ceftazidime and trimethoprim-sulfamethoxazole were administered for three weeks followed by three months of oral trimethoprim-sulfamethoxazole. The patient fully recovered.

Acute suppurative parotitis is rare in children[1], so children from melioidosis endemic areas presenting with fever and facial swelling should be tested for *Burkholderia pseudomallei* parotitis. With the correct diagnosis and appropriate treatment, parotitis has a good prognosis. All the presented patients recovered though one experienced post-operative, upper gastrointestinal bleeding and two other had temporary facial palsy in the marginal branch.

Conclusion

An alpha-hemolytic streptococcus was the most common pathogen associated with acute suppurative parotitis in the present study. Acute suppurative paroitis occurs mainly in adults and the elderly. Acute suppurative parotitis in children is rare, patients from a melioidosis-endemic area should be checked for *Burkholderia pseudomallei*.

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การอักเสบที่เป็นหนองชนิดเฉียบพลันของต่อมน้ำลายหน้าหู

สมชาย ศรีร่มโพธิ์ทอง, สมชาติ แสงสอาด

การอักเสบของต่อมน้ำลายส่วนมากเกิดบริเวณต่อมน้ำลายหน้าหู ได้รายงานผู้ป่วยที่เป็นต่อมน้ำลายหน้าหูอักเสบที่เป็นหนองชนิดเฉียบพลัน จำนวน 36 ราย ตั้งแต่ กรกฎาคม 2539 ถึง มิถุนายน 2545 ผู้ป่วยทุกรายมีอาการบวมบริเวณหน้าหูลงมาถึงบริเวณขากรรไกรล่างและเป็นข้างเดียว ผู้ป่วย 23 ราย มีไข้ (64%) และ 6 ราย เป็นโรคเบาหวาน (17%) ถึงแม้เชื้อ Staphylococcus aureus เป็นเชื้อที่พบบ่อยในการอักเสบของต่อมน้ำลายหน้าหู แต่จากการศึกษาครั้งนี้พบว่าเชื้อที่พบเป็นสาเหตุที่พบบ่อยที่สุดคือเชื้อ alpha-hemolytic streptococci การรักษาต่อมน้ำลายอักเสบบริเวณหน้าหู จำเป็นต้องให้น้ำให้เพียงพอและยาปฏิชีวนะที่ตรงกับเชื้อที่เป็นสาเหตุ ในกรณีที่การอักเสบเริ่มเป็นหนองจำเป็นต้องใช้การรักษาด้วยการผ่าตัดระบายหนองร่วมด้วย