Apert’s Hand Revisited: A New Classification System

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Current Classification

Type 1
Type 2
Type 3

Assess

- Non-functional classification
- Does not predict the total number of procedures needed (grafts, corrective osteotomies)
- Does not predict the outcomes

New Classification

- 42 hands
- 21 males, 21 females
- Single surgeon over a period of 10 years
- Number of Procedures: 4 – 7, (Mean: 5)
- Follow up: 4 – 13 years, (Mean: 5)
- Outcomes: hand therapy team as well as patient and family satisfaction

Type 1 (2)
Type 2 (3)
Type 3 (1)

Proposed Alder Hey Classification System

<table>
<thead>
<tr>
<th>Type</th>
<th>Subtype</th>
<th>Management</th>
<th>Outcomes</th>
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</table>
| 1- Uniplanar | A: No Synostosis | - Can separate all  
- No grafts  
- 2 procedures | ++++ |
|       | B: Distal Synostosis | - Can separate all  
+/- grafts  
- 2 procedures | +++ |
| 2- Biplanar | A: Deep 1st WS  | - Can separate all  
- Need grafts  
- 2 procedures | +++ |
|       | B: Shallow/ No 1st WS | - Can separate all  
- Need grafts  
- 3 procedures | ++ |
| 3- Multiplanar | A: No transverse p/M Phalanges/Metacarpals | - Need more than 3  
procedures  
- Corrective osteotomies | + |
|       | B: Transverse P/M | - Consider 4 fingers hand | |

Conclusion

Our proposed new classification system is directed more towards a predictive method to accurately assess the complexity of the deformity and be able to inform the family about the expected number of procedures and outcomes.