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Meta-analysis of the Effect of Dressing Change of Traditional Chinese Medicine on Wound Healing after Perianal Abscess

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Abstract: With the vigorous development of medicine in the motherland, traditional Chinese medicine treatment is increasingly used in clinical practice. Oral and external application of Chinese medicine, acupuncture, massage, and external treatment are all commonly used treatment methods. Chinese medicine treatment is related to the treatment of perianal abscess Lymphedema is also being tested for effectiveness and safety. This article is based on the Meta analysis method based on deep learning to study the wound healing of traditional Chinese medicine changing after the treatment of perianal abscess. In this paper, patients with perianal abscess after surgery are taken as the research object, and the postoperative wound healing of traditional Chinese medicine and western medicine is analyzed through the Meta theory of deep learning. Through searching the CNKI database and the National Library database, collecting research data since June 2020, including 31 documents, a total of 3537 patients, of which 1789 were in the traditional Chinese medicine powder group and 1748 were in the conventional method group. In the traditional Chinese medicine powder group, the minimum patient volume was 24 cases and the maximum patient volume was 486 cases; the conventional method group had the minimum patient volume of 24 cases and the maximum patient volume of 474 cases, and then analyzed by Meta analysis software. The results of the study showed that the combination of traditional Chinese medicine powder after perianal abscess surgery improved AS (MD=6.66, 95%CI[2.24,11.08], P=0.003), AF (MD=6.61, 95%CI[3.84,9.39], P <0.00001) and TS (MD=6.70, 95%CI[1.71, 11.70], P=0.009) are significantly better than western medicine treatment, suggesting that combined use of traditional Chinese medicine powder for perianal abscess surgery is better than conventional western medicine treatment in improving DP .

1. Introduction

With the development of minimally invasive technology and the application of cardiopulmonary bypass, the incidence of various complications after perianal abscess has been reduced, but the incidence of postoperative POAF has not decreased, and the incidence of POAF is 30%-50%. Although POAF has self-limiting characteristics, studies have shown that patients with POAF have a longer hospital stay of about 14 hours compared with patients who did not, and the recurrence within three years increased by 4 times, the hospital recurrence rate increased by 3 times, and the recurrence in 6 months the rate increased by 2 times.

Jeong's research has shown that the 1:1 compatibility of Forsythia and Honeysuckle has the strongest antipyretic and anti-inflammatory effect, which can effectively reduce the increase in IL-6, IL-8, and TNF-α levels, and improve the decrease in IL-10 secretion [1]. Babakhani uses the spatial information and coordinate characteristics of deep features to propose a spatial meta-learning module, which can more accurately predict the weight of the convolution kernel [2]. The Meta-analysis reconstruction method based on spatial meta-learning proposed by Gurwitz can realize image magnification of any size, enriching the methods of Meta-analysis and reconstruction [3]. States proposed that Fritillaria Zhei has a good analgesic effect [4]. Buchfink proposed that the active extract of Angelica dahurica can significantly promote the proliferation of HUVECs. Angelica dahurica volatile oil and dahurica dahurica total coumarin have analgesic and anti-inflammatory effects [5].

McArthur enrolled 172 patients taking hydrochlorothiazide tablets alone and combined with hydrochlorothiazide and diosmin tablets. The experimental results show that the combination of the two can effectively promote symptom relief and improve shoulder function, indicating the effectiveness of drug therapy [6]. Jia proposed some physical therapy, antispasmodic therapy, magnetic therapy, bandage compression pressure therapy, intermittent pneumatic compression and other rehabilitation nursing therapies for the treatment of perianal abscess. There are also many records in the literature, which further shows that western medical treatment is in the perianal. Practical upper extremity edema after abscess surgery [7]. Edgar's records all summarized that the use of traditional Chinese medicine combined with western medicine can effectively treat diseases and improve patients' living standards, with little side effects, and is a usable treatment method [8]. Donahue proposed that traditional Chinese medicine has the characteristics of multiple targets and multiple ways in promoting wound healing after perianal abscess surgery, which can reduce the inflammatory response of patients after surgery and improve pain and systemic symptoms [9]. Davies' research shows that vascular endothelial growth factor (VEGF) and related factors are involved in the process of wound repair after perianal abscess surgery. VEGF promotes wound repair by inducing the formation of vascular endothelial cells and the formation of new blood vessels. In the early postoperative period, the increase of its level promotes wound healing and granulation [10].

This paper studies the meta-analysis of the wound healing of traditional Chinese medicine after the operation of perianal abscess based on deep learning, and analyzes the wound healing of traditional Chinese medicine and western medicine in patients through the Meta theory of deep learning. Through searching the CNKI database and the National Library database, collecting research data since June 2020, including 31 documents, a total of 3537 patients, of which 1789 were in the traditional Chinese medicine powder group and 1748 were in the conventional method group. In the traditional Chinese medicine powder group, the minimum patient volume was 24 cases and the maximum patient volume was 486 cases; the conventional method group had the minimum patient volume of 24 cases and the maximum patient volume of 474 cases, and then analyzed by Meta analysis software.

2. Deep Learning Meta-Analysis Promotion Theory and Technology

2.1. Weekly Abscess Status

Western medicine mainly emphasizes connecting the whole from the local anatomy, and understanding diseases from physiology, biochemistry, pathology and anatomy. The human body is unified with the environment and society, and the internal parts of things are interconnected and inseparable, and run through the etiology and pathogenesis, syndrome differentiation, treatment, prescriptions and other aspects of Chinese medicine [11]. Therefore, in the treatment of diseases, the whole and the part should be combined. For example, in the treatment of hemorrhoids, the hemorrhoid vein mass is often removed in the clinic, and the local incision is as small as possible, thereby minimizing tissue trauma and protecting the anal function as much as possible. Pay attention to the flexible application of the three methods of "elimination, support, and supplementation", and can't stick to [12]. The ancients said that “elimination is expensive” and “internal treatment is expensive early”. The “elimination method” has to be good at adapting to different surgical diseases, as well as their etiology, pathogenesis, disease location, disease nature, and individual differences. For example, there are differences in relieving the surface, clearing away heat, warming up, regulating Qi and promoting Qi, and promoting blood circulation to remove blood stasis [13]. On this basis, Master Lu further deepened his thoughts and believed that all the "visible diseases" that appeared in the elimination of surgical diseases belong to the category of elimination, just as in Shen Douyuan's "Surgery Qixuan", "eliminate the person and eliminate the physical symptoms[14]. "Deficiency makes up for it", the method of supplementation is the treatment of deficiency syndrome, as long as there is a deficiency syndrome, it can be used [15]. It is often said that the virtual image of a patient should be examined from the local and the whole. The "virtuality" is in the local area. It can be seen that the sore complexion is dark or the granulation is pale and bloodless, and the healing speed is slow; for the whole person, it is manifested as fatigue and lack of energy. Language, food, less appetite, etc., should be viewed as a combination of whole and part [16]. Therefore, promoting postoperative wound healing has always been the focus of clinical research. Traditional Chinese medicine believes that anal abscess belongs to the category of "anal carbuncle". The effects of Chinese medicine on decay, muscle growth, and skin growth have accumulated rich experience in promoting wound healing and reducing the incidence of complications. It is safe, simple, and effective, advantages, and achieved good clinical results [17].

2.2. Meta Analysis Reconstruction Theory

The main task of meta-analysis reconstruction is to reconstruct high-deep learning digital features from low-deep learning digital features. It is one of the research hotspots in machine vision and has important applications in the fields of medicine, aviation, and safety monitoring [18]. At present, people have proposed many efficient Meta-analysis reconstruction methods based on interpolation, deep learning methods and reconstruction methods [19]. In particular, with the rapid development and wide application of deep learning, Meta analysis reconstruction has developed rapidly. Meta-analysis reconstruction methods based on deep learning usually include two parts: deep feature extraction and feature amplification. In recent years, there have been various models for feature extraction, which makes the extracted features more representative [20]. However, there are relatively few methods for feature amplification, mainly front-end upsampling, transposed convolution, and pixel reorganization [21].

