

## Posterior interosseous neuropathy Resulted from ganglion cyst mimicking Schwannoma in elbow

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### Background

Posterior interosseous neuropathy (PIN) Resulted from mass lesions (e.g., ganglion cysts, tumor) is rare. The clinical presentation of persons with PIN is somewhat variable depending upon the location of neural insult. We report an unusual PIN due to ganglion cyst mimicking Schwannoma.

### CASE REPORT

Twenty seven years old man visited with complaints of right elbow pain, which began 3 months ago without history of trauma. He did not complain of weakness and sensory change in hand and forearm. Small palpable fixed mass was detected between brachioradialis muscle and biceps tendon. MRI showed cystic mass of low signal intensity (SI) on T1WI and high SI on T2WI with split fat sign along radial nerve between brachioradialis muscle and brachialis tendon, which findings suggest the possibility of Schwannoma. (Fig. 1.) After 50 days of first visit, he underwent surgery for mass excision. At admission mild weakness of finger extension (thumb extension MRC grade 4, 2nd finger extension grade 4, 3rd-5th finger extension grade 3) without sensory change, which was found just prior to surgery, was detected. After excision the mass was identified as ganglion cyst with stalk connected with radiocapitellar joint capsule, (Fig. 2) After 3 months of surgery, third and fourth finger weakness slightly improved from grade 3 to grade 4 and electrodiagnostic (EDX) study confirmed posterior interosseous neuropathy with mild partial axonotmesis state.

### Conclusions

The occurrence of ganglion cyst in the elbow joint causing PIN is unusual and can be misdiagnosed as Schwannoma. Fortunately neurologic deficit was followed after detection of mass. Accurate diagnosis is important to treatment and prognosis.

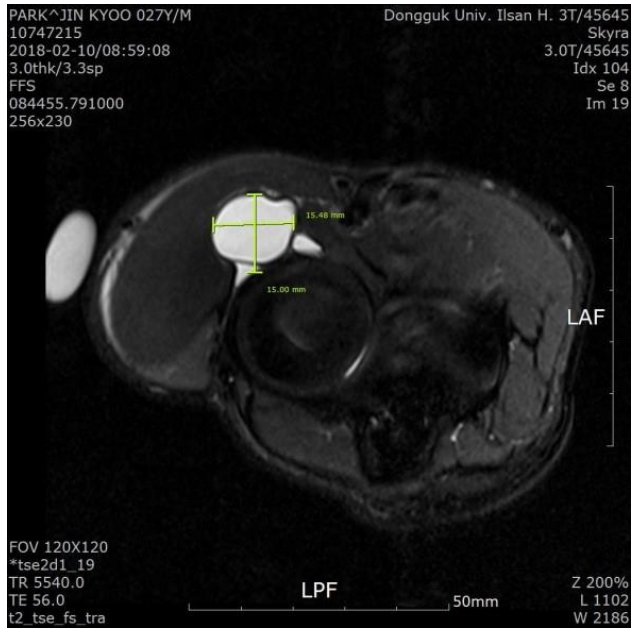


fig1. Preoperative T2-weighted MRI shows lobulated cystic mass along radial nerve



fig2. Ganglion cyst connected radiocapitellar joint along radial nerve (Intraoperative finding)