

World Journal of *Clinical Cases*

World J Clin Cases 2020 October 26; 8(20): 4688-5069



MINIREVIEWS

- 4688 Relationship between non-alcoholic fatty liver disease and coronary heart disease
Arslan U, Yenercağ M

ORIGINAL ARTICLE

Retrospective Cohort Study

- 4700 Remission of hepatotoxicity in chronic pulmonary aspergillosis patients after lowering trough concentration of voriconazole
Teng GJ, Bai XR, Zhang L, Liu HJ, Nie XH

Retrospective Study

- 4708 Endoscopic submucosal dissection as alternative to surgery for complicated gastric heterotopic pancreas
Noh JH, Kim DH, Kim SW, Park YS, Na HK, Ahn JY, Jung KW, Lee JH, Choi KD, Song HJ, Lee GH, Jung HY
- 4719 Observation of the effects of three methods for reducing perineal swelling in children with developmental hip dislocation
Wang L, Wang N, He M, Liu H, Wang XQ
- 4726 Predictive value of serum cystatin C for risk of mortality in severe and critically ill patients with COVID-19
Li Y, Yang S, Peng D, Zhu HM, Li BY, Yang X, Sun XL, Zhang M
- 4735 Sleep quality of patients with postoperative glioma at home
Huang Y, Jiang ZJ, Deng J, Qi YJ
- 4743 Early complications of preoperative external traction fixation in the staged treatment of tibial fractures: A series of 402 cases
Yang JZ, Zhu WB, Li LB, Dong QR
- 4753 Retroperitoneal vs transperitoneal laparoscopic lithotripsy of 20-40 mm renal stones within horseshoe kidneys
Chen X, Wang Y, Gao L, Song J, Wang JY, Wang DD, Ma JX, Zhang ZQ, Bi LK, Xie DD, Yu DX
- 4763 Undifferentiated embryonal sarcoma of the liver: Clinical characteristics and outcomes
Zhang C, Jia CJ, Xu C, Sheng QJ, Dou XG, Ding Y
- 4773 Cerebral infarct secondary to traumatic internal carotid artery dissection
Wang GM, Xue H, Guo ZJ, Yu JL
- 4785 Home-based nursing for improvement of quality of life and depression in patients with postpartum depression
Zhuang CY, Lin SY, Cheng CJ, Chen XJ, Shi HL, Sun H, Zhang HY, Fu MA

Observational Study

- 4793** Cost-effectiveness of lutetium (^{177}Lu) oxodotreotide *vs* everolimus in gastroenteropancreatic neuroendocrine tumors in Norway and Sweden
Palmer J, Leeuwenkamp OR
- 4807** Factors related to improved American Spinal Injury Association grade of acute traumatic spinal cord injury
Tian C, Lv Y, Li S, Wang DD, Bai Y, Zhou F, Ma QB
- 4816** Intraoperative systemic vascular resistance is associated with postoperative nausea and vomiting after laparoscopic hysterectomy
Qu MD, Zhang MY, Wang GM, Wang Z, Wang X

META-ANALYSIS

- 4826** Underwater *vs* conventional endoscopic mucosal resection in treatment of colorectal polyps: A meta-analysis
Ni DQ, Lu YP, Liu XQ, Gao LY, Huang X

CASE REPORT

- 4838** Dehydrated patient without clinically evident cause: A case report
Palladino F, Fedele MC, Casertano M, Liguori L, Esposito T, Guarino S, Miraglia del Giudice E, Marzuillo P
- 4844** Intracranial malignant solitary fibrous tumor metastasized to the chest wall: A case report and review of literature
Usuda D, Yamada S, Izumida T, Sangen R, Higashikawa T, Nakagawa K, Iguchi M, Kasamaki Y
- 4853** End-of-life home care of an interstitial pneumonia patient supported by high-flow nasal cannula therapy: A case report
Goda K, Kenzaka T, Kuriyama K, Hoshijima M, Akita H
- 4858** Rupture of carotid artery pseudoaneurysm in the modern era of definitive chemoradiation for head and neck cancer: Two case reports
Kim M, Hong JH, Park SK, Kim SJ, Lee JH, Byun J, Ko YH
- 4866** Unremitting diarrhoea in a girl diagnosed anti-N-methyl-D-aspartate-receptor encephalitis: A case report
Onpoaree N, Veeravigrom M, Sanpavat A, Suratannon N, Sintusek P
- 4876** Paliperidone palmitate-induced facial angioedema: A case report
Srifuengfung M, Sukakul T, Liangcheep C, Viravan N
- 4883** Improvement of lenvatinib-induced nephrotic syndrome after adaptation to sorafenib in thyroid cancer: A case report
Yang CH, Chen KT, Lin YS, Hsu CY, Ou YC, Tung MC
- 4895** Adult metaplastic hutch diverticulum with robotic-assisted diverticulectomy and reconstruction: A case report
Yang CH, Lin YS, Ou YC, Weng WC, Huang LH, Lu CH, Hsu CY, Tung MC