The front-end upsampling is to enlarge the low-depth learning digital features to the specified image size through bicubic interpolation and other methods after the low-depth learning digital

features are input to the network [22]. Meta Analysis Convolutional Neural Network (SRCNN) is the first to apply deep learning to Meta analysis image reconstruction, using a three-layer convolutional neural network to fit the mapping between amplified low-depth learning digital features and high-depth learning digital features Relationship, and achieved a good reconstruction effect [23]. The precise image meta-analysis (VDSR) of the very deep convolutional network is used to input the enlarged image into the network, and a 20-layer deep network is constructed to reconstruct high-deep learning digital features [24]. The Deep Recursive Convolutional Network (DRCN) applies the existing recurrent neural network structure to the amplified low-deep learning digital features for the first time, saving the parameter amount of the network weight. Deep Recursive Residual Network (DRRN) combines the ideas of recursive learning and residual learning, and designs a deeper network structure to act on the amplified low-deep learning digital features to improve network reconstruction performance [25].

Because front-end upsampling introduces error information in the process of amplifying low-depth learning digital features, the high-depth learning digital features reconstructed by this method are of poor quality. Transposed convolution enlarges the image size by inserting zero values in low-depth learning digital features and convolution operations. The Laplacian Pyramid Meta Analysis Network (LapSRN) doubles the image at each pyramid level through transposed convolution, and gradually enlarges the low-depth learning digital features. The Deep Back Projection Network (DBPN) uses transposed convolution to construct the upper projection unit and the lower projection unit, making full use of the relationship between high-depth learning digital features and low-depth learning digital features. The Embedded Block Residual Network (EBRN) uses transposed convolution to consider the texture characteristics of the image, and uses a deeper network to recover the high-frequency information of the image. The enlargement method of transposed convolution is faster than the front-end upsampling, but the reconstructed image will produce a checkerboard effect. Pixel reorganization is the use of pixel information to enlarge the image size after the low-depth learning digital features are extracted by the deep network feature. An effective sub-pixel convolutional neural network (ESPCN) proposed for the first time a method of pixel reorganization to enlarge the size of the feature map and produce better digital features with high depth learning. Residual Dense Network (RDN) uses dense connections to extract redundant local features, global feature fusion to extract overall hierarchical features, and pixel reorganization to enlarge the size of the feature map. Although the magnification method of pixel reorganization can obtain better reconstruction results, it is limited to the reconstruction of magnification of integer multiples. The above-mentioned meta-analysis image reconstruction based on deep learning mainly considers the case of feature map magnification by integer times, and less consideration of magnification by arbitrary times. However, in real life, the size of digital features with high depth learning is not necessarily an integer multiple of digital features with low depth learning. Some researchers have also begun to try to solve this problem, and based on the meta-learning network, they have given a method of meta-analysis reconstruction with arbitrary magnification. In order to produce better results, this method uses Residual Dense Network (RDN) as a feature extraction module, and then builds a meta-learning magnification module to magnify the feature map to arbitrary times. However, the meta-learning in this method only uses coordinate information to predict the convolution kernel, and does not consider the spatial characteristics of the feature image. Considering the spatial information of feature images, extracting spatial features through compression operations, combining spatial features and coordinate information as the input of the weight prediction network, giving a spatial meta-learning module, and proposing a Meta-analysis reconstruction based on spatial meta-learning (SMLSR) method. The proposed spatial meta-learning module effectively develops the spatial information hidden in the image, and it can be used to make more accurate convolution kernel predictions and produce high-depth

learning digital features with better reconstruction effects.

2.3. Deep Learning Meta Analysis Data Evaluation Model

(1) Deep learning Meta analysis standard decision matrix

The information of indicators C1 and C2 is represented by precise numbers, while the information of indicators C3-C11 can only be represented by qualitative semantics. In order to establish a standardized matrix, using the given method, the two kinds of deep learning Meta analysis standard decision information are represented by intuitionistic fuzzy numbers. For the decision information of indicators C1 and C2, the Meta analysis expert team firstly based on the deep learning Meta analysis status to give the expected interval of C1 and C2 in each stage, and then calculate the intuition of the decision information of each deep learning Meta analysis standard for C1 and C2 indicators Fuzzy number. For the semantic information corresponding to the indicators C3-C11, find the intuitionistic fuzzy number corresponding to each semantic information in the table.

(2) Weighted Meta analysis standard decision matrix for each stage

$$W(T) = K(y(T-1),....,y(t-n),u(T-d-1),...,u(k-d-n)) \tag{1}$$

First, use formula (1) to obtain the intuitionistic fuzzy information entropy of each stage C1-C11, and then calculate the weight of each stage index C1-C11. Finally, based on Definition 3 and the required weights, a weighted decision matrix for each stage is constructed.

(3) The positive and negative ideal solutions of the Meta analysis standard at each stage

First, based on the size of the defined comparison information, and then select the positive and negative ideal solutions according to the rules. Then, for structured indicators, the minimum value of the candidate Meta data in the positive ideal solution selection stage, and the maximum value of the candidate Meta data in the negative ideal solution selection stage; for analysis efficiency, the value of the candidate Meta data in the positive ideal solution selection stage Maximum value, the minimum value of candidate Meta data in the negative ideal solution selection stage. Among the decision-making indicators proposed in this paper, C1 and C2 are cost-based indicators, and C3-C11 are benefit-based indicators. The ideal formula for stage positive and negative is as follows:

$$P(d_i, w_j) = P(d_i)P(w_j|d_i); P(w_j|d_i) = \sum_{k=1}^{K} P(w_j|z_k)P(z_k|d_i) \tag{2}$$

$$\lambda(Ai, Aj) = \left[\log\left(\frac{\left|x_{A_i} - a_{A_j}\right|}{w_{A_j}}\right), \log\left(\frac{\left|y_{A_i} - y_{A_j}\right|}{h_{A_j}}\right), \log\left(\frac{w_{A_i}}{w_{A_j}}\right), \log\left(\frac{h_{A_i}}{h_{A_j}}\right) \right] \tag{3}$$

(4) The closeness of each Meta data to the ideal solution in its stage

First, calculate the distance from each Meta data to the positive and negative ideal solution in the stage according to the formula, and then calculate the closeness of each Meta data to the ideal solution in the stage according to the formula. The closeness of each Meta data in stage 1 is:

$$y = \beta X + \varepsilon \tag{4}$$

$$\varepsilon = \lambda W + \xi \tag{5}$$

The closeness of each Meta data in stage 2 is:

$$\varphi = V \times \frac{n}{Q} + \frac{Q}{(\frac{D}{2})2 \times \pi \times 3600} \tag{6}$$

$$(In - \alpha W)y = (In - \alpha W)X\beta + \varepsilon \tag{7}$$

The closeness of each Meta data in stage 3 is:

$$f_R^{A_i} = w_G^{A_i A_j} \cdot V \tag{8}$$

$$w_G^{A_i A_j} = \max\left\{0, W_G \cdot \varepsilon(f_G^{A_i}, f_G^{A_j})\right\} \tag{9}$$

(5) Feasible Meta data combination

First, calculate the number of potential Meta data combinations. The number of candidate Meta data for each stage is 4, 3, and 5 respectively. The number of Meta data required for each stage is 1. According to the Meta analysis and evaluation theory, the number of potential Meta data combinations is N =4×3×5=60 pieces. Therefore, after removing the Meta data combinations that contain any one of the above 4 pairs of Meta data, the number of possible Meta data combinations is 39.

(6) Synergy degree of feasible Meta data combination.

Based on the synergy of historical data and Meta data, Meta monitoring gives the influence factors of stage 1 Meta data on stage 2 and 3 Meta data, and the influence factors of stage 2 Meta data on stage 3 Meta data. Then use the formula to calculate the degree of synergy between stage 2 Meta data and stage 1 Meta data, as well as the degree of synergy between stage 3 Meta data under different combinations.

(7) Final evaluation results of all feasible Meta data combinations

According to the combination of Meta data, it meets the requirements of multi-stage Meta data based on CoPS deep learning Meta analysis, and builds a CoPS green selection index system. At the same time, considering the synergy between multi-stage Meta data from the characteristics of the CoPS complex system, the final Meta analysis is obtained Evaluation results.

