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Retraction

Retracted: Clinical Application of Restrictive Brace Combined with Psychological Intervention after Replantation of Severed Fingers in Children

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] G. Chen, W. Wang, P. Wang, N. Zhang, X. Xiu, and J. Zhao, "Clinical Application of Restrictive Brace Combined with Psychological Intervention after Replantation of Severed Fingers in Children," *Computational and Mathematical Methods in Medicine*, vol. 2022, Article ID 9631858, 6 pages, 2022.

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Research Article

Clinical Application of Restrictive Brace Combined with Psychological Intervention after Replantation of Severed Fingers in Children

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Objective. After replantation of severed fingers in infants, the utility model patent upper limb restrictive brace-assisted bed rest braking, combined with psychological intervention, can alleviate children's anxiety, so as to reduce the occurrence of vascular crisis. *Methods*. The study period was from April 2015 to July 2018. In this paper, 30 children with finger injuries in hand surgery in the CIS electronic medical record system of Cangzhou Integrated Traditional Chinese and Western Medicine Hospital were selected as the research objects. Replantation was performed in 30 infants with severed fingers. Among them, 15 cases were applied with the method of aircraft chest arm gypsum splint combined with sedative drug braking and the utility model patented product upper limb restrictive brace fixation-assisted bed rest braking, and the method of psychological intervention was applied at the same time. *Results*. Among the 15 fingers in the control group, 6 had vascular crisis and 1 in the experimental group. The incidence of vascular crisis in the experimental group was lower, and the difference between the two groups was statistically significant ($P < 0.05$). The patients were followed up for 9~18 months, with an average of 9.72 ± 1.07 months. In the control group, 15 cases of severed fingers survived, and there were 13 cases of replantation finger necrosis in 2 cases of intractable arterial crisis. In the experimental group, 14 cases of severed fingers survived in 15 cases and there was 1 case of replanted finger necrosis in intractable arterial crisis after operation. There was no significant difference in the survival rate between the two groups ($P > 0.05$). In addition, the replanted finger function was evaluated. In the control group, 9 cases were excellent, 4 cases were good, and 1 case was fair. In the experimental group, 14 cases were excellent, 1 case was good, and 0 case was fair. The functional evaluation of the experimental group was better than that of the control group, and the difference between the two groups was statistically significant ($P < 0.05$). *Conclusion*. For infants after replantation of severed fingers, the application of the utility model patented product upper limb restrictive brace can effectively make up for the insufficient fixation of aircraft chest arm gypsum splint, reduce the occurrence of vascular crisis, and assist children in bed. In addition, the application of psychological intervention can reduce children's postoperative crying and is conducive to children's postoperative recovery.

1. Introduction

Finger injury is the most common type of injury in children in emergency department, which has a certain impact on their body and mind [1, 2]. Although most children have mild finger injuries, severe finger injuries still need surgical treatment [3, 4] and may lead to serious complications such as infection, soft tissue defect, fracture nonunion, and amputation, resulting in serious sequelae such as finger deformity, nail dysplasia, and intractable pain [5–7].

Due to lively nature, strong curiosity, lack of life cognition and defense ability, or parents' neglect of care, the proportion of hand trauma in children's trauma is high [8–10]. Replantation of severed fingers is the most complicated in the treatment of children's hand trauma. Children's finger blood vessels and nerves are small, which requires

high replantation [11, 12]. With the development of microsurgical technology and the breakthrough of age factors and disconnection level of severed finger replantation, the survival rate of severed finger replantation in infants and young children is also higher and higher. Postoperative bed braking and baking lamp insulation have become the consensus of hand surgeons [13, 14]. Due to the specificity of this group of infants, their postoperative compliance is poor. In such infants, sedatives and thoracic casts have been the most commonly used interventions in the past to limit the infant's voluntary movements in bed [15, 16]. From April 2015 to July 2018, 30 infants with severed fingers were replanted. Among them, 15 cases applied the method of aircraft chest arm gypsum splint combined with sedative drug braking. The other 15 cases used a new patented product-upper limb restrictive support fixation to assist bed rest braking. At the same time, psychological intervention was used to reduce the anxiety and tension of postoperative children and this new method reduced the occurrence of arteriovenous crisis. It has achieved good curative effect, which is reported as follows.