- 4902** Thrombus straddling a patent foramen ovale and pulmonary embolism: A case report
Huang YX, Chen Y, Cao Y, Qiu YG, Zheng JY, Li TC
- 4908** Therapeutic experience of an 89-year-old high-risk patient with incarcerated cholecystolithiasis: A case report and literature review
Zhang ZM, Zhang C, Liu Z, Liu LM, Zhu MW, Zhao Y, Wan BJ, Deng H, Yang HY, Liao JH, Zhu HY, Wen X, Liu LL, Wang M, Ma XT, Zhang MM, Liu JJ, Liu TT, Huang NN, Yuan PY, Gao YJ, Zhao J, Guo XA, Liao F, Li FY, Wang XT, Yuan RJ, Wu F
- 4917** Woven coronary artery: A case report
Wei W, Zhang Q, Gao LM
- 4922** Idiopathic multicentric Castleman disease with pulmonary and cutaneous lesions treated with tocilizumab: A case report
Han PY, Chi HH, Su YT
- 4930** Perianorectal abscesses and fistula due to ingested jujube pit in infant: Two case reports
Liu YH, Lv ZB, Liu JB, Sheng QF
- 4938** Forniceal deep brain stimulation in severe Alzheimer's disease: A case report
Lin W, Bao WQ, Ge JJ, Yang LK, Ling ZP, Xu X, Jiang JH, Zuo CT, Wang YH
- 4946** Systemic autoimmune abnormalities complicated by cytomegalovirus-induced hemophagocytic lymphohistiocytosis: A case report
Miao SX, Wu ZQ, Xu HG
- 4953** Nasal mucosa pyoderma vegetans associated with ulcerative colitis: A case report
Yu SX, Cheng XK, Li B, Hao JH
- 4958** Amiodarone-induced hepatotoxicity — quantitative measurement of iodine density in the liver using dual-energy computed tomography: Three case reports
Lv HJ, Zhao HW
- 4966** Multisystem involvement Langerhans cell histiocytosis in an adult: A case report
Wang BB, Ye JR, Li YL, Jin Y, Chen ZW, Li JM, Li YP
- 4975** New mutation in EPCAM for congenital tufting enteropathy: A case report
Zhou YQ, Wu GS, Kong YM, Zhang XY, Wang CL
- 4981** Catastrophic vertebral artery and subclavian artery pseudoaneurysms caused by a fishbone: A case report
Huang W, Zhang GQ, Wu JJ, Li B, Han SG, Chao M, Jin K
- 4986** Anastomosing hemangioma arising from the left renal vein: A case report
Zheng LP, Shen WA, Wang CH, Hu CD, Chen XJ, Shen YY, Wang J
- 4993** Bladder perforation caused by long-term catheterization misdiagnosed as digestive tract perforation: A case report
Wu B, Wang J, Chen XJ, Zhou ZC, Zhu MY, Shen YY, Zhong ZX

- 4999** Primary pulmonary plasmacytoma accompanied by overlap syndrome: A case report and review of the literature
Zhou Y, Wang XH, Meng SS, Wang HC, Li YX, Xu R, Lin XH
- 5007** Gastrointestinal stromal tumor metastasis at the site of a totally implantable venous access port insertion: A rare case report
Yin XN, Yin Y, Wang J, Shen CY, Chen X, Zhao Z, Cai ZL, Zhang B
- 5013** Massive gastrointestinal bleeding caused by a Dieulafoy's lesion in a duodenal diverticulum: A case report
He ZW, Zhong L, Xu H, Shi H, Wang YM, Liu XC
- 5019** Plastic bronchitis associated with *Botrytis cinerea* infection in a child: A case report
Liu YR, Ai T
- 5025** Chest, pericardium, abdomen, and thigh penetrating injury by a steel rebar: A case report
Yang XW, Wang WT
- 5030** Monocular posterior scleritis presenting as acute conjunctivitis: A case report
Li YZ, Qin XH, Lu JM, Wang YP
- 5036** Choriocarcinoma with lumbar muscle metastases: A case report
Pang L, Ma XX
- 5042** Primary chondrosarcoma of the liver: A case report
Liu ZY, Jin XM, Yan GH, Jin GY
- 5049** Successful management of a tooth with endodontic-periodontal lesion: A case report
Alshawwa H, Wang JF, Liu M, Sun SF
- 5057** Rare imaging findings of hypersensitivity pneumonitis: A case report
Wang HJ, Chen XJ, Fan LX, Qi QL, Chen QZ
- 5062** Effective administration of cranial drilling therapy in the treatment of fourth degree temporal, facial and upper limb burns at high altitude: A case report
Shen CM, Li Y, Liu Z, Qi YZ

ABOUT COVER

Peer-reviewer of *World Journal of Clinical Cases*, Dr. Aleem Ahmed Khan is a Distinguished Scientist and Head of The Central Laboratory for Stem Cell Research and Translational Medicine, Centre for Liver Research and Diagnostics, Deccan College of Medical Sciences, Kanchanbagh, Hyderabad (India). Dr. Aleem completed his Doctorate from Osmania University, Hyderabad in 1998 and has since performed pioneering work in the treatment of acute liver failure and decompensated cirrhosis using hepatic stem cell transplantation. During his extensive research career he supervised 10 PhD students and published > 150 research articles, 7 book chapters, and 2 patents. His ongoing research involves developing innovative technologies for organ regeneration and management of advanced cancers. (L-Editor: Filipodia)

AIMS AND SCOPE

The primary aim of *World Journal of Clinical Cases* (*WJCC*, *World J Clin Cases*) is to provide scholars and readers from various fields of clinical medicine with a platform to publish high-quality clinical research articles and communicate their research findings online.