2.4. Meta Analysis Big Data Service Model

Data-driven Meta analysis the construction of a big data service complex system follows three basic principles as a whole: ① Covers smart data, user needs, smart technology, big data Meta analysis, Meta analysis workers, big data service platform and Meta analysis analysis methods Seven Key elements; ②Reflecting the four major characteristics of data multi-source, demand sensitivity, technical intelligence and service scenario; ③Realizing the three cores of demand big data perception, Meta analysis service big data research and user service intelligent push function, its formula is as follows:

$$y_i = f\left(\sum_{j=i}^{k} \omega_{ij} y_j - \theta_i\right), i \neq j \tag{10}$$

Where y refers to the distance from i to k of the service system area, which is the Meta standard deviation, which is an important regularization parameter in the GWR model. The size of the system will directly determine the meta-analysis change scale characteristics of the solution coefficient. The bandwidth corresponds to the fixed type (ie, the fixed distance Threshold value) and variable type (that is, the preset distance value corresponding to the Nth nearest field is used as the bandwidth value of each solution point), this paper adopts the variable Meta data model. When solving the BMI model, the bandwidth needs to be optimized. The cross-validation method or the BMI method can be used. When solving the bandwidth of the BMI model, the corrected version of the BMI method is generally used, and the expression is as follows:

$$\mathrm{BMI}(b) = 2n\ln(\sigma) + n\ln(2\pi) + n\left\{\frac{n + tr(S)}{n - 2 - tr(S)}\right\} \tag{11}$$

$$\wp_{\kappa} = \frac{2k}{k+1} + [\frac{1}{2} + \frac{1}{2k}][\frac{c_2 - c_1}{3}]^2 + \frac{2(c_2 - c_1)}{3} \tag{12}$$

$$W(T) = K(y(T-1), u(T-d-1)) \tag{13}$$

Where σ represents the estimated variance, S represents the data range matrix of the Meta analysis, and $tr(S)$ represents the trace of the matrix. Meta analysis big data service system complex system construction ideas, there are three main lines of thinking: ① based on multi-source heterogeneous massive data resources, to achieve the core function of Meta analysis big data service; ② Meta analysis of the interaction between the elements of the big data service model coordination constitutes a complete Meta analysis service ecosystem; ③It reflects the main characteristics of the Meta analysis big data service model. As the BIM software lacks the Meta analysis family model required by this complex system, it is necessary to determine the data scale of the required model based on the large data type of the complex system in the early stage and formula calculation, and determine the number of models based on the formula. For example, the SJG diagonal flow physical examination model in the Meta analysis big data service system model is established as an example: According to design specifications, indoor health data functional partitions and usage requirements, determine the indoor Meta analysis monitoring index as Q and the accuracy of the complex system as D, which can be calculated Health index v, namely:

$$v = Q(D_2)2 \times \pi \times 3600 \tag{14}$$

2.5. Meta Analysis Promotes the Theory and Technical Implementation Model

Meta analysis big data service system optimization involves cross-professional optimization. It is no longer a single-quality system. First, the key target performance of the system must be determined and listed as the "refactoring pole". They are usually the core performance and functions of the big data service system. Mathematical representation:

$$U = \sum_{i=1}^{g} \left\{ P_i \left| \sum_{j=1}^{k} p_j^{(i)} \right. \right\} \tag{15}$$

The role of meta-analysis knowledge in the field of physical activity promotion can also be explained by the TPB theory. According to the TPB theory, the intention of an individual to participate in physical activity is a direct predictor of individual physical activity participation, and contains three decisive factors. The importance of physical activity knowledge and participation is that it is related to the factors of TPB attitude. To be clear, knowledge affects attitudes and thus the purpose of behavior; assuming that physical activity, health knowledge and health benefits are the basis of physical activity participation, then improving and developing knowledge of meta-analysis should be the first step in establishing healthy physical activity behavior. Therefore, behavioral control is also one of the mediating variables that mediate the relationship between meta-analysis knowledge and physical activity behavior. In the case of integrated reconstruction of vibration isolation and shock resistance, three reconstruction poles are determined:

$$U = \{P_1 | D, L, f_2, Q, d, l \quad P_2 | f_1, \mu \quad P_3 | N, M, I\} \tag{16}$$

In the formula, P1 is the overall pole; 2P is the health pole; 3P is the Meta evaluation pole. Here, P3 is listed as the comparison object, but it can also be other. Because it is an iterative optimization, the initial plan is not particularly important; the acceptable plan is marked as U. Decompose the physical elements and redesign the architecture, then mark the initial parameter scheme as (0)C, change the parameters, obtain the improvement scheme, compare and summarize the optimization direction, until satisfied. The system is an envelope relationship to the subsystem, so subsystem

optimization can use all mature technologies, theories and research results. For example, pure structural optimization can use structural dynamics methods to establish objective optimization functions to carry out optimization analysis; difficult to express or immature combined with the overall expression or complex system experience decision-making, they are finally presented quantitatively on the data table for meta-analysis of the complex system decision-making of the big data service system. In fact, the comparison of advantages and disadvantages is already obvious. The key performance parameters in the reconstruction pole can be replaced, but the most important evaluation parameters at the moment are always retained, leading to a "chemical reaction" to generate one or more performance/function improvements. The general expression of the basic GWR model is as follows:

$$IR = \sum_{S-1}^{U} \sum_{d-1}^{K} f_s, DV_s, d \tag{17}$$

$$y_i = \beta(u_i, v_i) + \sum_{j=1}^{p} \beta_j(u_i, v_i) x_{ij} + \varepsilon_j \beta_j \tag{18}$$

Among them, (u_i, v_i) is the coordinates of the regression analysis point, X_j(j=1, 2...) is the independent variable, and the regression parameter is about the Meta analysis function, that is, it is estimated to quantitatively reflect the difference of the Meta analysis by evaluating the Meta analysis status. Quantification of qualitative characteristics. The MBY model uses the linear weighted least element method to decompose the model at i in any regression analysis. The formula is as follows:

$$\beta_j = (X^T W_j X)^{-1} X^T W_j Y \tag{19}$$

The matrix $X = (x_{ij})_{n\times(p+1)}$ is the independent variable sampling matrix (the value of the first column is 1), $Y = (y1, y1, ..., Yn)^T$ is the dependent variable sampling matrix, and $W_{i_{n\times n}}$ is the diagonal matrix, where the diagonal element $wik(k = 1, ..., n)$ indicates that each observation is at the regression analysis point i the weight of is generally calculated by the kernel function. Finally, the migration operator is executed after determining the migration candidate solution in the migration subsystem, which is defined as:

$$x_{ik}(s) \leftarrow x_{jl}(s) \tag{20}$$

$$\sigma_{ikjl} = \begin{cases} \dfrac{n}{\Delta_{ikjl}} \sqrt{\sum_{s=1}^{n} (x_{ik}(\varepsilon) - x_{jl}(\varepsilon))^2 \Delta_{ikjl}(\varepsilon)} & \Delta_{ikjl} > 0; \\ 0 & \Delta_{ikjl} < 0 \end{cases} \tag{21}$$

Among them:

$$\Delta_{ikjl} = \sum_{\delta=1}^{n} \Delta_{ikjl}(\varepsilon) \tag{22}$$

$$x_i = \sum_{j=1}^{n} \omega_{ij} y_j - \theta_i \tag{23}$$

3. Deep Learning Meta-Analysis Promotes the Construction of Empirical Research Models of Theory and Technology

3.1. Meta Analysis Research Object

The patients who received perianal abscess surgery were included, regardless of gender, age, race and course of disease. A total of 3537 patients were included in 31 articles, including 1789 patients in the traditional Chinese medicine powder group and 1748 patients in the conventional method group. In the traditional Chinese medicine powder group, the minimum patient volume was 24 cases, and the maximum patient volume was 486 cases; the conventional method group had the minimum patient volume 24 cases and the maximum patient volume 474 cases. The intervention measures of all the study treatment groups were conventional western medicine combined with traditional Chinese medicine powder after perianal abscess surgery, and the traditional Chinese medicine powder after perianal abscess surgery was taken orally, 0.5g/time, 3 times a day; the control group recovered by conventional means. The course of treatment ranged from 1 week to 9 months. There were 27 studies that started using TCM powders after surgery, and 4 studies started taking TCM powders before PCI. Among them, 1 study started using TCM powders after admission, and PCI was performed in the middle. 6 months after discharge; 1 study started taking 3 days before operation and continued treatment for 6 months; 1 study took 1 time before operation and treated for 9 months after operation; 1 study took 4-7 days before operation and after operation treat for 1 week.

