

## ROLE OF FINE NEEDLE ASPIRATION CYTOLOGY (FNAC) IN DIAGNOSIS OF PAROTID GLAND TUMORS

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**Introduction:** Parotid gland tumors include wide variety of inflammatory and neoplastic diseases. The diagnosis cannot be established on the basis of clinical history and simple physical examination but requires complementary diagnostic methods. Fine needle aspiration cytology (FNAC) guided by ultrasound is a widely used diagnostic tool to evaluate parotid swellings and it has been accepted as a safe, inexpensive, rapid and relatively painless procedure with a diagnostic accuracy of higher than 75%. FNAC can be very useful since it avoids the need of core tissue biopsy which carries significant risk of facial nerve damage, fistula formation and tumor implantation.

**Objective:** To determine the sensitivity, specificity and diagnostic accuracy of fine needle aspiration cytology in parotid tumors.

**Material and methods:** Retrospective chart review was performed of 193 patients who underwent parotidectomy from January 2005 to December 2015 to the Aga Khan University Hospital, Karachi. All patients underwent ultrasound guided FNAC. In order to obtain homogenous data, FNAC performed in our institute were

considered only. Data collection was done which included details regarding age, gender, comorbid, signs and symptoms, FNAC, final histopathology and complications.

**Results:** Out of 193 patients undergoing parotidectomy, 110(57%) were males and 83 (43%) were females, mean age being 48.21 and 43.76 years respectively. Mean duration of symptoms was 41.33 months and most common symptom was pre-auricular swelling present in all patients followed by pain present in 29 patients (15%) and facial nerve weakness in 6 patients (3.1%). FNAC was performed preoperatively and results were compared with final histopathology which showed sensitivity of 69.6%, specificity of 98.1%, and positive predictive value of 88.9%, negative predictive value of 93.8% and diagnostic accuracy of 91.93%.

**Conclusion:** Our results suggest that FNAC is relatively an accurate method for preoperative diagnosis of parotid swelling and can prove to be a valuable tool for preoperative counseling of the nature of the disease and prognosis.

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