WJCC mainly publishes articles reporting research results and findings obtained in the field of clinical medicine and covering a wide range of topics, including case control studies, retrospective cohort studies, retrospective studies, clinical trials studies, observational studies, prospective studies, randomized controlled trials, randomized clinical trials, systematic reviews, meta-analysis, and case reports.

INDEXING/ABSTRACTING

The *WJCC* is now indexed in Science Citation Index Expanded (also known as SciSearch®), Journal Citation Reports/Science Edition, PubMed, and PubMed Central. The 2020 Edition of Journal Citation Reports® cites the 2019 impact factor (IF) for *WJCC* as 1.013; IF without journal self cites: 0.991; Ranking: 120 among 165 journals in medicine, general and internal; and Quartile category: Q3.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Ji-Hong Liu; Production Department Director: Xiang Li; Editorial Office Director: Jin-Lai Wang.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Semimonthly

EDITORS-IN-CHIEF

Dennis A Bloomfield, Sandro Vento, Bao-Gan Peng

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2307-8960/editorialboard.htm>

PUBLICATION DATE

October 26, 2020

COPYRIGHT

© 2020 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/GerInfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/GerInfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/GerInfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>

Retrospective Study

Home-based nursing for improvement of quality of life and depression in patients with postpartum depression

Chun-Yu Zhuang, Sheng-Ying Lin, Chen-Jia Cheng, Xiao-Jing Chen, Hui-Ling Shi, Hong Sun, Hong-Yu Zhang, Mian-Ai Fu

ORCID number: Chun-Yu Zhuang 0000-0002-4457-7560; Sheng-Ying Lin 0000-0003-4884-1143; Chen-Jia Cheng 0000-0001-6689-3647; Xiao-Jing Chen 0000-0001-6650-7072; Hui-Ling Shi 0000-0002-5432-6415; Hong Sun 0000-0001-8768-5265; Hong-Yu Zhang 0000-0002-2679-8140; Mian-Ai Fu 0000-0001-8529-3591.

Author contributions: Zhuang CY and Lin SY contributed equally to this article and should be regarded as co-first authors; Zhuang CY and Lin SY designed this retrospective study; Chen JC and Chen XJ wrote this paper; Shi HL, Zhang HY, and Sun H were responsible for sorting the data.

Institutional review board

statement: The study was reviewed and approved by the Haikou Maternal and Child Health Hospital Institutional Review Board.

Conflict-of-interest statement: The authors declare that they have no conflict of interest.

Data sharing statement: No additional data are available.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external

Chun-Yu Zhuang, Sheng-Ying Lin, Hong Sun, Department of Nursing, Haikou Maternal and Child Health Hospital, Haikou 570203, Hainan Province, China

Chen-Jia Cheng, Department of Hepatobiliary Surgery, Hainan Provincial People's Hospital, Haikou 570311, Hainan Province, China

Xiao-Jing Chen, Department of Medicine, Haikou Maternal and Child Health Hospital, Haikou 570203, Hainan Province, China

Hui-Ling Shi, Department of Care Medicine, Haikou Maternal and Child Health Hospital, Haikou 570203, Hainan Province, China

Hong-Yu Zhang, Department of Midwifery, School of International Nursing, Hainan Medical College, Haikou 570203, Hainan Province, China

Mian-Ai Fu, Department of Reproductive Medicine, Haikou Maternal and Child Health Hospital, Haikou 570203, Hainan Province, China

Corresponding author: Mian-Ai Fu, BM BCh, Chief Physician, Department of Reproductive Medicine, Haikou Maternal and Child Health Hospital, No. 6 Wentan Road, Haikou 570203, Hainan Province, China. a18907667866@126.com

Abstract

BACKGROUND

Postpartum depression is a common mental illness in puerpera, with an incidence of approximately 3.5%-33.0% abroad, and the incidence of postpartum depression in China is higher than the international level, reaching 10.0%-38.0%. Providing effective nursing care in clinical nursing activities is one of the key points of obstetrical care. However, little research has been designed to investigate the positive role of home-based nursing in the prevention of postpartum depression.

AIM

To study the effect of home-based nursing for postpartum depression patients on their quality of life and depression.

METHODS

The clinical data of 92 patients with postpartum depression treated at our hospital

reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

Manuscript source: Unsolicited manuscript

Received: June 5, 2020

Peer-review started: June 5, 2020

First decision: July 25, 2020

Revised: July 30, 2020

Accepted: September 4, 2020

Article in press: September 4, 2020

Published online: October 26, 2020

P-Reviewer: Currie IS, Voigt M

S-Editor: Ma YJ

L-Editor: Wang TQ

P-Editor: Li JH



were retrospectively analyzed. The patients were grouped according to the nursing methods used; 40 patients receiving basic nursing were included in a basic nursing group, and 52 receiving home-based nursing were included in a home-based nursing group. Depression and anxiety were evaluated and compared between the two groups. The estradiol (E2), serotonin (5-hydroxytryptamine, 5-HT), and progesterone (PRGE) levels were measured.

