CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

EVIDENCE SUMMARY

Lumps and Bumps on the Hand, Wrist and Fingers

Overview

- Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's nodule may be accomplished with a detailed physical examination of the MCP region of the affected digit [1].
- In children aged <10 years, ganglions mainly occur on the volar wrist [3].
- Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist [5].
- 69% to 79% of pediatric ganglions in children aged <10 years display spontaneous regression within a span of 12-18 months [3].
- Cystic soft tissue tumours of the dorsal aspect of the wrist have two distinct histological subtypes [7].
- Open surgery continues to be an ineffective way of managing cystic soft tumours of the dorsal aspect of the wrist due to high recurrence rates [7].
- Arthroscopic resection of dorsal wrist ganglions with midcarpal exploration appeared to reduce recurrence at 1 year without negatively impacting patient outcomes [6].
- Routine midcarpal joint exploration during arthroscopic excision of dorsal wrist ganglions appeared to reduce recurrence at 1 year without negatively impacting patient outcomes [6].
- Higher postoperative pain intensity was associated with recurrence following previous surgery [8].
- Higher postoperative pain intensity was associated with treatment of the dominant hand [8].
- Higher postoperative pain intensity was associated with higher baseline pain intensity [8].
- Higher postoperative pain intensity was associated with lower credibility the patient attributes to the treatment [8].
- Higher postoperative pain intensity was associated with longer symptom duration [8].
- Hand surgeons are divided regarding the need to immobilize the wrist after dorsal wrist ganglion excision [4].
- Performing at least 1 aspiration before surgical excision improves the cost-effectiveness of dorsal wrist ganglions treatment [2].
- Giant cell tumors of the distal phalanx are extremely rare [9].
- Giant cell tumors of the distal phalanx require extensive en bloc excision to prevent local recurrence [9].

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- Digit-sparing operations for giant cell tumors of the distal phalanx may fail to eradicate all tumor foci [9].
- A giant spindle cell lipoma can involve a finger, representing an unusual location for this rare variant [10].
- Marginal excision appears to result in a good outcome with no recurrence at short- to medium-term follow-up for parosteal lipomas of the phalanges [12].
- Awareness of anatomic variations, such as a persistent median artery with a reversed palmaris longus and volar ganglion, is valuable for surgeons operating on the upper extremity [11].

Background & Causes

- Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's nodule may be accomplished with a detailed physical examination of the MCP region of the affected digit [1].
- In children aged <10 years, ganglions mainly occur on the volar wrist [3].
- Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist [5].
- Cystic soft tissue tumours of the dorsal aspect of the wrist have two distinct histological subtypes [7].
- Giant cell tumors of the distal phalanx are extremely rare [9].
- Giant spindle cell lipoma involving a finger represents an unusual location for a rare variant of giant lipoma [10].
- A persistent median artery with a reversed palmaris longus and volar ganglion represents an anatomic variation in the upper extremity [11].
- Parosteal lipomas can occur in the proximal phalanx of the hand [12].
- An angiolipoma of the hand can cause carpal tunnel syndrome [13].

Symptoms & Presentation

- Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's nodule may be accomplished with a detailed physical examination of the MCP region of the affected digit [1].
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- Higher postoperative pain intensity was associated with lower credibility the patient attributes to the treatment [8].
- Higher postoperative pain intensity was associated with longer symptom duration [8] [8].

Management

DIAGNOSIS AND PHYSICAL EXAMINATION

- Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's nodule can be accomplished with a detailed physical examination of the MCP region of the affected digit [1].
- Awareness of anatomic variations, such as a persistent median artery with a reversed palmaris longus and volar ganglion, is valuable for surgeons operating on the upper extremity [11].

NON-OPERATIVE MANAGEMENT

- In children aged <10 years, ganglions mainly occur on the volar wrist and can be treated expectantly, with 69% to 79% displaying spontaneous regression within a span of 12-18 months [3].
- Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist [5].
- Performing at least 1 aspiration before surgical excision improves the cost-effectiveness of dorsal wrist ganglion treatment, as patient preferences may preclude routinely performing 2 aspirations [2].
- There is no difference in reintervention at 1-year between ultrasound-guided versus blind dorsal carpal ganglion aspiration [16].
- Patients who received steroids at the time of aspiration perceived lower rates of recurrence [16].
- Scar massage is widely used as an intervention for post-surgical scars, though few therapists have received formal skills training or completed outcome measures regularly to formally evaluate its clinical efficacy or impact [14].

