Tumors of the Brachial Plexus Region: a 25 Year Experience

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Introduction

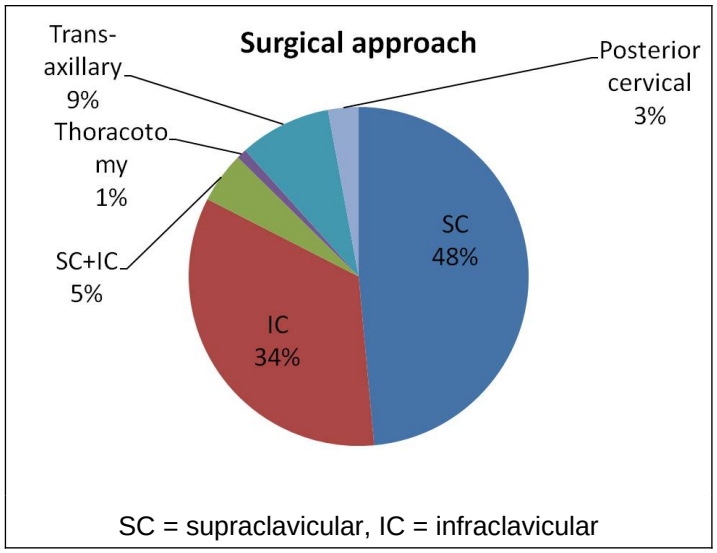
- Neoplasms of the brachial plexus region are rare.
- In this case series, we review our experience with brachial plexus tumors with emphasis on patterns of presentation, treatment, and outcome.

Methods

- Retrospectively review of patients undergoing surgical resection of brachial plexus region tumors
- Single neurosurgeon at an academic institution from 2001 – 2016
- Collected baseline characteristics, tumor location, surgical approach, pathological diagnosis, and post-operative motor function at the time of most recent follow-up

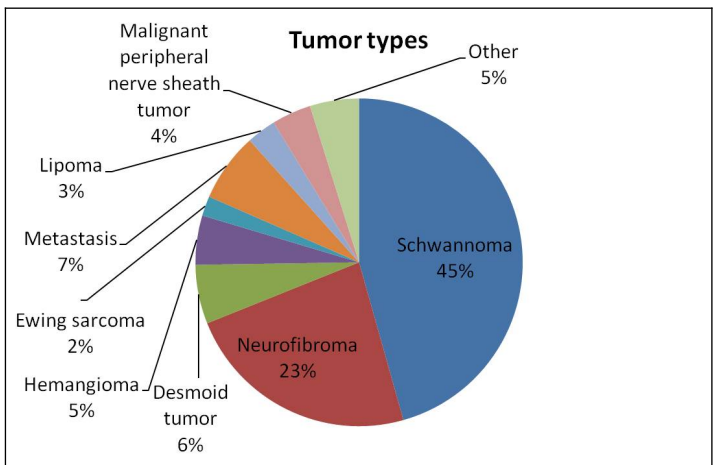
Results

- 103 brachial plexus region tumors (98 patients) were identified (mean age 47, 50% female).
- A palpable mass was present in 93 patients (90%), and sensory deficit/paresthesia was the most common presenting symptom (41 patients, 40%),
- The supraclavicular region was the most common tumor location (56%).



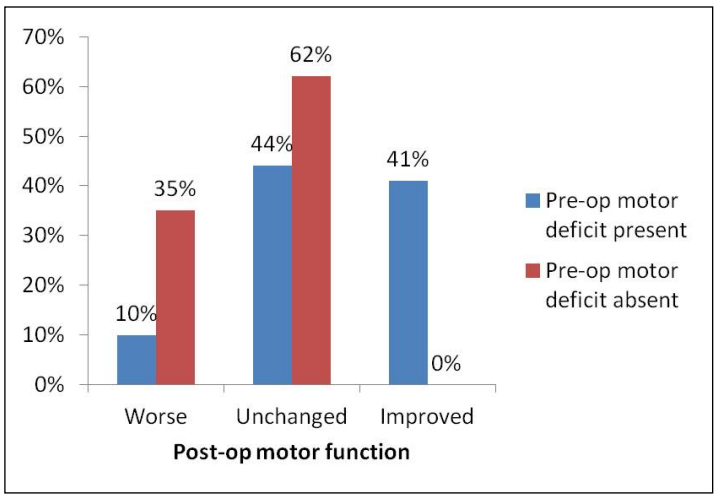
SC = supraclavicular, IC = infraclavicular

- Schwannoma (45%) and neurofibroma (23%) were the most common tumors.
- Greater than 95% resection was achieved in 68 patients (72%).
- Mean follow-up time was 10 months among 95 tumors in 90 patients.



"Other" includes: inflammatory fibrous nodule, hemangioma, osteogenic sarcoma, atypical teratoid rhabdoid tumor, chordoma

- Pain at follow-up was stable or improved in 72 patients (85%), and post-op function was unchanged or improved in 67 patients (75%).
- Among 51 patients with no pre-op weakness, motor strength was worse in 18 patients (35%) and unchanged in 32 patients (62%).
- Of these patients, half had motor strength of 4/5 at most recent follow-up.



Conclusions

- We present findings from a relatively large series of brachial plexus region tumors to further characterize tumor epidemiology and surgical outcome.
- Tumor resection is associated with improved post-op pain and is not commonly associated with severe post-op motor deficit, especially in cases in which pre-op deficits are already present.