3.2. Deep Learning Meta Analysis Method and Content

(1) Research type

Randomized controlled trial (RCT), the language is limited to Chinese and English. A total of 157 documents were retrieved from the database, and 31 documents were finally selected for statistical analysis after processing. The specific document processing flow is shown in Figure 1.

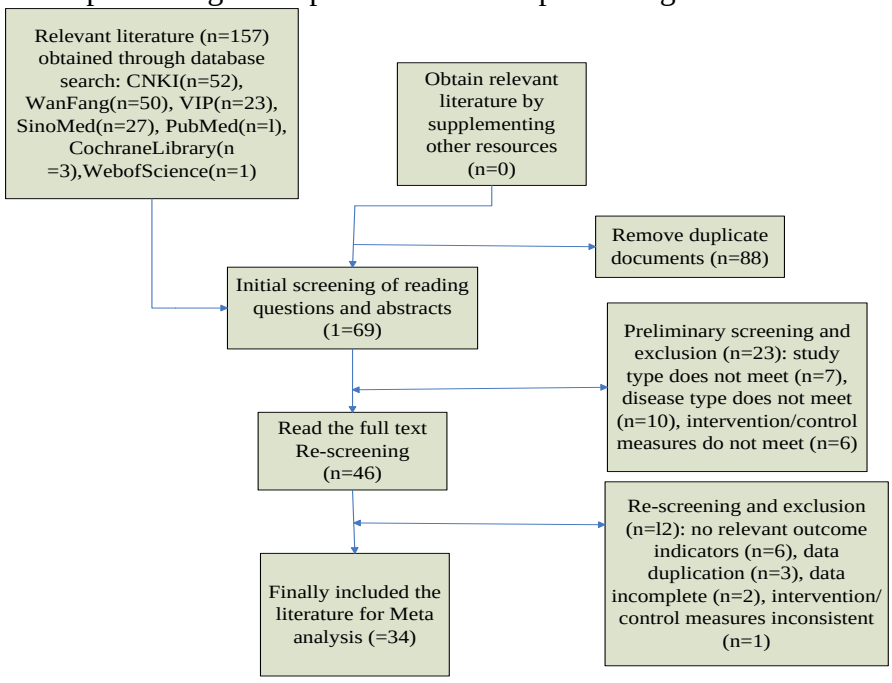

Figure 1. Literature screening process

(2) Evaluation criteria

1) Sensitivity analysis

If there are essential differences between the studies, further sensitivity analysis is needed to explore the reasons for the sensitivity, and compare the results of the Meta analysis by comparing all the included literature and excluding the literature that caused the heterogeneity.

2) Bias analysis

If the analysis index includes more than 10 studies, due to space limitations, the funnel chart results are only described in text, which meets the literature quality requirements. The subjects of the study included CABG patients, VR patients or both patients undergoing combined surgery. The total sample size was 10711 cases, including 3172 cases in the POAF group and 7539 cases in the non-POAF (Non-POAF) group.

3) Meta analysis results

Meta-analysis of the relationship between CRP, IL family, WBC, TNF-α and POAF. In order to further analyze the influence of different surgical methods on the results of Meta analysis, the research literature was divided into three categories according to the surgical methods: CABG alone, VR alone, and CABG+VR combined surgery group. Among the 47 articles, 39 articles were included in patients with CABG surgery alone, 2 articles in patients with VR surgery were included, and 0 articles were included in patients with CABG+VR combined surgery (6 articles were included in the study for CABG or VR or the two are combined, but there is no literature that only includes patients with CABG+VR combined surgery). Since there were only 2 articles in the VR group alone, no subgroup analysis was performed for this group, only 39 articles of CABG surgery alone were subgrouped.

(3) Exclusion criteria

The research design is not rigorous, the data is incomplete or there are obvious errors, and statistical analysis is not possible; the experimental group or the control group uses other traditional Chinese medicine treatment research.

4. Wound Healing in Traditional Chinese Medicine Changing after Perianal Abscess

4.1. Meta Analysis of Wound Healing Based on Deep Learning

16 studies reported MACE, of which 13 studies reported recurrence of angina, 8 studies reported non-fatal myocardial infarction, 9 studies reported arrhythmia, 9 studies reported heart failure, and 4 studies reported recurrence revascularization, 3 studies reported cardiac death, and 3 studies reported in-stent restenosis. In terms of angina pectoris recurrence, the heterogeneity test P=0.99, I2=0%.

As shown in Figure 2, in terms of increasing LVEF, combined with traditional Chinese medicine powder after perianal abscess surgery is significantly better than WM treatment, statistically significant (MD=5.43, 95%CI [1.28, 9.58], P=0.01). It is suggested that combined use of traditional Chinese medicine powder after perianal abscess surgery can further increase LVEF on the basis of single use of western medicine, and the intervention course is more effective for more than 2 weeks, and has certain clinical reference value. The conclusion needs to be confirmed, but the number of included literature is relatively large. Fewer and greater heterogeneity in each subgroup, as shown in Table 1.

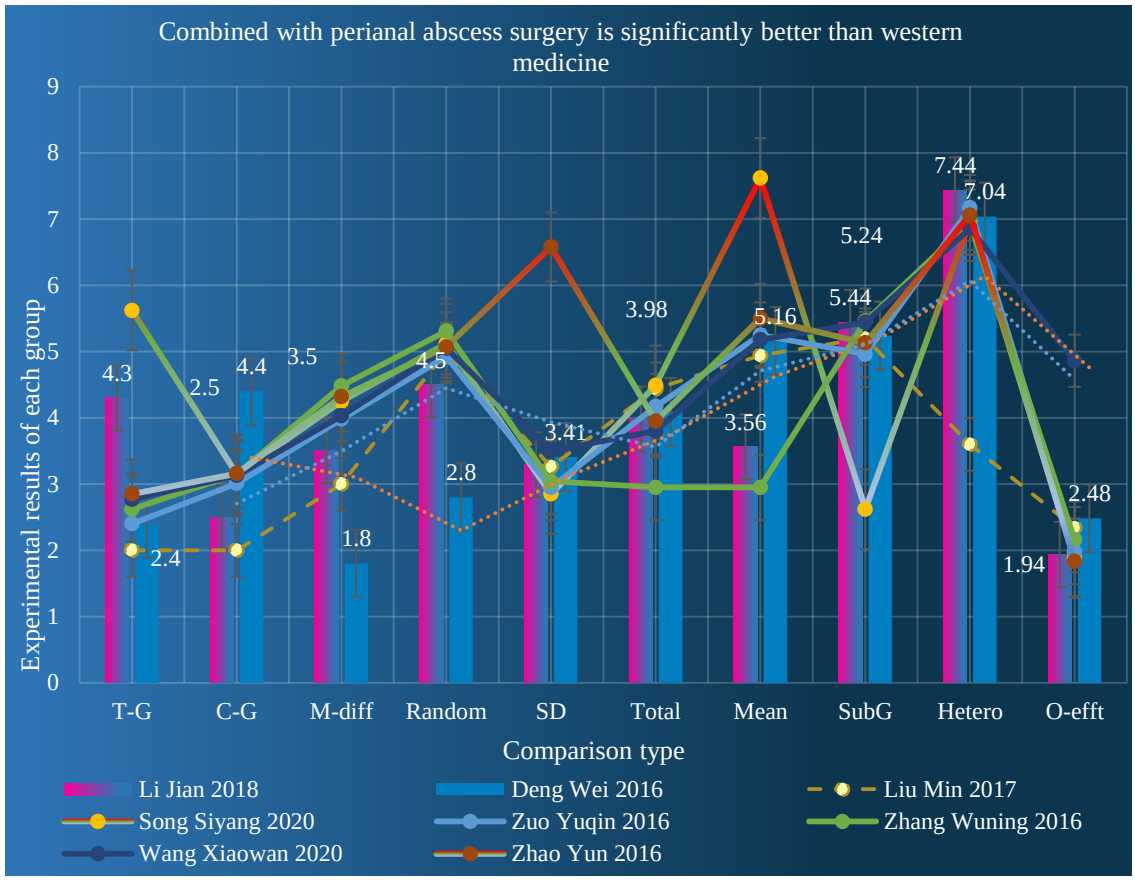

Figure 2. Combined with perianal abscess surgery is significantly better than western medicine