1.1. General Clinical Data. The study period was from April 2015 to July 2018. In this paper, 30 children with finger injuries in hand surgery in the CIS electronic medical record system of Cangzhou Integrated Traditional Chinese and Western Medicine Hospital were selected as the research objects. Collect and sort out the data of children's gender, age, injury type, and location. There were 15 cases in the control group, 12 males and 3 females. The age ranged from 11 months to 2 years, with an average of 1.37 ± 0.04 years. All are completely disconnected. The thumb was severed in 3 cases, and other fingers were severed in 12 cases. There were 4 cases of proximal segment avulsion, 5 cases of middle segment avulsion, and 6 cases of distal segment avulsion. Causes of injury are as follows: chain crush injury in 8 cases, triangular belt crush injury in 4 cases, and iron door crush injury in 3 cases. The time from injury to operation was 1~6 h, with an average of 3.64 ± 0.09 h. There were 15 cases in the experimental group, 13 males and 2 females. The age ranged from 10 months to 2 years, with an average of 1.27 ± 0.05 years. All are completely disconnected. The thumb was severed in 4 cases, and other fingers were severed in 11 cases. There were 5 cases of proximal segment avulsion, 4 cases of middle segment avulsion, and 6 cases of distal segment avulsion. Causes of injury are as follows: chain crush injury in 7 cases, triangular belt crush injury in 5 cases, and iron door crush injury in 3 cases. The time from injury to operation was 1~6 h, with an average of 3.45 ± 0.07 h. The general data of the two groups were not statistically significant ($P > 0.05$).

1.2. Control Group. Surgical methods are as follows: all operations were performed under general anesthesia. The inflatable tourniquet was used to stop bleeding. After thorough debridement of the affected limb, the contaminated tissue was trimmed, and the phalanges were fixed with cross or longitudinal Kirschner wire. If the interphalangeal joint was severed, the patients underwent cartilage fusion. The method was to cut off part of the articular surface with a surgical blade, retain the epiphysis, and fix with longitudinal Kirschner wire. Anastomose flexor and extensor tendons, anastomose 4-6 needles of the dominant digital artery of the finger under a 12-fold microscope, and anastomose 2-3 palmar or dorsal veins. After the operation, relax the tourniquet, check the blood supply recovery of each replanted finger, and wrap and fix it only after ensuring that the blood supply of each finger is good. The bandage and fixation should be carried out under the anesthesia state of the child. When the child wakes up from anesthesia, he will be agitated, which will lead to inaccurate bandage and fixation, affect the blood supply and treatment after operation, and even cause vasospasm. The binding shall be soft, and the "sandwich cake" shall be made of gauze and Vaseline. Cut the lining into 1 cm^2, and wrap it with gauze, cotton pad, and bandage. We used "aircraft" plaster fixation of the super contralateral shoulder joint. Postoperative treatment is as follows: the patients were placed in the replantation ward after operation, and the occipital supine position was removed. For the children after general anesthesia, the head was biased to one side to keep the respiratory tract unobstructed. For children who are emotionally unstable, crying, and unable to cooperate, subhibernation therapy shall be adopted. The subhibernation therapy is as follows: chlorpromazine 50 mg+promethazine 50 mg, combined with 500 ml intravenous drip of 0.9% normal saline. 1/2~1/4 amount can be used according to the weight of children every day. It can be input at a constant speed with an adjustable infusion set or infusion pump for 24 hours, and it can be used for 5~7 days. When using the hibernation mixture, it is necessary to closely observe the respiratory rate and consciousness of the children and keep the respiratory tract unobstructed, because the hibernation mixture has laryngeal regurgitation inhibition, which can lead to the fall of the root of the tongue. In addition, it is necessary to explain to the family members of the children that they should wake up the children in time to eat, drink water, and drink milk.

1.3. Experimental Group. In the preoperative psychological nursing, the nurse actively explained the disease-related knowledge, treatment methods, and functional rehabilitation to the children and their parents and told the parents that the finger injury of the children is expected to recover completely after scientific treatment. Share the treatment process and imaging data of previous successful cases, so as to eliminate the concerns of children and parents and promote them to actively cooperate with treatment and nursing. Through psychological nursing, children and parents have alleviated their inner tension. The operation method is as follows: the operation process was the same as that of the control group. After the operation, bandage the affected hand and wear self-made restrictive brace before anesthesia resuscitation. In the postoperative treatment and nursing, the patients were treated with "prevention of infection, anticoagulant, and antivasospasm" and kept warm by a baking lamp. They were kept in bed for 7~10 days under the protection of brace. After 6~8 weeks, the internal fixation Kirschner wire was pulled out for

functional exercise. Closely observe the movement of the affected limbs: (1) for the children who are clever and cooperative, ask their families to pay close attention to the movement of the affected limbs of the children, and stop them in time when the children want to move the affected limbs, especially at night. The nurse should closely observe the blood circulation of the severed finger, use subhibernation therapy to make the child fall asleep for the children who are crying seriously and do not cooperate, and strengthen the psychological care of the children. When the children are crying, the nurse should eliminate the discomfort factors such as urination, defecation, and hunger. When it is determined that the pain causes the crying, first, guide the close family members of the children to accompany and comfort them, or distract the children's attention by using toys, mobile phones, games, and other ways of interest, reducing pain and discomfort.

