High Cervical Antero Lateral Retropharyngeal (HCALR) approach.

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Disclosure

We don’t have any disclosure and any conflict of interest to declare.
Introduction

The first High Cervical Antero Lateral Retropharyngeal (HCALR) approach was reported by Steven GC for a clivus chordoma in 1966. Anterior approaches to the spine were often developed in response to problems presented by tuberculous spondylitis. This approach is indicated in anterior high cervical spine cases such as tumor resection, abscess drainage, atlantoaxial subluxation; decompression and stabilization.
Methods

A systematic search was performed on PubMed without temporal limitation to identify all clinical reports in which high anterior cervical approach was mentioned. The following search strategy was used ‘‘[(high cervical) OR (high anterior cervical) OR (submandibular)] OR (anterolateral) OR (retropharyngeal pre-vascular)]’’. The search was performed independently in parallel by one junior neurosurgery resident and one medical student.

Inclusion criteria included any case of the above mentioned searched words.
Results

We found 28 papers which matched the searched words but only 21 papers matched our inclusion criteria. We grouped the sample in 4 categories: 114 cadavers, 7 case reports, 584 patients and 1 vertebrae as shown in figure 1.

Figure 1.
Fig 2. Showing the anatomical landmarks on a real patient.
Discussion

Several studies have shown the usefulness of HCALR in providing a wide exposure from the clivus and anterior rim of foramen magnum to the rostral cervical spine up to C4.
Summary points

- HCALR approach provides a wide exposure (of anterior upper cervical spine, lower clivus and brain stem region) and feasibility for instrumentation.
- Complications that can happen are:
  1. Hypoglossal nerve palsy with hemiglossal atrophy.
  2. CSF fistula.
  3. Dysphagia (due to stretch of the SLN)
  4. Voice hoarseness.