Table 1. Combined use of traditional Chinese medicine powder for perianal abscess surgery

Item	Li Jian 2018	Deng Wei 2016	Liu Min 2017	Song Siyang 2020	Zuo Yuqin 2016	Zhang Wuning 2016	Wang Xiaowan 2020
T-G	4.3	2.4	2	5.62	2.4	2.62	2.77
C-G	2.5	4.4	2	3.15	3.01	3.15	3.13
M-diff	3.5	1.8	3	4.25	3.98	4.48	4.03
Random	4.5	2.8	5	5.12	4.92	5.31	5.05
SD	3.29	3.41	3.26	2.85	2.95	3.04	3.5
Total	3.98	4.09	4.44	4.49	4.17	2.95	3.8
Mean	3.56	5.16	4.94	7.62	5.25	2.95	5.18
SubG	5.44	5.24	5.2	2.62	4.96	5.46	5.44
Hetero	7.44	7.04	3.6	6.97	7.17	6.95	6.86
O-efft	1.94	2.48	2.34	1.88	1.98	2.16	4.86

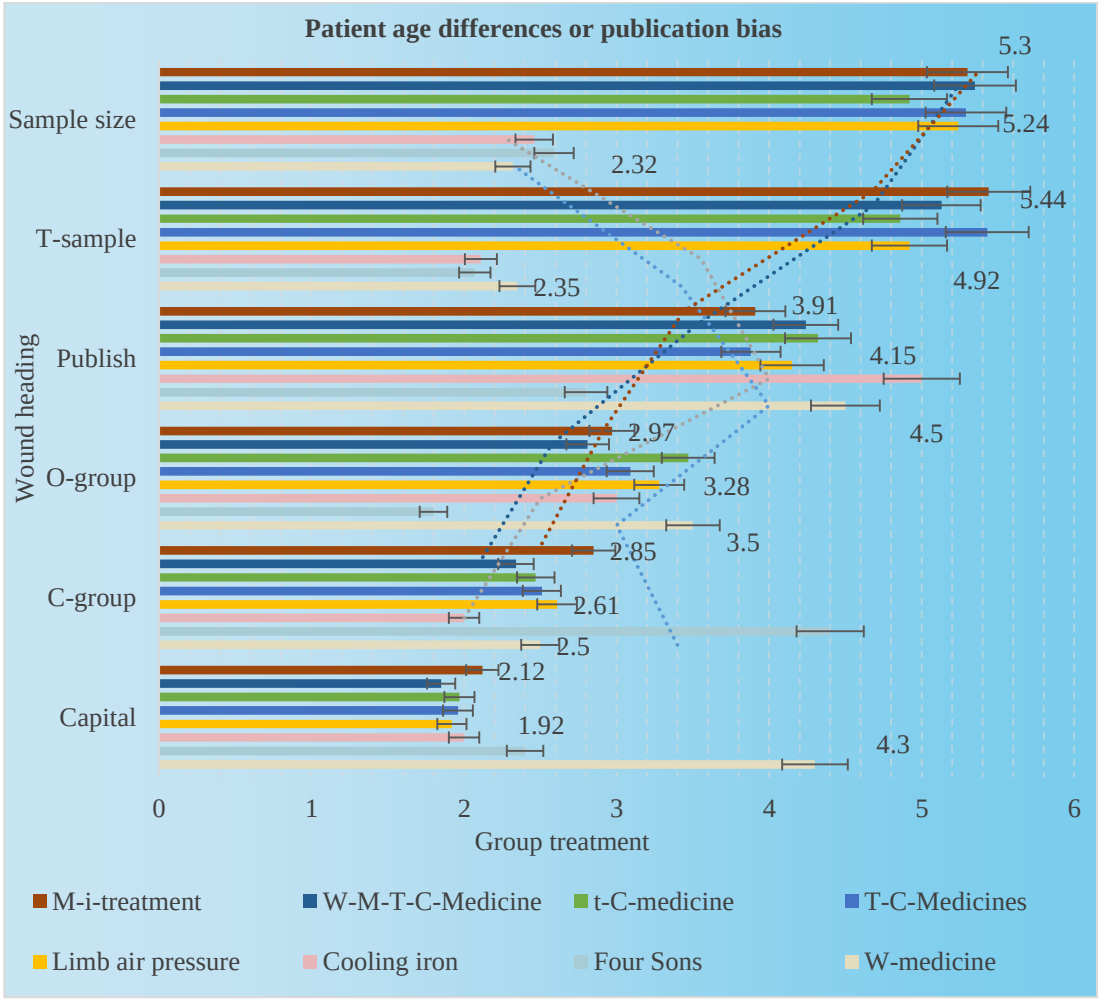

Figure 3. Patient age differences or publication bias

As shown in Figure 3, the large heterogeneity may be caused by differences in patient age or publication bias. The patient's own physical fitness has a greater impact on 6MWT. The average age of the patients excluded in the study is relatively small, and they may have better physical fitness and milder illness, which relatively weakens the impact of drugs on the body. The data is shown in Table 2.

Table 2. Relatively weakened the effect of drugs on the body

Item	Cooling iron	T-C-Medicines	t-C-medicine	W-M-T-C-Medicine
Capital	2	1.96	1.97	1.85
C-group	2	2.51	2.47	2.34
O-group	3	3.09	3.47	2.81
Publish	5	3.88	4.32	4.24
T-sample	2.11	5.43	4.86	5.13
Sample size	2.46	5.29	4.92	5.35

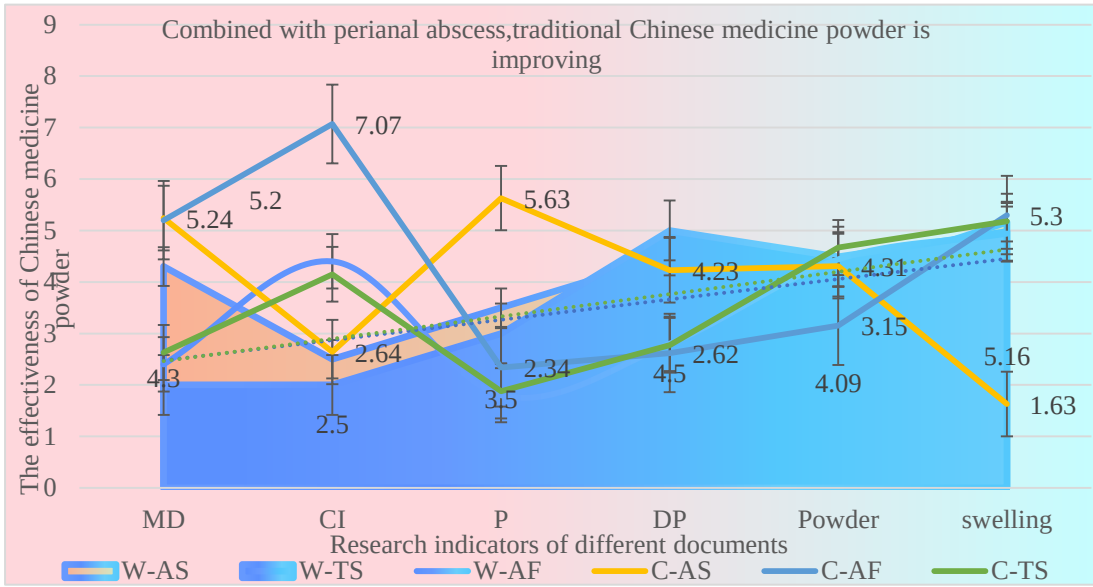

Figure 4. Combined with perianal abscess, traditional Chinese medicine powder is improving

As shown in Figure 4, after combined with perianal abscess, Chinese medicine powder can improve AS (MD=6.66, 95%CI[2.24,11.08], P=0.003), AF (MD=6.61, 95%CI[3.84,9.39] , P<0.00001) and TS (MD=6.70, 95%CI[1.71, 11.70], P=0.009) are significantly better than western medicine treatment, suggesting that combined use of traditional Chinese medicine powder for perianal abscess surgery is better than conventional in improving DP Western medicine treatment. Looking at the original text, no obvious source of heterogeneity was found, which may be caused by accidental factors caused by the small sample size of the study.

