



Review Article

Post-traumatic superolateral dislocation of condyle: A case series of 18 condyles with review of literature and a proposed classification.



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ABSTRACT

Aim: The aim is to review the English literature for post-traumatic superolateral dislocation of mandibular condyle (SDMC), discuss their dynamics and clinical management and to propose to modify the existing classification of SDMC. **Patients and Methods:** A literature search was carried at Pubmed, Sciencedirect, Google and references from reported articles were crosschecked to look for the cases of SDMC from 1969 to 2015 in English language. Also, we have reviewed 11 of our patients with total of 18 superolateral dislocated intact or sagittal split condyles, who visited our unit in the previous two years. **Results:** In our retrospective analysis 58 cases of SDMC were found in the literature, of which 38 had intact mandibular condyles and 20 had sagittal split. Early and intact SDMC were successfully managed conservatively with closed reduction, whereas old cases and largely fractured condyles necessitated open reduction. Additionally, we observed an unusual dislocation associated with fracture of contralateral posterior mandible (angle) in our series which did not gratify the existing classification. **Conclusion:** Alteration of the existing classification was required to accommodate the unusual type of dislocation.

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1. Introduction

By definition Temporomandibular joint (TMJ) dislocation involves a non self limiting displacement of the condyle, outside of its functional position within the glenoid fossa and the posterior slope of articular eminence.¹ Dislocation of TMJ represents 3% of all reported dislocated joints.² Depending on its direction of dislocation, it is classified as anterior, posterior, lateral or superior.³

Dislocation of condyle was classified by Allen⁴ as Type I (lateral subluxation) and Type II (complete dislocation) in which the condyle is forced laterally and superiorly to enter the temporal fossa. In the latter situation the medial end of the ovoid-shaped head of the condyle is engaged above the posterior root of the zygomatic arch. Satho et al.⁵ further classified type II into 3 subtypes i.e. type IIA, in which the condyle is not hooked above the zygomatic arch; type IIB, in which the condyle is hooked above the zygomatic arch; and type IIC, in which the condyle is lodged inside the zygomatic arch, which is fractured. Truro et al added a type III dislocation as a complete dislocation without associated fracture of anterior mandible.⁶

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Table 1
Reported Superolateral dislocation of maandibular condyles from 1969–2015.

