

Current Treatment and Billing Trends of Postaxial Polydactyly Type B

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Postaxial, or ulnar polydactyly type B (PPB) is among the most common congenital differences of the hand and is characterized by a rudimentary digit attached to the small finger through a narrow neurovascular skin pedicle (Fig. 1). Traditional management of PPB includes suture ligation or vascular clipping, which cause the supernumerary digit to necrose before autoamputating. Although these affordable options can be performed by primary care physicians and mitigate the need for local or general anesthesia, recent studies question their efficacy.^{1,2} Contour irregularities and neuroma development are theorized to be higher following these techniques.³ To set the stage for future prospective studies and establish treatment guidelines, we distributed a questionnaire assessing provider treatment preferences to hand surgeon members of the Carpal Coalition and the Pediatric Hand Study Group.

Of the 59 pediatric hand surgeon respondents (response rate, 57.8%), most prefer to treat PPB through in-office excision using local anesthesia when the patient is less than 1 month, old using bipolar cautery and traction neurectomy to manage the digital vessels and digital nerve, respectively. Among the observed postoperative complications, contour irregularities and neuroma formation were the most common (Table 1). Surgeons who use suture ligation were significantly more likely to report contour irregularities on multivariate regression analysis ($P = 0.004$). Similarly, surgeons who reported no treatment for the digital nerve were significantly more likely to report neuroma formation ($P = 0.048$). These findings suggest that suture ligation and vascular clipping may be associated with adverse long-term outcomes.

Other interesting findings were the response differences in the use of Current Procedural Terminology

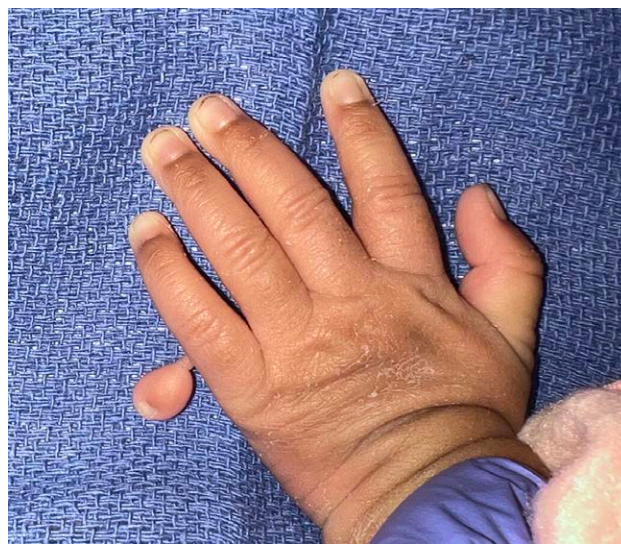


Fig. 1. This image features a 2-month-old girl with postaxial polydactyly type B. The extraneous digit seen on the ulnar side of the small finger is only attached by a narrow neurovascular skin pedicle.

(CPT) codes utilized in the United States for billing these cases. In 2016, Carpenter et al⁴ stated the CPT codes “excision of benign lesion” (11420) and “removal of skin tags, up to 15 lesions” (11200) were appropriate billing codes for PPB. In the same report, the CPT code “reconstruction of polydactylous digit, soft tissues, and bone” (26587) was deemed inappropriate by the authors.⁴ Although most respondents reported using the 11200 code, the 26587 code and the “excision of neuroma; cutaneous nerve, surgically identifiable” (64774) code were also used by respondents (Table 1). However, codes 11200 and 11420 underrepresent the relative value units that should be applied when this condition is treated by hand surgery subspecialists. Using the 26587 code with a reduced service modifier (52) may be a more appropriate way to bill until a better code can be created that reflects the effort and expertise required to treat PPB.⁵

Based on the results from this study and our clinical experience, we discourage the use of vascular clipping and suture ligation as these routes are cumbersome to families and may be associated with poorer long-term outcomes. We recommend that PPB be excised under local anesthesia with traction neurectomy within the first 3 months of life to minimize complications and avoid the costs and risks associated with excision in the operating room under general anesthesia. Although prospective studies are forthcoming, this approach will likely promote value-based care to children with PPB.

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Received for publication May 17, 2022; accepted June 30, 2022.

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Plast Reconstr Surg Glob Open 2022;10:e4485; doi: [10.1097/GOX.0000000000004485](https://doi.org/10.1097/GOX.0000000000004485); Published online 24 August 2022.

Table 1. Summary of Hand Surgeon Treatment Preferences for Postaxial Polydactyly Type B

	N (%)		N (%)
Preferred patient age		CPT Codes Used	
<1 mo	35 (59.3)	11200 (Skin tags)	44 (74.6)
1–3 mo	16 (27.1)	26587 (Recon polydactyly, skin and bone)	7 (11.9)
4–7 mo	5 (8.5)	11420 (Benign lesion)	6 (10.2)
8–12 mo	1 (1.7)	64774 (Neuroma excision)	4 (6.8)
>12 mo	2 (3.4)		
Preferred treatment approach		Preferred follow-up lengths	
In-office excision with local anesthesia	29 (49.2)	2 wk	38 (64.4)
Excision in the OR with general anesthesia	17 (28.8)	1 mo	9 (15.3)
Vascular clipping	17 (28.8)	3 mo	2 (3.4)
Suture ligation	12 (20.3)	6 mo	2 (3.4)
		>1 y	1 (1.7)
		Follow-up as needed	16 (27.1)
Blood vessel management		Observed postoperative complications	
Bipolar cautery	24 (40.7)	Contour irregularities	23 (39.0)
Figure-of-eight skin suture	10 (16.9)	Neuroma	13 (22.0)
Heat cautery	7 (11.9)	Excessive scarring	9 (15.3)
No treatment	4 (6.8)	Infection	9 (15.3)
Electrocautery	2 (3.4)	Bleeding	3 (5.1)
Ligation only	2 (3.4)		
Interrupted suture	1 (1.7)		
Digital nerve management			
Traction neurectomy	21 (35.6)		
Bipolar cautery	15 (25.4)		
No treatment	6 (10.2)		
Heat cautery	5 (8.5)		
Ligation only	1 (1.7)		

The questionnaire utilized select all that apply questions.

OR, operating room; 11200, removal of skin tags, up to 15 lesions; 26587, reconstruction of polydactylous digit, soft tissue, and bone; 11420, excision of benign lesions on the skin; 64774, excision of neuroma; cutaneous nerve, surgically identifiable.

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DISCLOSURE

Dr. Mendenhall is an educational consultant for PolyNovo, which is unrelated to this study. The other authors have no financial interest to declare.

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