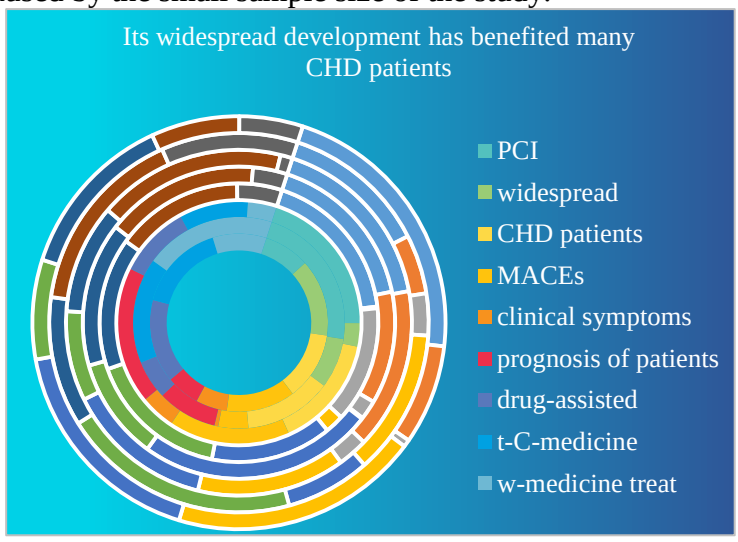

Figure 5. Its widespread development has benefited many CHD patients

As shown in Figure 5, the development of PCI is becoming more mature, and its widespread development has benefited many CHD patients. However, PCI may cause in-stent restenosis and even cardiac death and other MACEs, leading to clinical symptoms in patients unable to relieve or even life-threatening. It is difficult to continuously and effectively improve the prognosis of patients through PCI alone, and it is particularly important to carry out drug-assisted treatment after surgery.

4.2. Meta Analysis of Deep Learning Combined Therapy Wound Healing

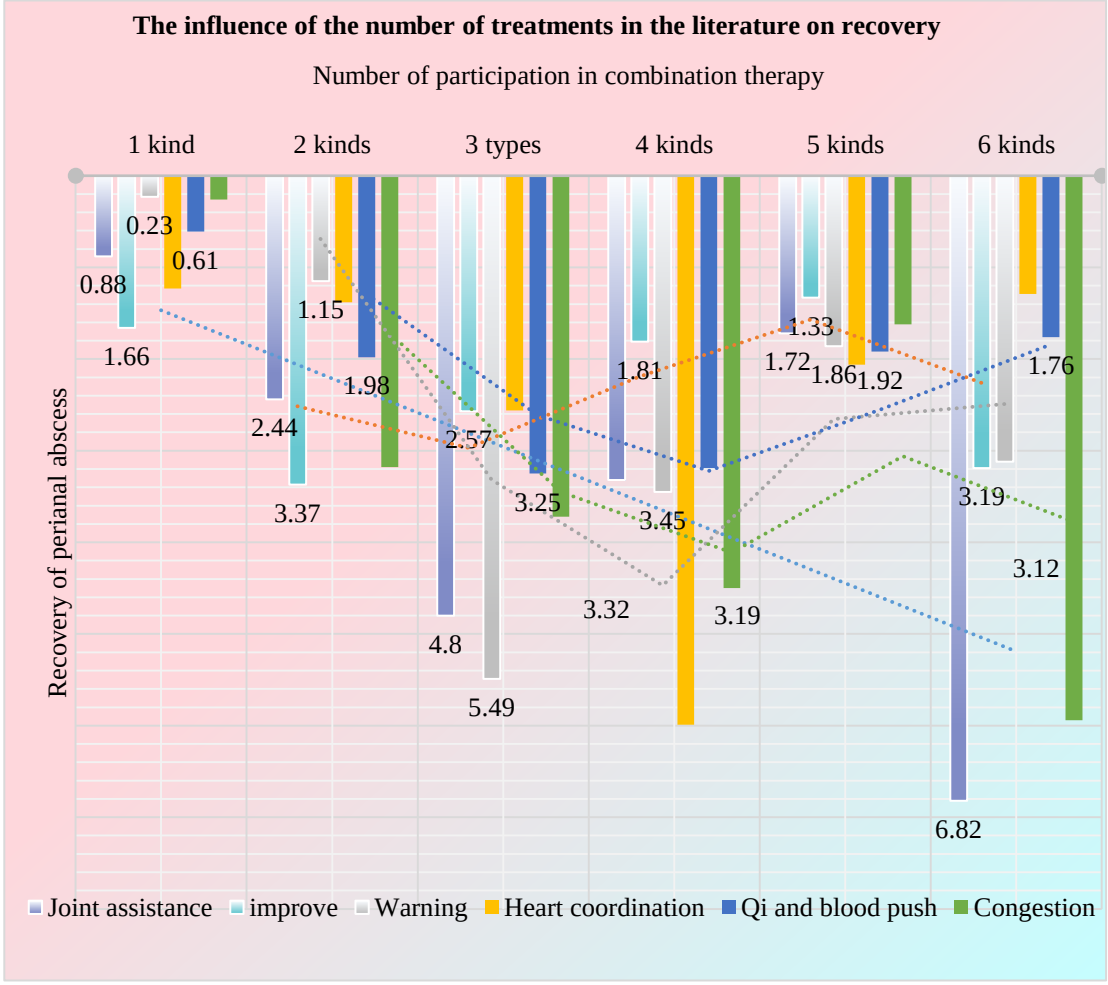

Figure 6. The effect of the number of treatments in the literature on recovery

As shown in Figure 6, there are many factors that trigger MACE after surgery. The conventional western medicine treatment recommended by the guideline is often only for one or several mechanisms, which is not effective and will bring certain side effects. Traditional Chinese medicine is receiving increasing attention in the prevention and treatment of complications after PCI. On the basis of conventional western medicine, combined with Chinese medicine adjuvant treatment, it can coordinate with western medicine to regulate heart function in multiple ways and multiple targets, inhibit the occurrence and development of MACE, and improve patients Prognosis, improve their quality of life. As CHD patients are old and physically weak for many years, and the operation itself is easy to consume Qi and blood, which leads to aggravation of the patient's deficiency syndrome, Qi deficiency promotes blood circulation, and then causes blood stasis. Therefore, the most common syndrome of Qi deficiency and blood stasis is the most common in patients after PCI.