1.4. Observation Indexes. After operation, the blood supply of replanted fingers was regularly observed by the color, tension, temperature, and capillary filling time of replanted fingers, so as to judge whether there was vascular crisis in time. The survival rate of severed fingers in the two groups was calculated, and the function of replanted fingers was evaluated according to the trial standard of replantation function evaluation of severed fingers of hand surgery branch of Chinese Medical Association [17].

1.5. Statistical Method. SPSS analysis software was used for statistical processing, and the X^2 test was used to compare the rates between the two groups and multiple groups. $P < 0.05$ indicates that the difference between the two groups is statistically significant.

2. Results

2.1. Incidence of Vascular Crisis in the Two Groups. Of the 15 fingers in the control group, 6 had vascular crisis, and the incidence of crisis was lower. One case of vascular crisis occurred in the experimental group. There was significant difference in the incidence of vascular crisis between the two groups, and the difference between the two groups was statistically significant ($P < 0.05$) (Table 1).

2.2. The Survival Rate of Severed Fingers in the Two Groups. The patients were followed up for 9~18 months, with an average of 9.72 ± 1.07 months. In the control group, 15 cases of severed fingers survived, and there were 13 cases of replantation finger necrosis in 2 cases of intractable arterial crisis. In the experimental group, 14 cases of severed fingers survived in 15 cases and there was 1 case of replanted finger necrosis in postoperative intractable arterial crisis. There was no significant difference in the survival rate between the two groups ($P > 0.05$) (Table 2).

2.3. Functional Evaluation of Replantation of Severed Fingers in Two Groups. In addition, the replanted finger function was evaluated. In the control group, 9 cases were excellent, 4 cases were good, and 1 case was fair. In the experimental group, 14 cases were excellent, 1 case was good, and 0 case was fair. The functional evaluation of the experimental group was better than that of the control group, and the difference between the two groups was statistically significant ($P < 0.05$) (Table 3).

Table 1: Rate of crisis in two groups (n, %).

Groups	Occurrence of vascular crisis (n)		Incidence (%)
	Occurred	Not occurred	
Experience group	1	14	6.7
Control group	6	9	40
X^2	/	/	4.658
P	/	/	0.031

3. Discussion

Children are young, ignorant, and curious and have lack of risk awareness; the number of left behind children is increasing; and adults are neglected. The cases of complete amputation were significantly more than those of incomplete amputation. The index finger and middle finger were severed most. Because the children are not engaged in labor, the injuries of children are mostly caused by playing beside agricultural machinery and being injured by agricultural machinery, mostly caused by mechanical injuries such as hay cutter, thresher, and electric saw, and a small part by knife cutting, car door clamping injury, animal bite, door crush injury, instrument smashing, etc. Most of them are life accidents. Children's fingers are small, blood vessels are thin, and it is difficult to replant [18, 19]. In recent years, many hospitals in my country have carried out microsurgery technology, which makes this technology develop rapidly in China. The small-vessel anastomosis technology for infants is relatively mature, and the postoperative blood vessels can be guaranteed to be unobstructed. However, due to the special physiological characteristics of this group of infants, the probability of postoperative vascular crisis is higher than that of adults [20, 21]. The main reasons are incomplete debridement during operation and poor suture quality. Children's postoperative crying leading to vasospasm is also a special reason different from adults. Therefore, it is recommended to apply 3~5 days of subhibernation and limb immobilization after replantation of severed fingers in children to prevent vascular crisis [22, 23].

Compared with adults, the indications for replantation of severed fingers in children should be relaxed appropriately [24, 25]. Traumatic severed fingers in children are mainly accidental injuries in life, with local tissue damage and light pollution. Parents require replantation; children are still in the stage of growth and development and have strong ability to repair and compensate tissue damage. The function after replantation is better than that of adults. As long as there are no obvious contusion and multiple fractures at the far and near ends of the severed finger in

Table 2: Survival rate of severed fingers in two groups (n, %).