RESULTS

The SAS and SDS scores of the home-based nursing group were significantly lower than those of the basic nursing group ($P < 0.05$). The E2 and 5-HT levels of the home-based nursing group were significantly higher than those of the basic nursing group, but the PRGE level was significantly lower than that of the basic nursing group. The GQOLI-74 scores (material, social, somatic, and psychological) and nursing satisfaction were significantly higher in the home-based nursing group ($P < 0.05$).

CONCLUSION

Postpartum depression through home-based nursing can effectively alleviate depression and improve the quality of life of patients, help modulate their serum E2, 5-HT, and PRGE levels, and improve their satisfaction with nursing care.

Key Words: Postpartum depression; Home-based care; Depression; Quality of life; Estradiol; Progesterone

©The Author(s) 2020. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: Based on the nursing principle of "taking the patient as the nursing center", family nursing measures can improve the overall nursing quality and provide an effective psychological intervention for patients with clinical depression.

Citation: Zhuang CY, Lin SY, Cheng CJ, Chen XJ, Shi HL, Sun H, Zhang HY, Fu MA. Home-based nursing for improvement of quality of life and depression in patients with postpartum depression. *World J Clin Cases* 2020; 8(20): 4785-4792

URL: <https://www.wjgnet.com/2307-8960/full/v8/i20/4785.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v8.i20.4785>

INTRODUCTION

Pregnancy is a special physiological period for women. During the normal development of the fetus, maternal physiology and psychology will experience a series of changes. After delivery, these physical and psychological changes gradually recover, but in this process, some women are prone to depression, seriously affecting their quality of life and subsequent feeding enthusiasm^[1-4].

Clinical studies suggest that in addition to the changing family role as the main trigger, changes in sex hormone levels are also risk factors for postpartum depression^[5,6]. The main manifestations of depression in postpartum women are depression, fear, excessive worry about the newborn, *etc.*, which seriously affect their physical and mental health. At the same time, the current economic development of the country, the increase in social work pressure, and the increase in depression have led to the annual incidence in postpartum depression^[7,8]. In view of the high incidence and harmfulness of postpartum depression, the approach to providing effective nursing care in clinical nursing activities is one of the key points of obstetrical care^[9].

Previous studies have shown that routine basic postpartum care has a good effect on maternal physical rehabilitation; however, due to a lack of corresponding effective psychological intervention measures, there are some limitations in the nursing care of postpartum depression patients^[10]. Based on the nursing principle of "taking the patient as the nursing center", family nursing measures can improve the overall nursing quality and provide an effective psychological intervention for patients with clinical depression.

MATERIALS AND METHODS

A retrospective analysis of the clinical data of 92 patients with postpartum depression admitted to our hospital was conducted from May 2017 to April 2019. The diagnostic criteria referred to the "Prevention and Conditioning of Postpartum Depression." Patients were grouped according to the nursing measures that they received after admission; 40 patients receiving basic care were enrolled in a basic nursing group, and 52 receiving family care were included in a family care group. There was no significant difference between the two groups ($P < 0.05$; Table 1). The study was approved by the Ethics Committee of our hospital.

The diagnostic criteria included the following: (1) SDS score ≥ 53 ; and (2) Clinical manifestations such as depression and depression.

The following inclusion criteria were used: (1) No history of prenatal depression; (2) Normal intelligence, with IQ test results showing an IQ > 70 ; (3) Good compliance and no severe resistance or resistance to study participation; (4) Voluntary use of their clinical data in this nursing study; and (5) Multiple physical examinations showing no serious heart, lung, kidney, or other organ diseases.

The exclusion criteria were as follows: (1) Gestational diabetes mellitus or gestational hypertension; (2) Severe schizophrenia or cognitive dysfunction; (3) Other diseases that can affect the indicators included in this observation, such as ovarian hyperfunction and endometrial hyperplasia; and (4) Missing basic data.

Review of nursing methods

Basic care unit: The vital signs of the patients after childbirth were closely monitored, and wound healing was checked regularly. The matters needing attention in daily life were as follows: Yin cleaning and avoiding the consumption of spicy food. Patients were guided to gain relevant nursing knowledge and to improve their breastfeeding ability.

Family care unit: The above basic care was accompanied by home-based care as follows: Regarding ward management activities, patients were allowed to adjust and decorate the ward environment properly, such as putting up posters commonly used in patients' homes, placing small bonsai plants in the wards, *etc.* Their families were informed that they could deliver items that they often use and contact in their daily life, such as sofa pillows and water cups.

The use of family-style communication in daily nursing work reduced the use of professional terminology when nursing staff performed nursing work. In addition to the normal visits made for patient rehabilitation, the nurses chatted with the patients more. This family-oriented, ordinary, and life-oriented communication style improved nurse-patient relations, created a family-oriented language atmosphere, and improved patient communication enthusiasm and nursing compliance.

