

TCM comprehensive nursing intervention to pathological jaundice on neonate

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Abstract: Pathological Jaundice on neonate differs from that of physiologic jaundice. They perform differently on clinical cases, which is an effective way to distinguish them. There are many causes for pathological jaundice, common ones include hemolytic jaundice, infectious jaundice, obstructive jaundice, breast-feeding jaundice, etc. Clinically proven that pathological jaundices has significant differences in symptoms. This brings problems to its treatment and nursing. In recent years, TCM comprehensive nursing shows great results in treating process. Therefore, this paper take 2000 cases to make a thorough analysis for the actual clinical effects of TCM comprehensive nursing on pathological jaundice on neonate.

Keywords: TCM nursing; comprehensive nursing; pathological jaundice on neonate; nursing effect.

INTRODUCTION

Causes for pathological jaundice is complicated, specific reasons is as follows. First, defection of inborn metabolic enzymes and genetic defects of red blood cells. Due to physiochemical, biological and immune harm, large amount of red blood cells of fetus get destroyed. This leads to anemia, hemolysis, and surplus of material of bilirubin, and finally leads to pathological jaundice. Second, neonate has autoimmune hemolytic anemia (AIHA), hereditary spherocytosis, unstable hemoglobin disease, etc. This causes the cell condition differs greatly from common ones. Calculi, liver, gallbladder, pancreas tumor and other inflammation result in biliary obstruction, thus bile cannot circulate into small intestine, which causes posthepatic jaundice. It reflected as pyogenic cholangitis, choledocholithiasis, pancreatic cancer, carcinoma of gallbladder. Third, jaundice caused by Gilbert's disease and Dubin-Johnson syndrome or novobiocin. Bilirubin binding disorder in liver cell and metabolic function of bilirubin can lead to congenital nonhemolytic jaundice. Fourth, if neonate has severe heart disease, and even hear failure, the liver would be in congestion enlargement for a long period, this would also lead to jaundice. Fifth, drug damage is another cause. Having chlorpromazine, indomethacin, barbiturate, sulfanilamide grous, para-amino-salicylic acid, carbenarson, etc. as medicine could lead to toxipathic hepatitis. In this circumstance, GIS is not obvious, and no fever before jaundice, serum transaminase rapidly increases, but flocculation and turbidity reaction can help us to verify the jaundice. The neonate jaundice index is shown as fig. 1.

Pathological jaundice in clinical trials usually causes

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yellow palms of hands and foots and serum bilirubin over 205 $\mu\text{mol/L}$ of neonate, etc. Inappropriate treatment or nursing would lead to relapse or deterioration. Currently we use routine methods to nurse neonate patient, however, the results are not satisfied. Doctors as Ma (2013) and Wang (2012) discovered some deficiencies in those methods that can be improved to promote cure rate. In order to verify the accuracy and provide guidance to future clinical work, this paper use 2000 cases of Yancheng City No.1 People's Hospital to prove that the TCM comprehensive nursing method receives great results. The nonate jaundice symptom is shown as fig. 2. Details are talked in later part.

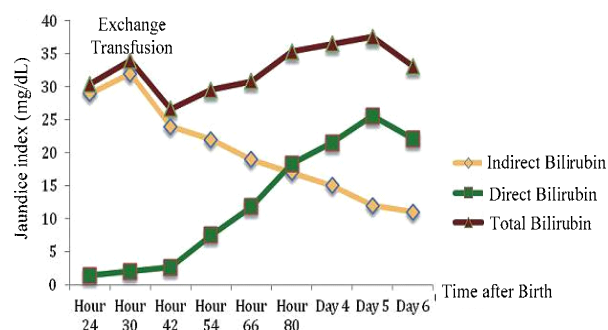


Fig. 1: Neonate Jaundice Index



Fig. 2: Neonate jaundice symptom.

MATERIALS AND METHODS

Choosing Cases

The 2000 study cases are neonate with pathological jaundice from Yancheng City No.1 People's Hospital between Jan. 2012 to Jan. 2015, with 1243 boys and 757 girls.