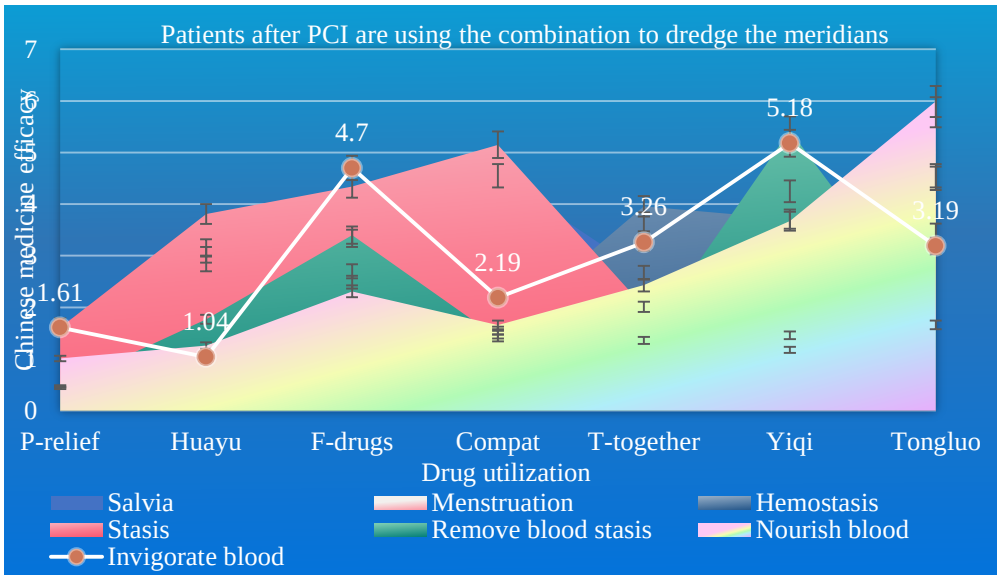

Figure 7. Patients after PCI are using the combination to dredge the meridians

As shown in Figure 7, clinically for patients after PCI, combined with Chinese medicine for replenishing Qi and activating blood based on western medicine, can significantly alleviate the clinical symptoms of patients and reduce the occurrence of MACE. Traditional Chinese medicine powder for perianal abscess surgery is a representative traditional Chinese medicine compound for replenishing Qi and activating blood. Astragalus replenishes Qi and strengthens the surface, nourishes the lung and spleen. It is an essential medicine for invigorating Qi; Danshen is essential for promoting blood circulation and regulating menstruation Medicine: Panax notoginseng promotes blood circulation and stops bleeding, stops bleeding without leaving blood stasis, removes blood stasis and does not hurt; lowering fragrance, promoting Qi and relieving pain, removing blood stasis and stopping bleeding, the compatibility of the four drugs, together to replenish Qi, promote blood circulation, dredge collaterals and relieve pain.

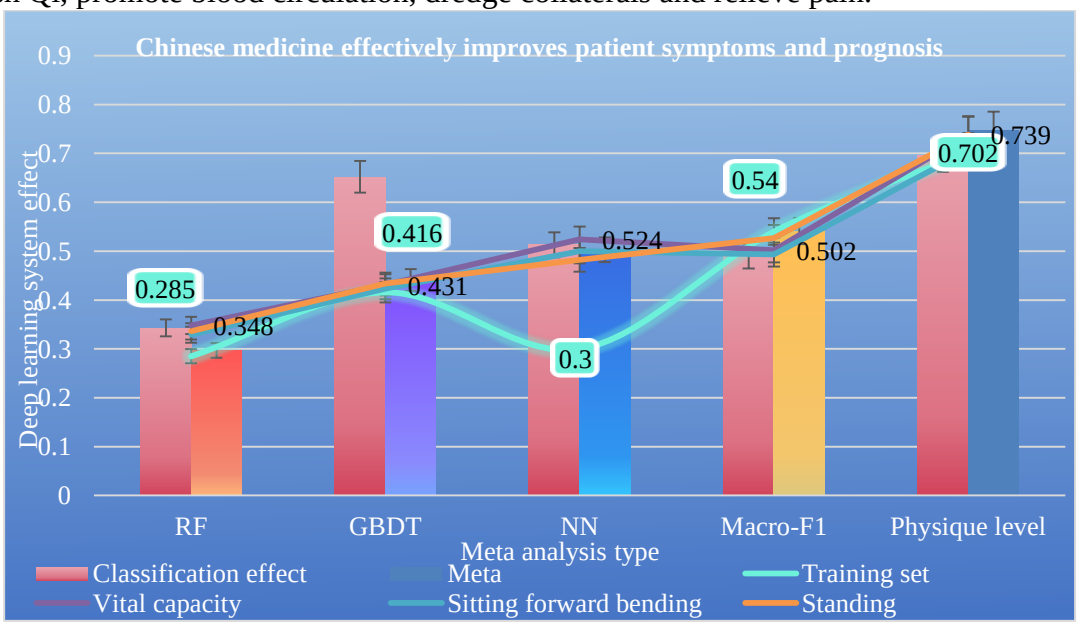

Figure 8. Chinese medicine effectively improves patient symptoms and prognosis

As shown in Figure 8, tanshinone, salvianolic acid, panax notoginseng saponins, odorifera volatile oil, etc. can act on all stages of the development of CHD at multiple levels and multiple targets, effectively improving patient symptoms and prognosis. After a one-time radical resection of perianal abscess, the department combined with anal carbuncle cuyu decoction for adjuvant treatment, and achieved satisfactory clinical effects. Therefore, it is suggested that the standardized use of traditional Chinese medicine powder for perianal abscess after PCI can effectively reduce the occurrence of most MACEs. For patients who are at risk of in-stent restenosis, myocardial infarction, stroke and cardiogenic death, perianal. The curative effect of traditional Chinese medicine powder after abscess surgery is limited, and the treatment plan needs to be further improved. LVEF and 6MWT are important indicators for evaluating cardiac function. LVEF is closely related to the occurrence of MACE after PCI. The greater the LVEF, the stronger the myocardial contractility and the corresponding increase in the patient's exercise tolerance.

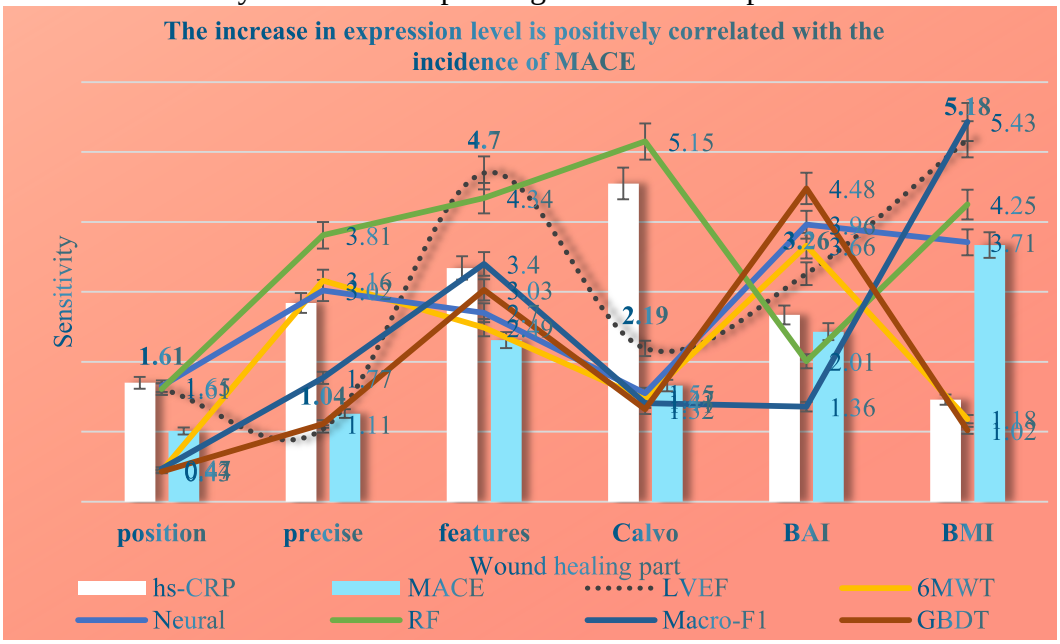

Figure 9. The increase in expression level is positively correlated with the incidence of MACE

As shown in Figure 9, hs-CRP is a sensitive biomarker of systemic inflammatory response, and the increase in its expression level is positively correlated with the incidence of MACE. The results show that the combined use of traditional Chinese medicine powder for perianal abscess surgery is better than western medicine alone in improving LVEF, 6MWT and hs-CRP. It can significantly increase LVEF and 6MWT, reduce hs-CRP expression levels, enhance patients' heart function, and reduce. Its inflammatory response reduces the occurrence of MACE. In addition, the results of the subgroup analysis suggest that combined use of traditional Chinese medicine powder intervention after perianal abscess surgery is more effective in improving LVEF for more than 2 weeks, but the number of included literature is small, and the conclusion needs further verification.