Groups	Severed finger survival (n)		Incidence (%)
	Survival	Necrosis	
Experience group	14	1	6.7
Control group	13	2	13.3
X^2	/	/	0.371
P	/	/	0.543

Table 3: Functional evaluation of severed finger replantation in two groups (n, %).

Groups	Replanted finger function (n)		
	Excellent	Good	Fair
Experience group	14	1	0
Control group	8	6	1
X^2	/	/	6.208
P	/	/	0.045

children, the finger with relatively complete body should be replanted. Replantation of severed fingers in children is different from that in adults [26, 27]. Due to the existence of epiphysis, the replanted fingers can continue to grow, and the injury of epiphysis will affect the bone growth. Children should pay attention to the protection of epiphysis during replantation. If the joint is broken, as long as the joint and epiphysis are still intact, they should be retained. Except for serious injury of the joint, joint fusion is generally not performed. At the same time, the shortening of the phalanx should be minimized. If there is a soft tissue defect, various skin flaps should be used for repair [28, 29].

After replantation of severed fingers, infants need to stay in bed for 7~10 days. Infants are naturally active and have poor compliance. Parents are often required to hug them. Changes in body position and irregular waving of affected limbs will not only induce vascular crisis but also lead to the failure of replantation of severed fingers. There is also the risk of naked Kirschner wire scratching the eyes and face. In the past, in order to deal with this situation, the "aircraft" like gypsum splint was often used for fixation, and the bilateral upper limbs of children were fixed with dorsal and ventral over trunk gypsum splints [30]. It can effectively prevent children from turning over and waving their hands, but it has the following disadvantages: (1) bandage fixation and complicated disassembly during dressing change; (2) the plaster has poor adherence and inaccurate fixation, and the affected hand often retracts into the plaster, which is not conducive to the observation of blood supply; and (3) the ventilation of gypsum is poor, and the affected limbs are prone to eczema, sweat rash, etc. [31, 32]. In view of this situation, we designed and invented an upper limb restrictive brace, which is a national utility model patent (Patent No. ZL 2016 2 0854728.5). It is made of low-temperature thermoplastic plate and elastic fastening belt. It is composed of five parts: supporting arm plate, covering arm plate, elastic connecting belt, chest, and arm fixing belt. The brace can assist children in bed braking and prevent turning over and hand waving. The utility model effectively solves the problems of fixed air permeability and comfort, can effectively prevent the retraction of the affected limb, is conducive to the dressing change operation and blood supply observation, and greatly improves the comfort. In the current study, we confirmed that compared with the traditional "aircraft" like gypsum splint fixation, the newly designed and invented upper limb restrictive brace can alleviate the occurrence of vascular crisis, and the functional evaluation of severed finger replantation is also better. This may be because the upper limb restrictive brace of the new design and invention can effectively brake and improve the blood circulation of the affected limb. However, there was no significant difference in survival rate, which may be related to rapid development of microscopy.

Psychological factors are also the key factors affecting the survival rate of severed finger replantation in children. Children's mental development is not mature. In the face of sudden trauma, regret and fear after making trouble, pain, bleeding, and fear of strange environment, children often cry loudly because of panic and tension [33, 34]. From the perspective of stress theory of clinical psychology, negative emotions such as tension and anxiety will lead to vascular crisis of severed finger replantation and reduce the survival rate. Through the action of psychoneuroendocrine regulation axis, the level of vasoconstrictor monoamines such as adrenaline, catecholamine, and serotonin in the human body increases, the blood viscosity increases, and the blood hypercoagulable state and the incidence of vascular crisis increase [35, 36]. In order to cope with this situation, the nursing team should pay attention to the causes of pain after the operation, ask the family members to place the children's favorite toys, watch cartoons and other methods to distract the children's attention, often praise the children, and appropriately apply subhibernation therapy to the children with serious crying.

In conclusion, upper limb restraint brace combined with psychological care can improve children's symptoms, relieve children's anxiety, and increase parents' confidence, which is worthy of promotion.

Data Availability

The datasets used and analyzed during the current study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

[1] G. A. Lamaris and M. K. Matthew, "The diagnosis and management of mallet finger injuries," *Hand (N Y).*, vol. 12, no. 3, pp. 223–228, 2017.

[2] A. Duarte, "Optimising the conservative management of closed tendinous mallet finger injury," *Emergency Nurse*, vol. 28, no. 5, pp. 35–40, 2020.