Regarding the psychological nursing work, the nursing staff educated the family members of the patient about postpartum depression, and informed them of the importance of their participation in the process of psychological nursing to help improve the patients' mood. Through the cooperation of family members to jointly implement subjective nursing measures, patients were guided to face the changes in their family role after delivery appropriately. In the process of psychological care, the nurses helped family members and patients to reconcile possible differences in parenting and to create a stress-free family atmosphere for patients.

Health education was conducted by nursing staff with substantial clinical experience and good communication skills in obstetrics to explain various physiological and psychological changes that occur throughout the special physiological cycle of a woman during pregnancy, childbirth, and rehabilitation. The purpose was to remove the tension and fear that the patient may have experienced due to the lack of relevant knowledge. The goals were to explain to them in detail the matters needing attention, including neonatal contact, daily feeding skills, bath skills, umbilical nursing-related knowledge, and how to change diapers; to improve the neonatal nursing ability of patients; and to alleviate some patients' worries about whether they can be competent as a mother.

Patients were guided on maintaining good dietary care, including appropriate intake of a high-protein, high-calorie diet, supplementing nutrients lost to labor, and avoiding spicy intake. Patients were directed to focus on rehabilitation exercises and appropriate daily activity; modern research has confirmed that exercise has a certain regulatory effect on female hormones, whereby reasonable exercise can promote a faster return to pre-pregnancy hormone levels.

Before discharge from the hospital, the patients provided their contact information,

Table 1 Comparison of basic data between the two groups [*n* = 46, *n* (%)]

Basic information		Basic nursing group	Home-based care group	χ^2/t	<i>P</i> value
Cultural level	High school	15 (32.61)	14 (30.43)	0.110	0.740
	College	17 (36.96)	17 (36.96)	0.001	1.001
	Bachelor's degree or above	14 (30.43)	15 (32.61)	0.110	0.740
Age		27.86 (3.59)	27.61 (3.47)	0.340	0.735
Estradiol (pmol/L)		588.12 (38.20)	593.00 (39.97)	0.599	0.551
Progesterone (nmol/L)		145.10 (10.02)	145.99 (10.24)	0.422	0.674
Serotonin (μ mol/L)		0.91 (0.12)	0.93 (0.14)	0.736	0.464

such as their QQ number, WeChat username, *etc.*, and they were followed once a week to monitor their out-of-hospital rehabilitation progress and neonatal conditions and to provide continuous guidance.

Regarding the use of the anxiety self-rating anxiety scale (SAS) and depression self-rating scale (SDS), after the nursing measures outlined in 1.2.1 were given, the total score of the two scales was 80, and the score was proportional to the severity of anxiety and depression.

The quality of life of the patients was evaluated using a GQOLI-74 questionnaire after they received the care described in 1.2.2. The questionnaire is divided into four dimensions, including material, social, physical, and psychological, and the results are positively correlated with the quality of life of the patients.

Serum was collected after routine separation to include 5 mL of affected venous blood after the completion of nursing. The levels of estradiol (E2), serotonin (5-hydroxytryptamine) and progesterone (PRGE) were measured by radioimmunoassay.

Nursing satisfaction was assessed through a simple questionnaire, which mainly includes nursing attitude, self-perceived comfort, nursing skills and so on. The questionnaire is a percentage system, and satisfaction levels were as follows: High satisfaction (100-85), satisfaction (84-50), and dissatisfaction (< 50).

Statistical analysis

The obtained data were processed with SPSS software package. The measurement data are expressed as the mean \pm SD and were compared using the independent sample *t*-test; the count data are expressed as percentages (%) and were compared using chi-squared tests. *P* < 0.05 indicated a significant difference.

RESULTS

Nursing satisfaction

The satisfaction of the family nursing group was significantly higher than that of the basic nursing group (*P* = 0.001). The data and corresponding test results are shown in Table 2 and Figure 1.

GQOLI-74 score

The data in Table 2 show that the scores of each dimension of the GQOLI-74 in the family nursing group were significantly higher than the corresponding scores of the basic nursing group (*P* < 0.05) (Table 3).

Comparison of SAS and SDS scores between the two groups

The SAS and SDS scores of the family nursing group were significantly lower than those of the basic nursing group (*P* < 0.05), and the data are presented in Table 4.

Comparison of E2, 5-HT, and PRGE levels in the two groups

The E2 and 5-HT levels of the family nursing group were significantly higher than those of the basic nursing group, and the PRGE level was significantly lower than that of the basic nursing group (*P* < 0.05) (Table 5).