As shown in Table 3, the combined use of traditional Chinese medicine powder for perianal abscess surgery can significantly improve PL, AS, AF, TS, DP scores compared with conventional western medicine treatment, suggesting that combined use of traditional Chinese medicine powder for perianal abscess surgery can help improve patients Clinical symptoms and quality of life. The two groups had fewer adverse reactions, no significant difference, and no serious adverse reactions occurred, indicating that the combined use of traditional Chinese medicine powder after perianal abscess had fewer side effects and good safety. At present, there is a Meta-analysis report on the

effect of beneficial Qi and blood activating traditional Chinese medicine combined with conventional western medicine treatment on MACE in patients after PCI, but there is no separate article published on the effectiveness and safety of combined use of traditional Chinese medicine powder after perianal abscess surgery.

Table 3. Combined use of traditional Chinese medicine powder after perianal abscess

	hs-CRP	MACE	LVEF	6MWT	Neural	RF	Macro-F1	GBDT
position	1.7	1.01	1.61	0.44	1.65	1.61	0.47	0.43
precise	2.84	1.26	1.04	3.16	3.02	3.81	1.77	1.11
features	3.34	2.31	4.7	2.49	2.7	4.34	3.4	3.03
Calvo	4.55	1.66	2.19	1.47	1.55	5.15	1.41	1.32
BAI	2.67	2.43	3.26	3.66	3.96	2.01	1.36	4.48
BMI	1.46	3.67	5.18	1.18	3.71	4.25	5.43	1.02

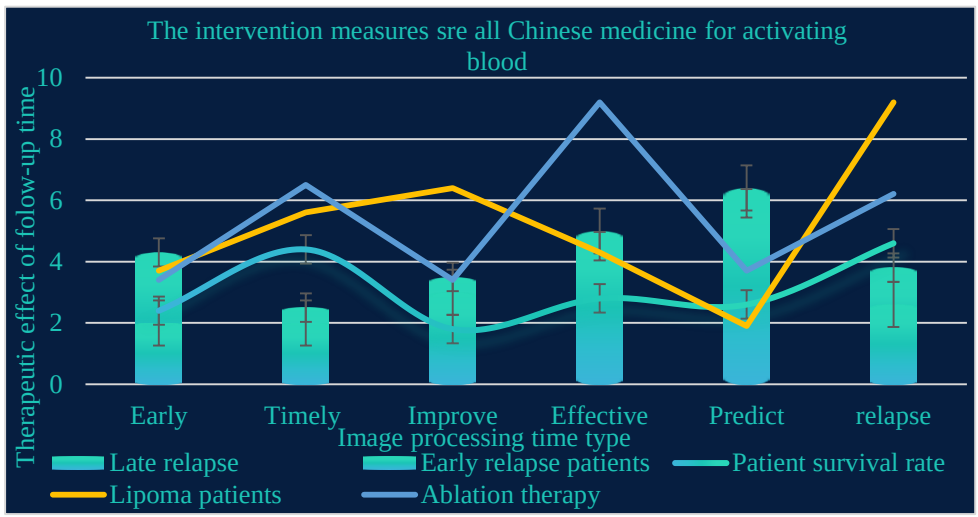

Figure 10. The intervention measures are all Chinese medicine for activating blood

As shown in Figure 10, similar to the other two Meta-analysis studies, the intervention measures are all Chinese medicines for replenishing Qi and activating blood combined with western medicine. Only the effect of the combined medicine on MACE is discussed. The statistical analysis results are slightly different from this study. Different types may be the main reason for the discrepancies in conclusions, and none of the studies performed statistical analysis on other important outcome indicators related to MACE.

Table 4. Combined use of Chinese medicine for replenishing and activating blood

Num	Joint assistance	Improve	Warning	Heart coordination	blood push	Congestion
1 kind	0.88	1.66	0.23	1.23	0.61	0.26
2 kinds	2.44	3.37	1.15	1.38	1.98	3.18
3 types	4.8	2.57	5.49	2.56	3.25	3.72
4 kinds	3.32	1.81	3.45	5.99	3.19	4.5
5 kinds	1.72	1.33	1.86	2.06	1.92	1.62
6 kinds	6.82	3.19	3.12	1.29	1.76	5.94

As shown in Table 4, compared with pure western medicine treatment, the combined use of Chinese medicine for replenishing Qi and activating blood can significantly reduce the incidence of recurrent angina and in-stent restenosis in patients after PCI, which is slightly different from the results of this study. The Chinese medicines used in this study include 16 kinds of Chinese patent medicines, Chinese medicine injections and Chinese medicine decoctions, including Chinese medicine powder after perianal abscess surgery, Tongxinluo capsule, Danhong injection, Buyang Huanwu decoction, etc. Included 46 studies, of which only 4 studies intervention measures were traditional Chinese medicine powder combined with conventional western medicine after perianal abscess surgery, which may be the main reason for the inconsistency with the analysis results of this study.

5. Conclusion

Perianal abscess is a common anorectal disease. Studies have shown that obesity, drinking, poor sleeping habits, hotness, sitting for a long time, drinking less water, and less exercise are all risk factors for its occurrence. At present, incision and drainage is usually used to treat perianal abscess in clinic. Most patients can be cured in one stage, but it is easy to cause larger wound damage, coupled with stool contamination, and higher risk of postoperative complications and recurrence. Angiogenesis, fibroblasts, and inflammatory factors are closely related to the healing process of perianal abscess. Granulation tissue formation is one of the important steps during cell repair. The number of fibroblasts determines the speed of wound healing. At the same time, wound inflammatory factors are also the main factors affecting wound healing. Therefore, it is urgent to find drugs that effectively inhibit perianal inflammation and promote angiogenesis, which are of great significance for the treatment of perianal abscess. The included literature clearly shows the characteristics and advantages of integrated traditional Chinese and western medicine through the comparison of integrated traditional Chinese and western medicine treatment and pure western medicine treatment. The use of the two treatment methods is intuitively demonstrated through the study of effective efficiency and changes in the circumference of the affected limb. Through the above analysis of the feasibility of combined traditional Chinese and Western medicine in treating postoperative upper extremity edema of perianal abscess, it can be concluded that the cooperation of traditional Chinese medicine and Western medicine in the treatment of postoperative upper extremity edema of perianal abscess is worthy of further clinical application.

In recent years, the quality of RCTs carried out in China for the treatment of perianal abscesses with traditional Chinese medicine is generally low, which reduces the strength of the evidence of the test results and affects the promotion of its conclusions. High-quality clinical research design and implementation are the key to improving the strength of evidence. In future research, the design, implementation and publication of clinical trials should be strictly regulated. For example, reasonable sample size calculations and registration of clinical research protocols should be carried out before trials, and randomization should be clear. Methods: Implementation of allocation concealment and blinding, placebo control, detailed records of dropped cases and intention-to-treat analysis report, encourage the publication of negative results, and report clinical trials in strict accordance with international CONSORT standards to describe the items in the list in detail. Refer to the latest clinical practice guidelines and expert consensus, etc., formulate reasonable and feasible treatment plans, reduce the clinical heterogeneity of the included research subjects, and improve the acceptance and homogeneity of intervention measures. Select representative outcome indicators that can reflect the endpoint events, and combine the characteristic evaluation indicators of TCM, such as TCM symptom score, blood stasis syndrome score, etc., to observe the overall efficacy of TCM. Strengthen long-term follow-up and evaluation of long-term prognosis to

objectively and comprehensively reflect the long-term efficacy of traditional Chinese medicine and its impact on the quality of life of patients. Improve drug safety monitoring and reporting, provide complete and reliable data for clinical scientific research, and provide guarantee for clinical safe drug use.

On the basis of conventional western medicine treatment, combined with perianal abscess Chinese medicine powder can significantly reduce the incidence of MACE in patients with perianal abscess after PCI, increase LVEF, 6MWT levels and SAQ score, and reduce hs-CRP levels, thereby reducing their inflammatory response and enhancing heart function, relieve clinical symptoms, improve quality of life and prognosis without increasing adverse reactions, it is worthy of clinical application. However, the quality of the included studies is generally low, and more rigorous and standardized high-quality RCTs are needed to further confirm the effectiveness and safety of perianal abscess Chinese medicine powder combined with conventional western medicine treatment, in order to better guide clinical practice.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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