[3] J. S. Lin and J. B. Samora, "Surgical and nonsurgical management of mallet finger: a systematic review," *The Journal of Hand Surgery*, vol. 43, no. 2, pp. 146–163.e2, 2018.

[4] S. Özkan and Ö. Berköz, "Comparison of four different immobilization methods in the treatment of tendinous mallet finger injury," *Ulusal Travma ve Acil Cerrahi Dergisi*, vol. 27, no. 3, pp. 356–361, 2021.

[5] Y. Hamada, H. Takai, R. Satoh, N. Hibino, Y. Ueda, and Y. Minamikawa, "Swan neck deformity due to chronic radial collateral ligament injury of the little finger proximal interphalangeal joint," *J Hand Surg Eur*, vol. 43, no. 5, pp. 513–517, 2018.

[6] H. Liu, R. Li, C. Yuan, and J. Gu, "Treatment of tendinous mallet finger deformity with a part of the flexor digitorum profundus tendon," *ANZ Journal of Surgery*, vol. 90, no. 11, pp. 2325–2328, 2020.

[7] M. Sosin, L. A. Weiner, B. C. Robertson, and R. A. DeJesus, "Treatment of a recurrent neuroma within nerve allograft with autologous nerve reconstruction," *Hand (N Y).*, vol. 11, no. 2, p. NP9, 2016.

[8] J. Zhou, Y. Zheng, Z. Wei et al., "Free transplantation of medial plantar flow-through venous flap for primary repairing children's finger wounds with digital artery defect," *Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi*, vol. 35, no. 9, pp. 1182–1185, 2021.

[9] R. Faderani, M. Kanapathy, and A. Mosahebi, "Hand injury: investigating the accuracy of referrals to a specialist trauma centre," *Emergency Nurse*, vol. 29, no. 3, pp. 29–33, 2021.

[10] J. M. McBride, K. S. Romanowski, S. Sen, T. L. Palmieri, and D. G. Greenhalgh, "Contact hand burns in children: still a major prevention need," *Journal of Burn Care & Research*, vol. 41, no. 5, pp. 1000–1003, 2020.

[11] J.-G. Delvaque, V. Mas, A.-L. Simon, B. Ilharreborde, and P. Jehanno, "Resections metacarpiennes simples apres echec de reimplantation des doigts medians en pediatrie," *Hand Surg Rehabil.*, vol. 40, no. 5, pp. 670–674, 2021.

[12] N. L. Berlin, C. T. Tuggle, J. G. Thomson, and A. Au, "Digit replantation in children: a nationwide analysis of outcomes and trends of 455 pediatric patients," *Hand (N Y).*, vol. 9, no. 2, pp. 244–252, 2014.

[13] A. Imaizumi, K. Ishida, K. Arashiro, and O. Nishizeki, "Validity of exploration for suitable vessels for replantation in the distal fingertip amputation in early childhood: replantation or composite graft," *Journal of Plastic Surgery and Hand Surgery*, vol. 47, no. 4, pp. 258–262, 2013.

[14] N. Lindfors and I. Marttila, "Replantation or revascularisation injuries in children: incidence, epidemiology, and outcome," *Journal of Plastic Surgery and Hand Surgery*, vol. 46, no. 5, pp. 359–363, 2012.

[15] N. Patel, L. Wilson, and G. Wansbrough, "Do split paediatric forearm POP casts need to be completed? A biomechanical study," *Injury extra*, vol. 46, no. 7, pp. 1231–1237, 2015.

[16] J. Donato, K. Rao, and T. Lewis, "Pharmacology of common analgesic and sedative drugs used in the neonatal intensive care unit," *Clinics in Perinatology*, vol. 46, no. 4, pp. 673–692, 2019.

[17] F. Haas, M. Hubmer, T. Rappl, H. Koch, I. Parvizi, and D. Parvizi, "Long-term subjective and functional evaluation after thumb replantation with special attention to the Quick DASH questionnaire and a specially designed trauma score called modified Mayo score," *The Journal of Trauma*, vol. 71, no. 2, pp. 460–466, 2011.

[18] N. Scott, "Pediatric fingertip injuries," *Pediatric Fingertip Injuries. Hand Clin.*, vol. 37, no. 1, pp. 107–116, 2021.

[19] Y. Weir, "Fingertip injuries in children: a review of the literature," *Emergency Nurse*, vol. 26, no. 3, pp. 17–20, 2018.

[20] E. Georgakarakos and K.-M. Tasopoulou, "A clampless technique to facilitate successful end-to-end anastomosis in small vessels with spasm," *Annals of Vascular Surgery*, vol. 75, pp. 527–530, 2021.