OPERATIVE MANAGEMENT

- Routine midcarpal joint exploration during arthroscopic excision of dorsal wrist ganglions appeared to reduce recurrence at 1 year without negatively impacting patient outcomes [6].
- Hand surgeons are divided regarding the need to immobilize the wrist after dorsal wrist ganglion excision [4].
- Open surgery continues to be an ineffective way of managing cystic soft tumours of the dorsal aspect of the wrist due to high recurrence rates [7].
- Giant cell tumors of the distal phalanx require extensive en bloc excision to prevent local recurrence, as digit-sparing operations may fail to eradicate all tumor foci [9].
- Marginal excision appears to result in a good outcome with no recurrence at short- to medium-term follow-up for parosteal lipomas of the phalanges [12].
- Both curettage and resection/amputation are acceptable treatment options for giant cell tumour of bone in the hand, with treatment decisions needing to be individualized based on the site and extent of disease to minimize treatment morbidity while maximizing disease control [17].

POSTOPERATIVE OUTCOMES

- Higher postoperative pain intensity was associated with recurrence following previous surgery, treatment of the dominant hand, higher baseline pain intensity, lower credibility the patient attributes to the treatment and longer symptom duration [8].

Key Considerations

- Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's nodule may be accomplished with a detailed physical examination of the MCP region of the affected digit [1].
- Performing at least 1 aspiration before surgical excision improves the cost-effectiveness of dorsal wrist ganglion treatment when patient preferences preclude routinely performing 2 aspirations [2].
- In children aged <10 years, ganglions mainly occur on the volar wrist and can be treated expectantly, with 69% to 79% displaying spontaneous regression within a span of 12-18 months [3].
- Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist [5].
- Hand surgeons are divided regarding the need to immobilize the wrist after dorsal wrist ganglion excision [4].
- Routine midcarpal joint exploration during arthroscopic excision of dorsal wrist ganglions appeared to reduce recurrence at 1 year without negatively impacting patient outcomes [6].
- Open surgery continues to be an ineffective way of managing cystic soft tissue tumors of the dorsal aspect of the wrist due to high recurrence rates [7].
- Higher postoperative pain intensity was associated with recurrence following previous surgery, treatment of the dominant hand, higher baseline pain intensity, lower credibility the patient attributes to the treatment and longer symptom duration [8].
- Giant cell tumors of the distal phalanx are extremely rare and require extensive en bloc excision to prevent local recurrence, as digit-sparing operations may fail to eradicate all tumor foci [9].
- Marginal excision appears to result in a good outcome with no recurrence at short- to medium-term follow-up for parosteal lipomas of the phalanges [12].
- Awareness of anatomic variations, such as a persistent median artery with a reversed palmaris longus and volar ganglion, is valuable for surgeons operating on the upper extremity [11].
- Resection followed by wrist arthrodesis and structural iliac bone graft achieved satisfactory oncologic and functional results for giant cell tumor of bone, albeit with one-third of all patients experiencing some complications at a minimum of 10 years of follow-up [15].

Key Evidence

- [L4] Distinguishing between a flexor sheath ganglion, trigger digit, and Dupuytren's may be accomplished with a detailed physical examination of the MCP region of the affected digit. [1] (10.1177/15589447221109644)

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- [L2] As patient preferences may preclude routinely performing 2 aspirations, performing at least 1 aspiration before surgical excision improves the cost-effectiveness of dorsal wrist ganglions treatment. [2] (10.1016/j.jhsa.2022.09.002)
- [L4] In children aged <10 years, ganglions mainly occur on the volar wrist and can be treated expectantly, with 69% to 79% displaying spontaneous regression within a span of 12-18 months. [3] (10.1016/j.jhsa.2021.12.015)
- [L2] The systematic review and survey of Canadian hand surgeons reveal that hand surgeons are divided regarding the need to immobilize the wrist after dorsal wrist ganglion excision. [4] (10.1177/15589447211014631)
- [L4] Pediatric ganglions of the hand have a greater rate of resolution than ganglions of the wrist. [5] (10.1016/j.jhsa.2023.07.002)
- [L3] Routine midcarpal joint exploration during arthroscopic excision of dorsal wrist ganglions appeared to reduce recurrence at 1 year without negatively impacting patient outcomes. [6] (10.1177/17531934251405730)
- [L4] The authors suggest that open surgery continues to be an ineffective way of managing cystic soft tumours of the dorsal aspect of the wrist due to high recurrence rates. [7] (10.1177/17531934241251721)
- [L2] Higher postoperative pain intensity was associated with recurrence following previous surgery, treatment of the dominant hand, higher baseline pain intensity, lower credibility the patient attributes to the treatment and longer symptom duration. [8] (10.1177/17531934231153029)
- [L4] Giant cell tumors of the distal phalanx are extremely rare and require extensive en bloc excision to prevent local recurrence, as digit-sparing operations may fail to eradicate all tumor foci. [9] (10.1016/j.jhsa.2020.04.005)
- [Case_report] The case is reported due to the unusual location of a rare variant of giant lipoma involving a finger. [10] (10.1055/s-0040-1721879)
- [L4] Awareness of such anatomic variations is valuable for surgeons operating on the upper extremity. [11] (10.1016/j.jhsg.2022.04.005)
- [L4] Marginal excision appears to result in a good outcome with no recurrence at short- to medium-term follow-up for parosteal lipomas of the phalanges. [12] (10.1016/j.jhsa.2020.10.029)
- [L4] This case is the first report of an angiolipoma as a cause of carpal tunnel syndrome. [13] (10.1016/j.jhsg.2022.05.006)
- [L4] Whilst scar massage was widely used, few respondents had received formal skills training or completed outcome measures regularly to formally evaluate its clinical efficacy or impact. [14] (10.1177/17589983231205666)
- [L2] Resection followed by wrist arthrodesis and structural iliac bone graft achieved satisfactory oncologic and functional results, albeit with one-third of all patients experiencing some complications at a minimum of 10 years of follow-up. [15] (10.1097/corr.0000000000003738)
- [L3] Patients who received steroids at the time of aspiration perceived lower rates of recurrence. [16] (10.1016/j.jhsg.2023.06.007)

