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Complications of instrumentation in the cervical spine and craniovertebral junction in paediatric patients – An analysis of 141 casesSandip Chatterjee*Park Clinic, Kolkata, India*

Aim of the Study: To highlight complications caused during instrumentation in surgery of the cervical spine including the craniocervical junction in the paediatric age group by analyzing retrospective data of the last 8 years.

Material and Methods: The data of 141 patients in the age group 0-16years operated by a single surgeon at the Park Clinic Kolkata over a 8 year period from 2003 to 2010 were reviewed to assess complications .The indications of surgery had varied from congenital atlantoaxial junction anomalies(64)to tuberculosis(36) and tumours(23) as well as cervical spinal injuries(18). The complications were grouped as follows: a) Those due to faulty diagnosis. b) Those due to faulty surgical techniques c)Those due to failure of instrumentation and d)Other complications.

Results: 2 patients were identified as having "inappropriate diagnosis" labelled on them,including one with an unclassifiable craniovertebral anomaly, 4 patients had problems with "inappropriate surgical techniques"including one with a massive pseudomeningocele due to anterior cervical approach for a recurrent enterogenous cyst, 7 patients had problems due to growing spine and inappropriate stabilization techniques,including one with displaced screws and pullout of fixation device, and 2 had other complications including one with orthosis induced skin abscess.Of the patients, only 5 had neurological deterioration after surgery.

Conclusions: Complications after instrumentation at the cervical spine and cervicocranial junction surgery is not as uncommon as one would imagine and has occurred in over 10% of paediatric patients operated on by a single surgeon in this series. This is an attempt to analyse the causes and suggest means of preventing similar problems in future.