Chosen patients suit the diagnostic criteria of pathological jaundice, that are having jaundice symptoms within 24 hours after birth, volume of hemobilirubin over 102 $\mu\text{mol/L}$ -1, over 15 days' duration, relapsing after subside, age within 25 days, Apgar score over 8. All parents are informed of the aim and significance of this study and signed informed consent (Li *et al.*, 2014; Zhang *et al.*, 2014).

Cases are separated into observation team and comparison team randomly. Each team contains 1000 cases. If cases from each team has obvious similarity in basic conditions, and $P > 0.05$, they are comparable.

(1) Inclusion criteria: all included patients meet the diagnostic criteria of pathologic jaundice, show jaundice symptoms within 24 h since born, have hemobilirubin content over 102 $\mu\text{mol.L}$ -1, have been suffering from disease for over 15 d, and show jaundice tendency of first decreasing and then increasing again; all patients are less than 25 days old, have Apgar scoring over 8 point; parents of all included patients clearly knew the purpose and significance of this research and signed informed consent before their child being included. (2) Exclusion criteria: healthy newborns, newborns with other congenital diseases, newborns who involuntarily participated in this research, and newborns with drug allergy phenomena are excluded in this research.

Nursing Method

Take routine nursing for comparison team cases. First, nursing staff need to pay close attention to vital signs as respiratory rate, heart rate, and heart function. Second, observing and taking notes of patients' jaundice symptoms progress. Third, observing patients' bilirubin. If patient has hyperbilirubinemia, nursing staff need to take close attention to the early symptoms, such as drowsiness, hypotonia, listlessness, etc. These three aspects can reflect causes efficiently to provide doctors with useful information for further treatment. In addition, in daily treatment, nursing staff need to keep the ward of hygiene and asepsis, and be careful dealing with patients' skin. If any index suddenly changes, nursing staff need to communicate with parents and doctor-in-charge in time to make a tailored treatment plan (Zou *et al.*, 2014).

Patients in observation team need to take routine nursing plus TCM comprehensive nursing. TCM comprehensive nursing needs to follow TCM treatment plan. The basic conception of TCM nursing is shown as fig. 3.

Nursing staff need to control the ward temperature between 26-28°, humidity between 50-60%. Using soft light instead of strong light. TCM nursing mainly contains TCD enema and TCM massage. TCD enema use Xiaodan decoction, which is boiled with artemisia capillaris thumb, curcumin, endothelium corneum gigeriae galli, and rhubarb (Shu *et al.*, 2013).

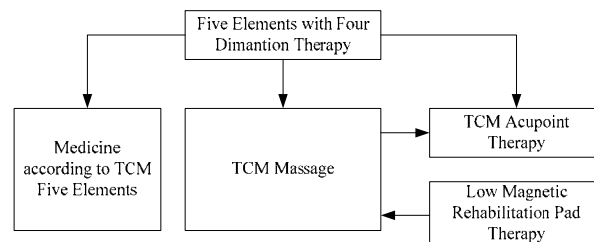


Fig. 3: Basic conception of TCM Nursing

Doctors will change medicine according to patient's conditions. For instance, if patient has interior retention of damp-heat, doctor need to add plantain seed, fructus gardenia into the prescription. If patient has interior retention of coldness that adds to his weight, doctor need to add cassia twig, rhizome alismatis and monkshood. Patient with splenasthenic fluid-retention need radix pseudostellariae, green husk, pericarpium citri reticulatae. Patient with interior deposition need peach kernel, flos carthami, and zedoary. Once a day with one dose of TCD enema, and 7 consecutive days is a basic treatment. In the beginning, the dose is 20ml per day. It gradually reduces along with the process. Gastric tube need to put around glycerol suppositories, and plug into the anus for 5.0-7.5 cm. Pour the dose through this tube (Ding *et al.*, 2008; Jiang *et al.*, 2014).

Nursing staff would also use TCM bathing method. Bathing water is Yinchenhao decoction, which contains Artemisia capillaris thumb, prepared rubarb, scutellaria baicalensis, fructus gardenia, fructus aurantii immaturus, radix bupleuri, radix paeoniae rubra, desmodium, and plantain seed. Bathing water need to maintain between 36-38o, in case that higher or lower temperature would do harm to patient. Indoor temperature needs stay at around 28°. After bathing, nursing staff should use 75% ethyl alcohol to disinfect the patient. Bathing is once a day, lasting for 10-15 min each time. 7 consecutive days is a basic treatment.