Table 2 Comparison of nursing satisfaction between the two groups [*n* = 46, *n* (%)]

Group	Highly satisfied	Satisfaction	Dissatisfied	Total
Family care group	31 (67.39)	15 (32.61)	0 (0.00)	46 (100.00)
Basic nursing group	21 (45.65)	12 (26.09)	13 (28.26)	33 (71.74)
χ^2	9.616	1.025	32.910	32.910
<i>P</i> value	0.002	0.311	0.001	0.001

Table 3 GQOLI-74 score comparison (*n* = 46, mean \pm SD)

Group	Psychological	Society	Substance	Body
Family care group	93.53 \pm 2.52	92.16 \pm 3.02	90.85 \pm 3.57	92.87 \pm 3.06
Basic nursing group	84.16 \pm 3.58	83.41 \pm 3.87	81.57 \pm 4.06	81.93 \pm 4.51
<i>t</i>	19.516	12.089	11.642	13.614
<i>P</i> value	0.001	0.001	0.001	0.001

Table 4 Comparison of SAS and SDS scores between the two groups (*n* = 46, mean \pm SD)

Group	SAS	SDS
Family care group	30.21 (3.57)	33.61 (3.69)
Basic nursing group	40.16 (4.41)	42.87 (5.06)
<i>t</i>	11.894	10.029
<i>P</i> value	0.001	0.001

Table 5 Comparison of estradiol, 5-hydroxytryptamine, and progesterone levels between the two groups [*n* = 46, *n* (%)]

Group	E2 (pmol/L)	5-HT (μ mol/L)	PRGE (nmol/L)
Family care group	868.36 (59.49)	1.78 (0.31)	68.72 (11.48)
Basic nursing group	710.29 (38.02)	1.34 (0.24)	96.23 (12.91)
<i>t</i>	15.184	7.612	10.799
<i>P</i> value	0.001	0.001	0.001

PRGE: Progesterone; E2: Estradiol; 5-HT: 5-hydroxytryptamine.

DISCUSSION

Postpartum depression is the result of a combination of factors. Physiologically, after delivery, women's physical state will be restored to their pre-pregnancy conditions; during this stage, various levels of hormones will have an impact on the nervous system. Psychologically, the family role after delivery changes from wife to mother, which can lead to psychological stress, and multiple factors may influence the occurrence of depression^[11]. The epidemiological statistics show that the incidence of postpartum depression abroad is 3.5%-33.0%, and the incidence in China is higher than the international level, reaching 10.0%-38.0%^[12]. Clinical postpartum depression patients experience depression, anxiety and so on, affecting their nursing care and treatment compliance, and the overall harm is great^[13].

Family nursing requires treating the patient as the center of nursing, using the hospital environment as a home, and engaging in daily communication with the family, *etc.* to complete the nursing intervention, which emphasizes the positive effect of family nursing measures on the emotional state of patients^[14]. In clinical practice, patients with postpartum depression are found to be a key population for targeted nursing measures. Previous studies have summarized the clinical manifestations of

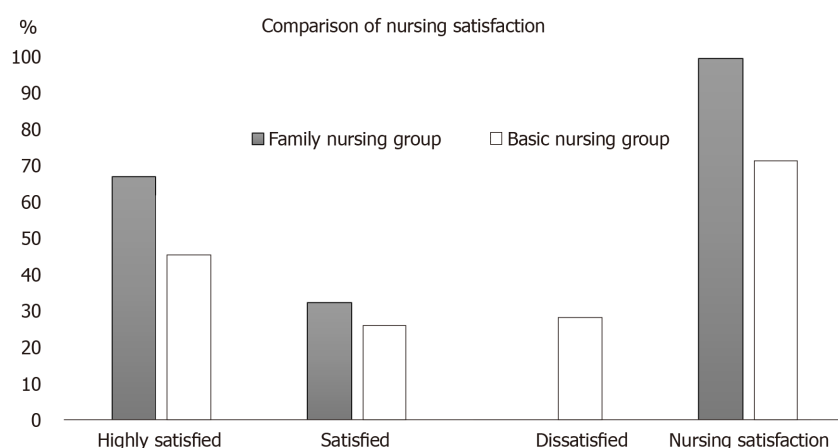


Figure 1 Comparison of nursing satisfaction between the two groups.

patients with postpartum depression into four main characteristics, including the emotional aspect, self-evaluation aspect, thought aspect, and life confidence aspect. Among them, the emotional aspect generally includes depression; its clinical manifestations are shyness, unwillingness to contact people, and irritability. The self-evaluation aspect typically addresses the patients' feelings of self-abandonment, self-blame, and guilt; easily developing hostility toward other people; increased vigilance; and non-harmonious family relations. Patients who experience challenges in the thought aspect are generally slow and unable to focus quickly and have poor ability to handle routine affairs. Regarding life confidence, patients can generally feel that life is meaningless and have no positive life confidence and willingness to enjoy life; the typical manifestations are anorexia, libido, dizziness, nausea, constipation, *etc.*^[15,16].

According to the results of this study, the E2, 5-HT, and PRGE levels of the family nursing group were better than those of the basic nursing group. Recent studies have shown that depression in women is associated with sex hormone imbalances^[17,18]. Estrogen is an antidepressant. When estrogen levels are excessive, the development of depression is likely. Estrogen levels are associated with up/downregulation of 5-HT. When estrogen decreases, the 5-HT levels decrease, and 5-HT deficiency has been identified in previous studies as a major cause of depression^[19]. Also noted in some studies is that PRGE decline is slow, *i.e.*, high levels of maternal PRGE are also directly associated with postpartum depression^[20]. At the same time, the SAS and SDS scores of the family nursing group were lower than those of the basic nursing group. In the course of family nursing, it was concluded that in addition to directly improving the emotional state of the patients, the nursing approach also had an effect on various hormone levels in the patients. In both groups, the quality of life scores and nursing satisfaction observations indicated that the family nursing group had significantly better outcomes than the basic nursing group, suggesting that family nursing can directly improve quality of life and nursing satisfaction after improving the emotional state of the patients.