| S N | Year | Authors | Age (yrs) | Sex | Etiology | No of Condyles | Intact/ sag # | Type | Side | Reduction after Days | Reductin Condyle | Assoc mand # | MO | Follow up |
|-----|------|--------------------------------|-----------|-----|----------|----------------|---------------|---------|------|----------------------|------------------|---------------------------------------|----|---|
| 1. | 1969 | Allen ⁴ | 16 | M | RTA | 5 | Intact | I | R | 8 | C | sym, | NA | Fibro-osseous ankylosis |
| 2. | | | 50 | M | RTA | | Intact | II | L | 15 | C | Rt body | NA | Malocclusion |
| 3. | | | 36 | M | RTA | | Intact | I | B | 1 | C | Lt Parasymp | NA | Malocclusion |
| 4. | | | 22 | M | RTA | | Intact | I | L | 1 | C | Sym | NA | |
| 5. | | | 30 | M | RTA | | Intact | II | R | 1 | C | L Parasymp | NA | Not available |
| 6. | 1978 | Brusati Paimi ⁸ | NA | NA | NA | 2 | Intact | II | U | 1 | C | None | NA | facial palsy |
| 7. | | | NA | NA | NA | | Intact | II | U | 12 | O | None | NA | facial palsy |
| 8. | 1982 | Worthington ²¹ | NA | NA | NA | 1 | Intact | Unusual | U | 14 | O | Contralat | NA | For management of Fibro-osseous ankylois |
| 9. | 1988 | Devita ⁹ | 28 | F | RTA | 1 | Intact | II | B | NA | C | None | NA | Coronoidectomy for limited MO |
| 10. | 1989 | Ferguson ¹¹ | 31 | M | Bull | 1 | Intact | II | U | 1 | O | Midline | 30 | For arthroplasty |
| 11. | 1989 | To ¹² | 34 | M | Fall | 1 | I | II | R | 14 | O | Sym, | 17 | Preauricular incision for reduction |
| 12. | 1994 | Satoh ⁵ | NA | NA | NA | 1 | Intact | II | B | 13 | O | NA | 30 | Interposition Arthroplasty |
| 13. | 1996 | Kapila ³ | 42 | M | RTA | 1 | Intact | II | L | 7 | C | Sym, | 30 | |
| 14. | 1998 | Hoard ¹³ | NA | NA | NA | 1 | Intact | II | B | NA | O | NA | NA | |
| 15. | 2000 | Yoshii ²¹ | 1.5 | F | RTA | 1 Ant | Intact | II | B | 16 | O | Sym, ZA | 20 | Preauricular for reduction |
| 16. | 2002 | Rattan ¹⁴ | 55 | M | RTA | 2 | Sag # | II | R | 14 | O | midline | 30 | Preauricular for removal of medial fragment |
| 17. | | | 52 | M | RTA | | Intact | II | B | 21 | O | midline | 35 | Preauricular, bilateral Interposition Arthroplasty, bilateral Coronoidectomy manual |
| 18. | 2007 | Hsieh ²¹ | 23 | M | RTA | 1 | Intact | II | B | 1 | C | midline | 41 | |
| 19. | 2007 | Bu ¹⁵ | 42 | M | RTA | 1 | Intact | II | L | 5 | C | none | 37 | |
| 20. | 2009 | Lloyd ²¹ | 20 | M | RTA | 1 | Intact | Unusual | L | NA | O | R angle | 30 | Open reduction, craniotomy |
| 21. | 2010 | Papadopoulos ²¹ | 16 | M | RTA | 1 | Intact | II | B | NA | O | none | 32 | Coronoidectomy |
| 22. | 2010 | Vasconcelos ²¹ | 30 | M | RTA | 1 Post | Intact | Unusual | L | NA | C | none | NA | Percutaneous hook sigmoid |
| 23. | 2010 | Hegde ²¹ | 32 | M | RTA | 1 | Intact | II | U | 5 | O | none | NA | Preauricular incision for reduction |
| 24. | 2010 | Tauro ⁶ | 25 | M | RTA | 1 | Intact | II | B | 3 | C | Midline | 35 | Manual reduction under sedation |
| 25. | 2011 | Christiano et al ²¹ | 03 | F | RTA | 1 | Sag # | II | NA | 1 | C | none | NA | Normal occlusion & TMJ function |
| 26. | 2011 | Prabhakar ²¹ | 47 | F | Fall | 1 | Intact | II | B | 45 | O | none | 30 | preauricular for reduction |
| 27. | 2011 | Amaral ¹⁶ | 15 | F | RTA | 1 | Intact | II | L | NA | C | Symphysis, panfacial | 30 | |
| 28. | 2011 | Imai ¹⁷ | 23 | M | RTA | 1 Ant | Intact | II | R | 11 | O | Zygomatic complex, articular eminence | 45 | Preauricular for reduction, fixation of arch, removal of fragments |
| 29. | 2013 | Kim ¹⁸ | 54 | M | RTA | 1 | Intact | II | B | 1 | C | midline | NA | Percutaneous traction at sigmoid, FRM |
| 30. | 2013 | Radhakrishna ¹⁹ | 50 | M | RTA | 1 | Intact | II | L | NA | C | Rt body | NA | Open Traction, FRM |
| 31. | 2013 | Singh ²⁰ | 22 | M | RTA | 1 | Intact | II | B | 2 | O | Lt parasymp | 33 | R submandibular for traction at angle & sigmoid, L manual |
| 32. | 2013 | Saraswathi ²⁰ | 8 | F | Fall | 1 | Intact | IIB | L | NA | C | - | 35 | |
| 33. | 2013 | Shen ²¹ | 40 | M | RTA | 10 | Intact | IIB | L | 4 | C | midline | 34 | |
| 34. | | | 20 | M | RTA | | Intact | IIB | B | 12 | O | midline | 33 | Sagittal split osteotomy |
| 35. | | | 44 | M | RTA | | Sag # | IIB | L | 15 | O | midline | 30 | Sagittal split osteotomy |
| 36. | | | 32 | M | RTA | | Intact | IIA | R | 17 | O | midline | 37 | Sagittal split osteotomy |
| 37. | | | 20 | M | RTA | | Intact | IIA | R | 5 | C | Rt angle | 41 | |
| 38. | | | 16 | M | RTA | | Sag # | IIA | B | 12 | O | midline | 38 | Sagittal split osteotomy |
| 39. | | | 58 | M | Fall | | Intact | IIB | R | 6 | C | midline | 34 | |
| 40. | | | 27 | M | RTA | | Intact | IIA | L | 27 | O | midline | 36 | Sagittal split osteotomy |
| 41. | | | 46 | M | RTA | | Sag # | IIB | L | 19 | O | midline | 38 | Sagittal split osteotomy |
| 42. | | | 39 | M | RTA | | Intact | II B | B | 35 | O | midline | 27 | Sagittal split osteotomy |
| 43. | 2013 | Chaitanya ²² | 4 | F | Fall | 1 Ant | Intact | II C | U | 6 | O | none | 30 | Preauricular incision for reduction |
| 44. | 2013 | Li ²³ | 28 | M | RTA | 13 | Sag# | 3 II B | U | NA | C | none | 39 | |
| 45. | | | 31 | M | RTA | | Sag# | | U | NA | O | midline | 38 | Reduction fixation & Disc repair |
| 46. | | | 19 | M | RTA | | Sag# | | U | NA | O | midline | 36 | Reduction fixation & Disc repair |
| 47. | | | 42 | M | RTA | | Sag# | | U | NA | O | midline | 34 | Reduction fixation & Disc repair |
| 48. | | | 36 | M | RTA | | Sag# | | U | NA | O | --- | 39 | Reduction fixation & Disc repair |
| 49. | | | 19 | F | RTA | | Sag# | | U | NA | O | midline | 36 | Reduction fixation & Disc repair |
| 50. | | | 25 | M | RTA | | Sag# | | U | NA | O | body | 34 | Reduction fixation & Disc repair |
| 51. | | | 22 | M | RTA | | Sag# | | U | NA | O | midline | 35 | Reduction fixation & Disc repair |
| 52. | | | 18 | M | RTA | | Sag# | | U | NA | O | -- | 40 | |

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