

Findings

- Pain
- Swelling
- Step deformity
- Lip paresthesia / Anesthesia
- Blunt/penetrating injury
- Concomitant Systemic injuries
- Concomitant facial Fractures
- Medical history -
Immunosuppression / Severe
asthma / Epilepsy / Psychosis
- Social History - Alcohol / Drug
abuse

Mandibular Fracture (Adult)

Diagnostic Imaging

- Panoramic radiographs
- Extraoral - Mandibular lateral
oblique / anterior posterior /
towne
- Computerized Tomography

Symphysis Fracture

Parasymphysis Fracture

Body Fracture

Ramus Coronoid Process Fractures

Condylar process Fracture

Angle Fracture

Avulsive, comminuted Fractures

Observation
Soft diet

Observation
Soft diet

Observation
Soft diet

Observation
Soft diet

Refer algorithm 1

Refer algorithm 2

Refer algorithm 2

Closed Reduction
Maxillomandibular
Fixation

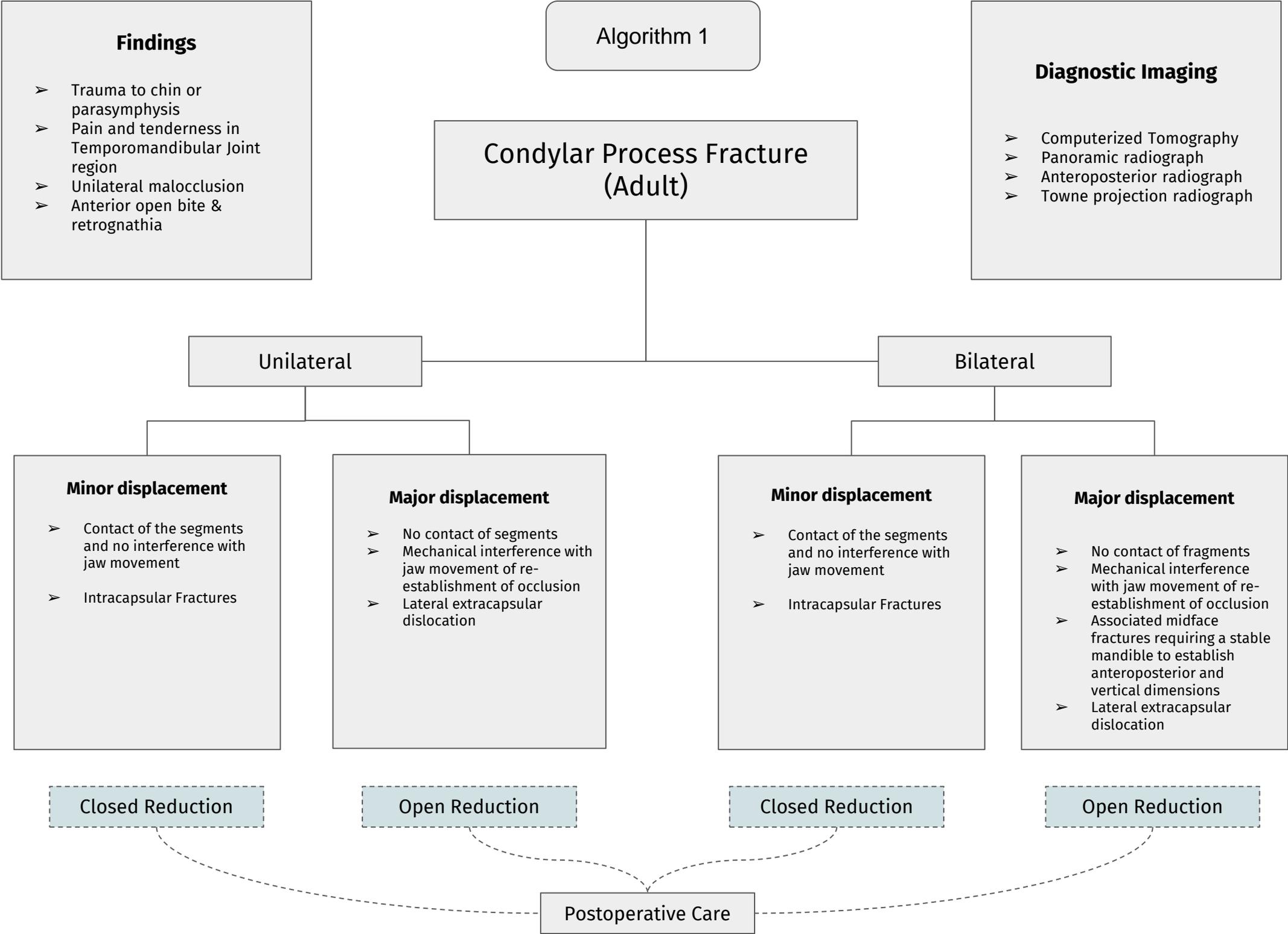
Closed Reduction
Maxillomandibular
Fixation