[21] H. Tian, D. Song, H. Jin et al., "Repair of soft tissue and extensor tendon defects on the dorsum of the hand by transfer of dorsal foot flap and extensor digitorum brevis tendon in a 3-year-old child: a case report," *Medicine (Baltimore)*, vol. 99, no. 34, article e21837, 2020.

[22] S. Regus, V. Almási-Sperling, and W. Lang, "Pediatric patients undergoing arteriovenous fistula surgery without intraoperative heparin," *The Journal of Vascular Access*, vol. 17, no. 6, pp. 494–498, 2016.

[23] L. R. Sun, W. Ziai, P. Brown et al., "Intrathecal chemotherapy-associated cerebral vasospasm in children with hematologic malignancies," *Pediatric Research*, vol. 89, no. 4, pp. 858–862, 2021.

[24] F.-H. Yan, J. Liao, P.-L. Shan, Z. F. Liu, and R. Fang, "Clinical analysis on replantation of severed palm in 45 patients," *Zhongguo Gu Shang*, vol. 27, no. 6, pp. 475–477, 2014.

[25] C.-H. Lin, N. Aydyn, Y.-T. Lin, C. T. Hsu, C. H. Lin, and J. T. Yeh, "Hand and finger replantation after protracted ischemia (more than 24 hours)," *Annals of Plastic Surgery*, vol. 64, no. 3, pp. 286–290, 2010.

[26] N. F. Jones and J. E. Clune, "Thumb amputations in children: classification and reconstruction by microsurgical toe transfers," *The Journal of Hand Surgery*, vol. 44, no. 6, pp. 519.e1–519.e10, 2019.

[27] S. Feng, A. Wang, Z. Zhang et al., "Efficacy observation on repair of finger pulp defects and sensory reconstruction of children with the perforator propeller flaps based on the end dorsal branch of digital proper artery in the same finger," *Zhonghua Shao Shang Za Zhi*, vol. 31, no. 5, pp. 345–348, 2015.

[28] J. B. Tang, "Fingertip repair methods: choices for different fingers and sides emphasizing sensation," *J Hand Surg Eur*, vol. 44, no. 10, pp. 1109–1111, 2019.

[29] P. F. Liang, P. H. Zhang, M. H. Zhang et al., "Repair methods and clinical effects of full-thickness burn wounds deep to tendon or even bone in fingers," *Zhonghua Shao Shang Za Zhi*, vol. 37, no. 7, pp. 614–621, 2021.

[30] J. L. Chen, L. J. Zhang, Y. Xu, S. B. Zhu, and X. D. Zheng, "Clinical research of percutaneous K-wires fixation after manipulative reduction combining with gypsum or splint fixation for treatment of the Barton fractures of aged people," *Zhongguo Gu Shang*, vol. 29, no. 1, pp. 8–12, 2016.

[31] S. M. Athar, N. Ashwood, G. Aerealis, and G. I. Bain, "Is external fixation a better way than plaster to supplement K-wires in non-comminuted distal radius fractures?," *Postgraduate Medical Journal*, vol. 94, no. 1107, pp. 20–24, 2018.

[32] M. A. Mulders, M. M. Walenkamp, J. C. Goslings, and N. W. Schep, "Internal plate fixation versus plaster in displaced complete articular distal radius fractures, a randomised controlled trial," *BMC Musculoskeletal Disorders*, vol. 17, no. 1, p. 68, 2016.

[33] S. Jones, S. Tyson, J. Yorke, and N. Davis, "The impact of injury: the experiences of children and families after a child's traumatic injury," *Clinical Rehabilitation*, vol. 35, no. 4, pp. 614–625, 2021.

[34] H. Yu, C. Nie, Y. Zhou, X. Wang, H. Wang, and X. Shi, "Epidemiological characteristics and risk factors of posttraumatic stress disorder in Chinese children after exposure to an injury," *Disaster Medicine and Public Health Preparedness*, vol. 14, no. 4, pp. 486–493, 2020.

[35] T. J. Stewart, W. Tong, and M. J. Whitfeld, "The associations between psychological stress and psoriasis: a systematic review," *International Journal of Dermatology*, vol. 57, no. 11, pp. 1275–1282, 2018.

[36] E. Orion and R. Wolf, "Psychological factors in skin diseases: stress and skin: facts and controversies," *Clinics in Dermatology*, vol. 31, no. 6, pp. 707–711.