

Grisel Syndrome With Chronic C1C2 Subluxation: 2 Case Series

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INTRODUCTION:

Grisel Syndrome refers to non-traumatic atlantoaxial subluxation. It was first described in 1951 following two cases of pharyngitis associated with atlantoaxial subluxation¹. Early diagnosis and treatment always followed by excellent result. We described two cases of Grisel Syndrome, presented late, after three months of the onset, treated with halo traction and followed by C1C2 fusion.

CASE REPORTS:

Case 1

A 9 year old girl, previously healthy, presented to us with complained of worsening torticollis. She gave a history of upper respiratory tract infection symptoms before the neck become tilted. Physical examination noted typical cock-robin position of torticollis with no neurological deficit. Plain radiograph and CT scan confirmed the diagnosis of C1C2 subluxation. Halo traction was applied with incomplete reduction of C1C2. She underwent C1C2 fusion using C1 lateral mass and C2 pedicle screw technique. Patient was applied on halo vest post operatively for three month duration. The symptoms resolved completely after removal of the halo vest.

Case 2

An 8 year old girl, with similar complaint and history with previous patient, presented to us three months after the onset of torticollis. The diagnosis of C1C2 subluxation was then confirmed with plain radiograph and CT scan. Halo traction was applied, but again, incomplete reduction was achieved. She also underwent C1C2 fusion using C1 lateral mass and C2 pedicle screw technique. As the reduction was easily achieved intra operatively, she was only applied on cervical collar post operatively. The symptom was also completely resolved after removal of cervical collar.



Figure 1: Plain radiograph showed C1C2 subluxation and reduction with C1C2 fixation (Case 2).

DISCUSSIONS:

Grisel Syndrome is one of the causes for acute torticollis, occur mainly in children². Early diagnosis is very important, so that surgery can be avoided. If detected early, most of the patient will respond very well with antibiotic, analgesic and semi rigid immobilization. Surgery will be indicated in chronic condition as the reduction is usually difficult to achieve via traction. C1 lateral mass screw with C2 pedicle screw technique can be considered to achieve C1C2 fusion with excellent result.

CONCLUSION:

Grisel Syndrome should be suspected in a child with acute torticollis with recent history of upper respiratory tract infection. While managing early case can be relatively straight forward, chronic C1C2 subluxation offered much more challenges.

REFERENCES:

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2. Guleryuz A, Bagdatoglu C, Duce MN, Talas DU, Celikbas H, Koksel T: Grisel's syndrome. J Clin Neurosci 9:81-84, 2002