Additionally, nursing staff need to make meridian massage for patient. During the massage, nursing staff need to be highly patient and responsible, make sure be soft, accurate and comfort. Specific method is as follows. Spleen meridian: taking the thumb finger thread as center, and message in clockwise. Liver meridian: taking index finger thread as starter, straight it, pushing toward finger root with tenderness. Large intestinal meridian: it locates in the finger side, a straight line from tip to the part between the thumb and the finger. Rubbing stomach:

rubbing stomach in clockwise, taking navel as center. All the acupoints need to be rubbed or pressed for 200 times. During the treating process, whenever patient's condition changes, the method need to be changed accordingly. The spleen meridian method is shown as fig. 4. The liver meridian massage method is shown as fig. 5.

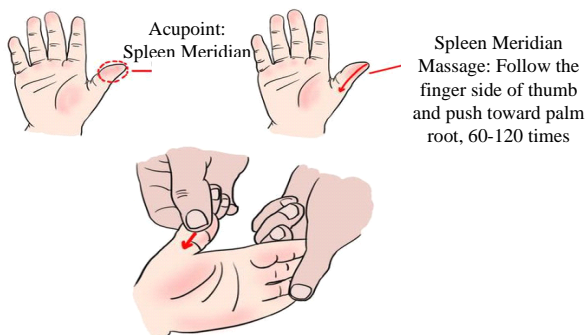


Fig. 4: Spleen meridian method.



Fig. 5: Liver Meridian Massage Method.

Observation Method

After treatment, we compare two cases in each team to study the clinical nursing result. Standard is nursing efficiency. (Nursing efficiency=(cure+obvious effective)/total number of patient * 100%) (Li et al., 2015; Tian et al., 2006).

Comparing recovery total bilirubin index, standard duration of jaundice index, and length of stay.

STATISTIC ANALYSIS

The results of TCM comprehensive method is analyzed by SPSS19.0 statistic program. Enumeration data is recorded under (n, %), tested under chi-square. Measurement data is recorded under ($\bar{x} \pm s$), tested under t. If the result is <0.05, it suggests the discrepancy has statistical meaning.

RESULTS

Patients in observation team get great control under TCM comprehensive nursing. The effective rate reaches 100%.

Among them, 520 cured, 280 obviously improved, and 200 improved. The effective rate of comparison team is 72%, with 400 cured, 200 obviously improved, 120 improved. There are 280 patients have not seen any improvement. The discrepancy $P < 0.05$ suggests that it has statistical meaning.

Besides, after 7 days of TCM comprehensive nursing, total bilirubin of patients in observation team decreased from 281.38 ± 75.62 to 142.43 ± 32.81 , while the total bilirubin of patients in comparison team decreased from 279.84 ± 74.26 to 167.12 ± 46.76 . Although both has decreased, but the ranger is wider in observation team, which shows effectiveness. $P < 0.05$ suggests it has statistical meaning.

Additionally, treating period of comparison team is (5.89 ± 2.36) days, while for observation team is (4.23 ± 2.17) days. $P < 0.05$ suggests it has statistical meaning.

DISCUSSION

Clinical test shows that TCM comprehensive nursing can effectively improve defections in routine nursing, and particularly in neonate pathological jaundice. Meridian massage can dredge the blood circulation, stimulate body surface feel, in order to nourishing yin and clearing heat, eliminating stagnation. Enema can effectively stimulate neonates' gastrointestinal function to boost fast growth of normal flora inside body and promote digestive absorption and gastrointestinal motility. This would cause fast subside of jaundice. It is worth noting that in current clinical practice, adverse effects and side effects of TCM-combined therapy have still been unclear. Moreover jaundice infants are too young to have developed digest and detoxification function, it needs to fully consider the interaction among different traditional Chinese medical herbs during medication process, so as to ensure the safety and reliability of medication.

Therefore, TCM comprehensive nursing is especially suitable for neonate pathological jaundice, recommends to apply to clinical practice.

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