Document details

‹ Back to results | 1 of 1

Export Download Print E-mail Save to PDF Add to List More... ›

View at Publisher

Bangladesh Journal of Medical Science Open Access
Volume 19, Issue 3, 2020, Pages 520-526

Evaluation of wound healing biomarkers of interleukin 6 (Il-6), vascular endothelial growth factor (VEGF) and matrix metalloproteinases 9 (MMP-9) in post lower segment caesarean section (LSCS) patients consuming channa striatus extract (Article) (Open Access)

Omar, J.[a], Shafii, N.[a], Zainan, A.E.[a], Sirajudeen, K.N.S.[b], Abdullah, M.R.[c]

[a]Department of Chemical Pathology, School of Medical Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia
[b]Department of Basic Medical Sciences, Kulliyyah of Medicine, International Islamic University Malaysia, Bandar Indera Mahkota, Kuantan 25200, Malaysia
[c]Perdana University, Selangor, Malaysia

Abstract

View references (21)

Background: Wound healing is a dynamic process which is divided into four phases; haemostasis, inflammatory, proliferation and tissue remodelling phases, that encompasses inflammatory cells, cytokines and growth factors. Interleukin-6 (IL-6), Vascular Endothelial Growth Factor (VEGF) and Matrix Metalloproteinase 9 (MMP-9) involve at the different phases of wound healing. Channa striatus (C.striatus) is a fresh water fish that is believed to have natural properties to promote wound healing. Currently, the effects of C.striatus on the cytokines and growth factors are not available. Objective: This study was conducted to evaluate the wound healing biomarkers; IL-6, VEGF and MMP-9 on post Lower Segment Caesarean Section (LSCS) women consuming oral C.striatus extract. Methods: This was a randomised, double-blinded study amongst LSCS women consuming C.striatus extract versus a placebo at Universiti Sains Malaysia Hospital and Raja Perempuan Zainab II Hospital from May 2011 to January 2013. After randomization, the treatment group received freeze dried C.striatus extract 500 mg daily while the placebo group received maltodextrin 500 mg daily for 6 weeks. Blood samples for IL-6, VEGF and MMP-9 were taken from both groups post-operatively at day 3, week 2, week 4 and week 6. The data were analysed using SPSS version 22. Results: A total of 39 patients from C.striatus and 34 patients from placebo group were included in this study. Within C.striatus group, the results of IL-6, MMP-9 and VEGF showed significant differences (P<0.05) for all the study period. Between group comparison showed significant difference (P<0.05) on week 4 and week 6 for IL-6 and MMP-9 whereas VEGF showed significant difference (P<0.05) on day 1, day 3, week 4 and week 6. The trend of IL-6 and MMP-9 exhibit decreasing trend in both groups however, VEGF in C.striatus group exhibit increasing trend till week 6 compared to placebo group. Conclusion: This study showed C.striatus extract had effects on IL-6, VEGF and MMP-9 in post LSCS women.

SciVal Topic Prominence

Topic: Carp | Cyprinus carpio | Stocking density

Prominence percentile: 55.448

Author keywords

Channa striatus | Interleukin-6 | Lower segment caesarean section | MMP 9 | VEGF | Wound healing

Indexed keywords

EMTREE drug terms: antiinflammatory agent, biological marker, Channa Striatus extract, gelatinase B, interleukin 6, maltodextrin, placebo, plant extract, unclassified drug, vasculotropin

EMTREE medical terms: adult, angiogenesis, Article, blood cell count, blood sampling, cesarean section, Channa striatus, clinical article, comparative study, controlled study, double blind procedure, enzyme linked immunosorbent assay, evaluation study, human, immunoassay, inflammation, kidney function, liver function, parallel design, prospective study, protein expression, randomized controlled trial, wound healing

Chemicals and CAS Registry Numbers:

gelatinase B, 146480-36-6; maltodextrin, 9050-36-6; vasculotropin, 127464-60-2

Funding details

Funding sponsor	Funding number	Acronym
Universiti Sains Malaysia	1001/ PPSP/812081	

Funding text

We acknowledge the financial assistance received from Universiti Sains Malaysia, Kubang Kerian, Kelantan through RUI grant (Grant No. 1001/ PPSP/812081).

ISSN: 22234721
DOI: 10.3329/bjms.v19i3.45870
Source Type: Journal
Document Type: Article
Original language: English
Publisher: Ibn Sina Trust

References (21)

1 Young, A., McNaught, C.-E.

The physiology of wound healing

(2011) *Surgery*, 29 (10), pp. 475-479. Cited 64 times.
http://www.elsevier.com.ezproxy.um.edu.my/wps/find/journaldescription.cws_home/709612/description#description
doi: 10.1016/j.mpsur.2011.06.011

View at Publisher

2 Hoosen, M., Pool, E.J.

An in vitro study to elucidate the effects of septilin™ on immune pathways (Open Access)

(2018) *Bangladesh Journal of Medical Science*, 17 (2), pp. 238-244.
https://www.banglajol.info/index.php/BJMS/article/download/35877/24189
doi: 10.3329/bjms.v17i2.35877

View at Publisher