The SAS and EPDS scores of the patients in both groups decreased significantly, but the scores of patients in the observation group decreased significantly more than those in the control group. The GSES scores in the observation group decreased significantly, and the incidence of depression was significantly lower. Maternal self-efficacy was improved, achieving the purpose of significantly preventing the occurrence of postpartum depression. The study revealed the positive role of home-based care in the prevention of postpartum depression; furthermore, in a nursing study on post-partum depression by Zhao Huijun, family nursing in postpartum depression patients yielded significantly better results than those in the control group (routine nursing). The study found that postpartum depression was the result of multiple factors, and the imbalance of various hormones was one of the important factors for developing depression. Incorporating family nursing in clinical nursing activities could affect multiple factors from physiology to psychology, from social relations to family relations, and from self-cognition to self-management. This study is highly consistent with previous studies on family nursing, which showed effective relief of depression. However, the specific nursing measures of home-based nursing still need to be improved and optimized, and clinical references need to be improved according to the different conditions of clinical patients to further improve the relevance of nursing care.

CONCLUSION

In summary, home-based nursing for patients with clinical postpartum depression can effectively improve their various hormone levels, play an effective role in alleviating their depression or depressed mood, and improve their quality of life and nursing satisfaction.

ARTICLE HIGHLIGHTS

Research background

Postpartum depression is a common mental illness in puerpera with a high incidence rate. Both changing family role as the main trigger and changes in sex hormone levels are risk factors for postpartum depression.

Research motivation

Postpartum depression has been investigated in many previous studies, which have shown that routine basic postpartum care has a good effect on maternal physical rehabilitation; however, due to a lack of corresponding effective psychological intervention measures, there are some limitations in the nursing care of postpartum depression patients. However, little research has been designed to investigate the positive role of home-based nursing in the prevention of postpartum depression. This study aimed to explore the importance of home-based nursing in postpartum depression.

Research objectives

To study the effect of home-based nursing for postpartum depression patients on their quality of life and depression, and research the importance of home-based nursing for patients with clinical postpartum depression and the influence of their hormone levels to lead more researchers to pay more attention to home-based nursing in postpartum depression patients.

Research methods

A retrospective analysis was performed on the clinical data of 92 patients with postpartum depression admitted to an obstetrical department. The patients were grouped according to the nursing measures that they received after admission. Data were collected by questionnaire investigation, and serum samples were collected. The obtained data were processed with the help of SPSS software package.

Research results

The satisfaction with nursing care, the scores of the GQOLI-74, SAS, and SDS, and the E2 and 5-HT levels of the family nursing group were significantly higher than those of the basic nursing group, which proved the importance of home-based nursing.

Research conclusions

Home-based nursing for patients with clinical postpartum depression can effectively improve their various hormone levels, play an effective role in alleviating their depression or depressed mood, and improve their quality of life and satisfaction with nursing care. This study preliminarily proved the importance of home-based nursing.

Research perspectives

More studies are needed to investigate the positive role of home-based care in the prevention of postpartum depression and to provide new ideas for the treatment of postpartum depression through more research methods.

REFERENCES

- 1 **Muchanga SMJ**, Eitoku M, Mbelambela EP, Ninomiya H, Iiyama T, Komori K, Yasumitsu-Lovell K, Mitsuda N, Tozin RR, Maeda N, Fujieda M, Suganuma N; Japan Environment and Children's Study Group. Association between nausea and vomiting of pregnancy and postpartum depression: the Japan Environment and Children's Study. *J Psychosom Obstet Gynaecol* 2020 1-9 [PMID: [32131648](#) DOI: [10.1080/0167482x.2020.1734792](#)]
- 2 **Li Y**, Zhao Q, Cross WM, Chen J, Qin C, Sun M. Assessing the quality of mobile applications targeting

