



QR code for mobile view

- Inclusion criteria:**
- Infant with diagnosis of BBPI
  - $\geq 3$  months of age to 12 months of age
- Exclusion criteria:**
- Infant  $\geq 3$  months with a *fully resolved* birth brachial plexus injury

Infant  $\geq 3$  months of age with diagnosis of BBPI

**Send infant to CM radiology for initial US**  
 Include the alpha angle and, in neonates, posterior humeral head displacement

- **Affected shoulder**
  - 2 static images w/internal rotation and 2 static images w/external rotation
  - 1 cine of internal to external rotation
- **Unaffected shoulder**
  - 2 static images w/internal rotation and 2 static images w/external rotation
  - 1 cine of internal to external rotation
- **Both shoulders:**
  - 1 static image in dual screen affected and unaffected side with internal rotation
  - 1 static image in dual screen affected and unaffected side with external rotation

**Alpha angle of affected shoulder  $\geq 40^\circ$**

**Alpha angle of affected shoulder  $\geq 30^\circ$  but  $< 40^\circ$**

**Alpha angle of affected shoulder  $< 30^\circ$**

**Schedule infant for manual shoulder reduction, including:**

- Injection of botulinum toxin A into the pectoralis major, latissimus, and subscapularis muscles
- Apply shoulder spica cast for 6 weeks to maintain joint reduction

*\*Consider combining shoulder reduction with nerve surgery if infant is 3-6 months of age*

Remove cast at 6 weeks post-op  
**AND**  
 Repeat US to ensure appropriate glenohumeral reduction  
 ◦ *If glenohumeral joint is not reduced to an alpha angle of  $< 30$  degrees, - refer infant for brace*

Complete US again at 1-2 months after cast removal

Has glenohumeral joint reduction been maintained?

Yes

Schedule infant for brace

**Recommend US every 2 months to evaluate glenohumeral relationship**

- Measure both in and out of brace to ensure brace is maintaining glenohumeral joint reduction

Is glenohumeral joint alignment maintained?

Yes

**Brace wearing timing:**

- Wear 22 hrs/day for first month
- After first month, wear only at night (when sleeping) and during naps for an additional 6 - 10 months

No

No

**Follow-up at 9 - 12 months of age**

- If PROM is restricted for internal/external rotation, consider MRI
- Otherwise, continue with regularly scheduled 6 month or yearly appointment in Brachial Plexus Clinic

**Repeat US at 6 months of age:**

- **Alpha angle  $< 30^\circ$**  -Continue to monitor with a repeat US as needed
- **Alpha angle  $\geq 30^\circ$  but  $< 40^\circ$  without PROM restriction** - refer for brace
- **Alpha angle  $\geq 30^\circ$  but  $< 40^\circ$  with PROM** - refer for manual reduction and spica cast
- **Alpha angle  $> 40^\circ$**  - Refer for manual reduction with spica cast

**Abbreviations:**  
 PROM - passive range of motion  
 US - ultrasound