Closed Reduction
Maxillomandibular
Fixation

Intraoral /extraoral
Open Reduction Fixation
of Symphysis

Intraoral /extraoral
Open Reduction Fixation
of Parasymphysis

Intraoral /extraoral
Open Reduction Fixation
of mandibular body



Algorithm 1

Condylar Process Fracture (Child)

- Findings**
- Trauma to chin or parasymphysis
 - Pain and tenderness in Temporomandibular Joint region
 - Unilateral malocclusion & premature tooth contact, contralateral posterior open bite, and deviation of midline to side of injury with Unilateral fractures
 - Anterior open bite & retrognathia with Bilateral condylar fractures

- Diagnostic Imaging**
- Computerized Tomography (Axial & Coronal)
 - Panoramic radiograph
 - Anteroposterior radiograph
 - Towne projection radiograph

Unilateral

Bilateral

- Minor displacement**
- Fractures with contact of the segments
 - Intracapsular Fractures

- Major displacement**
- No contact of segments

- Minor displacement**
- Fractures with bilateral contact of the segments
 - Intracapsular Fractures

- Major displacement**
- Treat both sides if no contact of the segments
 - Treat only the side without contact if there is contralateral contact

Closed Reduction

Open Reduction

Closed Reduction

Open Reduction

- No more than 2 weeks of Maxillomandibular Fixation
- Active Physical therapy

- No Maxillomandibular Fixation
- Guiding elastics for deviation on mouth opening

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- No Maxillomandibular Fixation
- Guiding elastics for deviation on mouth opening

Postoperative Care

Inform parents of possible future retrognathia or laterognathia

Algorithm 2

- Findings**
- Pain
 - Swelling
 - Step deformity , malocclusion
 - Inferior alveolar nerve paresthesia / Anesthesia
 - Blunt/penetrating injury
 - Concomitant Systemic injuries
 - Concomitant facial Fractures
 - Medical history - Immunosuppression / Severe asthma / Epilepsy / Psychosis
 - Social History - Alcohol / Drug abuse

- Diagnostic Imaging**
- Panoramic radiographs
 - Extraoral - Mandibular lateral oblique / anterior posterior / townes
 - Computerized Tomography

Mandibular angle Fracture (Adult)

Greenstick, nondisplaced Fracture
Noncompliant patient

Observation
Soft diet

Minimally displaced Fracture
Patient refuses open reduction and can tolerate maxillomandibular fixation

Closed Reduction
Maxillomandibular Fixation

Isolated Fracture

Intraoral /extraoral
Open Reduction Fixation

Bilateral Fracture

With concomitant mandibular Fracture

Intraoral /extraoral
Open Reduction Fixation

Avulsive, comminuted Fractures

Reconstruction plate

External pin fixation

Intraoral/ Extraoral
Open reduction and fixation

Algorithm 2

Mandibular Fracture (Child)

Findings

- Circumstances of injury
- Swelling
- Tenderness
- Lip paresthesia / Anesthesia
- Ecchymosis
- Occlusal steps
- Rule out cervical spine injury

Diagnostic Imaging

- Panoramic radiographs
- Computerized Tomography
- Periapical radiographs
- Sedation or General anesthesia in uncooperative children

Neonatal to primary dentition
(1 day - 6 yrs)

Mixed Dentition
(7 yrs - 12 yrs)

Adolescent Dentition
(13 yrs - 18 yrs)

Minor displacement

- Observation

Major displacement

- Eyelet loops & MMF
- Lingual / Occlusal splints
- Rigid fixation (resorbable plates)

Minor displacement

- Observation

Major displacement

- Occlusal splints & skeletal fixation
- Rigid fixation

- Arch bars and Maxillomandibular Fixation
- Rigid Fixation

Follow Up