- postpartum depression in China. *Int J Ment Health Nurs* 2020; Online ahead of print [PMID: 32223070 DOI: 10.1111/inm.12713]
- 3 **Maliszewska K**, Świątkowska-Freund M, Bidzan M, Krzysztof P. Screening for maternal postpartum depression and associations with personality traits and social support. A Polish follow-up study 4 wk and 3 mo after delivery. *Psychiatr Pol* 2017; **51**: 889-898 [PMID: 29289968 DOI: 10.12740/pp/68628]
 - 4 **Li XB**, Liu A, Yang L, Zhang K, Wu YM, Zhao MG, Liu SB. Antidepressant-like effects of translocator protein (18 kDa) ligand ZBD-2 in mouse models of postpartum depression. *Mol Brain* 2018; **11**: 12 [PMID: 29506545 DOI: 10.1186/s13041-018-0355-x]
 - 5 **Fisher PM**, Larsen CB, Beliveau V, Henningsson S, Pinborg A, Holst KK, Jensen PS, Svarer C, Siebner HR, Knudsen GM, Frokjaer VG. Pharmacologically Induced Sex Hormone Fluctuation Effects on Resting-State Functional Connectivity in a Risk Model for Depression: A Randomized Trial. *Neuropsychopharmacology* 2017; **42**: 446-453 [PMID: 27649641 DOI: 10.1038/npp.2016.208]
 - 6 **Henningsson S**, Madsen KH, Pinborg A, Heede M, Knudsen GM, Siebner HR, Frokjaer VG. Role of emotional processing in depressive responses to sex-hormone manipulation: a pharmacological fMRI study. *Transl Psychiatry* 2015; **5**: e688 [PMID: 26624927 DOI: 10.1038/tp.2015.184]
 - 7 **Masoudi M**, Khazaie H, Ghadami MR. Comments on: insomnia, postpartum depression and estradiol in women after delivery. *Metab Brain Dis* 2018; **33**: 673-674 [PMID: 29340844 DOI: 10.1007/s11011-018-0184-8]
 - 8 **Fariás-Antúnez S**, Xavier MO, Santos IS. Effect of maternal postpartum depression on offspring's growth. *J Affect Disord* 2018; **228**: 143-152 [PMID: 29248820 DOI: 10.1016/j.jad.2017.12.013]
 - 9 **Scarff JR**. Use of Brexanolone for Postpartum Depression. *Innov Clin Neurosci* 2019; **16**: 32-35 [PMID: 32082941]
 - 10 **Chung TC**, Chung CH, Peng HJ, Tsao CH, Chien WC, Sun HF. An analysis of whether sleep disorder will result in postpartum depression. *Oncotarget* 2018; **9**: 25304-25314 [PMID: 29861873 DOI: 10.18632/oncotarget.25219]
 - 11 **Swanson LM**, Burgess HJ, Zollars J, Todd Arnedt J. An open-label pilot study of a home wearable light therapy device for postpartum depression. *Arch Womens Ment Health* 2018; **21**: 583-586 [PMID: 29603017 DOI: 10.1007/s00737-018-0836-z]
 - 12 **Miller ES**, Hoxha D, Pinheiro E, Grobman WA, Wisner KL. The association of serum C-reactive protein with the occurrence and course of postpartum depression. *Arch Womens Ment Health* 2019; **22**: 129-132 [PMID: 29654412 DOI: 10.1007/s00737-018-0841-2]
 - 13 **Thomson M**, Sharma V. Between a rock-a-bye and a hard place: mood disorders during the peripartum period. *CNS Spectr* 2017; **22**: 49-64 [PMID: 29350128 DOI: 10.1017/s1092852917000852]
 - 14 **Rasmussen MH**, Strøm M, Wohlfahrt J, Videbech P, Melbye M. Risk, treatment duration, and recurrence risk of postpartum affective disorder in women with no prior psychiatric history: A population-based cohort study. *PLoS Med* 2017; **14**: e1002392 [PMID: 28949960 DOI: 10.1371/journal.pmed.1002392]
 - 15 **Lin CC**, Hung YY, Tsai MC, Huang TL. Increased serum anti-N-methyl-D-aspartate receptor antibody immunofluorescence in psychiatric patients with past catatonia. *PLoS One* 2017; **12**: e0187156 [PMID: 29073246 DOI: 10.1371/journal.pone.0187156]
 - 16 **Ahmadpanah M**, Nazariabadi M, Aghaei E, Ghaleiha A, Bakhtiari A, Haghighi M, Bahmani DS, Akhondi A, Bajoghli H, Jahangard L, Holsboer-Trachsler E, Brand S. Influence of adjuvant detached mindfulness and stress management training compared to pharmacologic treatment in primiparae with postpartum depression. *Arch Womens Ment Health* 2018; **21**: 65-73 [PMID: 28721461 DOI: 10.1007/s00737-017-0753-6]
 - 17 **McEvoy K**, Osborne LM, Nanavati J, Payne JL. Reproductive Affective Disorders: a Review of the Genetic Evidence for Premenstrual Dysphoric Disorder and Postpartum Depression. *Curr Psychiatry Rep* 2017; **19**: 94 [PMID: 29082433 DOI: 10.1007/s11920-017-0852-0]
 - 18 **Li F**, He F, Sun Q, Li Q, Zhai Y, Wang X, Zhang T, Lin J. Reproductive history and risk of depressive symptoms in postmenopausal women: A cross-sectional study in eastern China. *J Affect Disord* 2019; **246**: 174-181 [PMID: 30583142 DOI: 10.1016/j.jad.2018.12.031]
 - 19 **Agampodi TC**, Agampodi SB, Glozier N, Lelwala TA, Sirisena KDPS, Siribaddana S. Development and validation of the Social Capital Assessment Tool in pregnancy for Maternal Health in Low and middle income countries (LSCAT-MH). *BMJ Open* 2019; **9**: e027781 [PMID: 31289074 DOI: 10.1136/bmjopen-2018-027781]
 - 20 **Wang Y**, Briere CE, Xu W, Cong X. Factors Affecting Breastfeeding Outcomes at Six Months in Preterm Infants. *J Hum Lact* 2019; **35**: 80-89 [PMID: 29723482 DOI: 10.1177/0890334418771307]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: bpgoffice@wjgnet.com

Help Desk: <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