- [L4] Both curettage and resection/amputation are acceptable treatment options for the rare condition of giant cell tumour of bone in the hand, with a need to individualize treatment decisions based on the site and extent of disease to minimize treatment morbidity while maximizing disease control. [17] (10.1177/17531934211007820)

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[1] A Simple Physical Exam Maneuver to Distinguish Trigger Digit, Dupuytren's Nodule, and Flexor Sheath Ganglion. *HAND*. 2022. DOI: 10.1177/15589447221109644 [2] Minimizing Costs for Dorsal Wrist Ganglion Treatment: A Cost-Minimization Analysis. *The Journal of Hand Surgery*. 2023. DOI: 10.1016/j.jhsa.2022.09.002 [3] Pediatric Ganglions of the Hand and Wrist: A Review of Current Literature. *The Journal of Hand Surgery*. 2022. DOI: 10.1016/j.jhsa.2021.12.015 [4] Immobilization of the Wrist After Dorsal Wrist Ganglion Excision: A Systematic Review and Survey of Current Practice. *HAND*. 2021. DOI: 10.1177/15589447211014631 [5] Natural History of Pediatric Hand and Wrist Ganglion Cysts: Longitudinal Follow-Up of a Prospective, Dual-Center Cohort. *The Journal of Hand Surgery*. 2023. DOI: 10.1016/j.jhsa.2023.07.002 [6] Arthroscopic resection of dorsal wrist ganglions with or without midcarpal exploration. *Journal of Hand Surgery (European Volume)*. 2025. DOI: 10.1177/17531934251405730 [7] Cystic soft tissue tumours of the dorsal aspect of the wrist have two distinct histological subtypes. *Journal of Hand Surgery (European Volume)*. 2024. DOI: 10.1177/17531934241251721 [8] Factors associated with self-reported pain and hand function following dorsal wrist ganglion excision. *Journal of Hand Surgery (European Volume)*. 2023. DOI: 10.1177/17531934231153029 [9] Giant Cell Tumor of the Ring Finger Distal Phalanx. *The Journal of Hand Surgery*. 2021. DOI: 10.1016/j.jhsa.2020.04.005 [10] Giant Spindle Cell Lipoma of Middle Finger: Case Report and Review of Literature. *Journal of Hand and Microsurgery*. 2024. DOI: 10.1055/s-0040-1721879 [11] Persistent Median Artery With a Reversed Palmaris Longus and Volar Ganglion. *Journal of Hand Surgery Global Online*. 2022. DOI: 10.1016/j.jhsg.2022.04.005 [12] Parosteal Lipoma of the Proximal Phalanx of Hand. *The Journal of Hand Surgery*. 2021. DOI: 10.1016/j.jhsa.2020.10.029 [13] Large Angiolipoma of the Hand as a Cause for Carpal Tunnel Syndrome. *Journal of Hand Surgery Global Online*. 2022. DOI: 10.1016/j.jhsg.2022.05.006 [14] Scar massage as an intervention for post-surgical scars: A practice survey of Australian hand therapists. *Hand Therapy*. 2023. DOI: 10.1177/17589983231205666 [15] What Are the Long-term Outcomes of Wrist Arthrodesis Using Structural Iliac Bone Graft After Resection of the Distal Radius for Giant Cell Tumor of Bone? A Minimum 10-year Follow-up. *Clinical Orthopaedics & Related Research*. 2025. DOI: 10.1097/corr.0000000000003738 [16] No Difference in Reintervention at 1-Year Between Ultrasound-Guided versus Blind Dorsal Carpal Ganglion Aspiration. *Journal of Hand Surgery Global Online*. 2023. DOI: 10.1016/j.jhsg.2023.06.007 [17] Giant cell tumour of hand bones: outcomes of treatment. *Journal of Hand Surgery (European Volume)*. 2021. DOI: 10.1177/17531934211007820

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