

World Journal of *Clinical Cases*

World J Clin Cases 2022 December 26; 10(36): 13148-13469



MINIREVIEWS

- 13148** Liver injury in COVID-19: Holds ferritinophagy-mediated ferroptosis accountable
Jia FJ, Han J
- 13157** Amebic liver abscess by *Entamoeba histolytica*
Usuda D, Tsuge S, Sakurai R, Kawai K, Matsubara S, Tanaka R, Suzuki M, Takano H, Shimozawa S, Hotchi Y, Tokunaga S, Osugi I, Katou R, Ito S, Mishima K, Kondo A, Mizuno K, Takami H, Komatsu T, Oba J, Nomura T, Sugita M
- 13167** Living with liver disease in the era of COVID-19-the impact of the epidemic and the threat to high-risk populations
Barve P, Choday P, Nguyen A, Ly T, Samreen I, Jhooty S, Umeh CA, Chaudhuri S
- 13179** Cortical bone trajectory screws in the treatment of lumbar degenerative disc disease in patients with osteoporosis
Guo S, Zhu K, Yan MJ, Li XH, Tan J
- 13189** Probiotics for preventing gestational diabetes in overweight or obese pregnant women: A review
Deng YF, Wu LP, Liu YP

ORIGINAL ARTICLE

Retrospective Cohort Study

- 13200** Effectiveness of microwave endometrial ablation combined with hysteroscopic transcervical resection in treating submucous uterine myomas
Kakinuma T, Kakinuma K, Shimizu A, Kaneko A, Kagimoto M, Okusa T, Suizu E, Saito K, Matsuda Y, Yanagida K, Takeshima N, Ohwada M
- 13208** Antibody and complement levels in patients with hypersplenism associated with cirrhotic portal hypertension and therapeutic principles
Zhang K, Zeng M, Li YJ, Wu HF, Wu JC, Zhang ZS, Zheng JF, Lv YF

Retrospective Study

- 13216** Case series in Indonesia: B.1.617.2 (delta) variant of SARS-CoV-2 infection after a second dose of vaccine
Karuniawati A, Syam AF, Achmadasyah A, Ibrahim F, Rosa Y, Sudarmono P, Fadilah F, Rasmin M
- 13227** Endobronchial ultrasound-guided transbronchial needle aspiration in intrathoracic lymphadenopathy with extrathoracic malignancy
Li SJ, Wu Q
- 13239** Analysis of the clinical efficacy of two-stage revision surgery in the treatment of periprosthetic joint infection in the knee: A retrospective study
Qiao YJ, Li F, Zhang LD, Yu XY, Zhang HQ, Yang WB, Song XY, Xu RL, Zhou SH

- 13250** Prognostic factors for disease-free survival in postoperative patients with hepatocellular carcinoma and construction of a nomogram model
Luo PQ, Ye ZH, Zhang LX, Song ED, Wei ZJ, Xu AM, Lu Z
- 13264** Oral higher dose prednisolone to prevent stenosis after endoscopic submucosal dissection for early esophageal cancer
Zhan SG, Wu BH, Li DF, Yao J, Xu ZL, Zhang DG, Shi RY, Tian YH, Wang LS
- 13274** Predictive value of the unplanned extubation risk assessment scale in hospitalized patients with tubes
Liu K, Liu Z, Li LQ, Zhang M, Deng XX, Zhu H
- 13284** Classification of rectal cancer according to recurrence types - comparison of Japanese guidelines and Western guidelines
Miyakita H, Kamei Y, Chan LF, Okada K, Kayano H, Yamamoto S
- 13293** Risk of critical limb ischemia in long-term uterine cancer survivors: A population-based study
Chen MC, Chang JJ, Chen MF, Wang TY, Huang CE, Lee KD, Chen CY
- 13304** Serum Spondin-2 expression, tumor invasion, and antitumor immune response in patients with cervical cancer
Zhang LL, Lin S, Zhang Y, Yao DM, Du X
- 13313** Thoracic para-aortic lymph node recurrence in patients with esophageal squamous cell carcinoma: A propensity score-matching analysis
Li XY, Huang LS, Yu SH, Xie D
- 13321** Anastomotic leakage in rectal cancer surgery: Retrospective analysis of risk factors
Brisinda G, Chiarello MM, Pepe G, Cariati M, Fico V, Mirco P, Bianchi V

META-ANALYSIS

- 13337** Successful outcomes of unilateral *vs* bilateral pedicle screw fixation for lumbar interbody fusion: A meta-analysis with evidence grading
Sun L, Tian AX, Ma JX, Ma XL

CASE REPORT

- 13349** Pregnancy-induced leukocytosis: A case report
Wang X, Zhang YY, Xu Y
- 13356** Acute moderate to severe ulcerative colitis treated by traditional Chinese medicine: A case report
Wu B
- 13364** Solitary hyoid plasmacytoma with unicentric Castleman disease: A case report and review of literature
Zhang YH, He YF, Yue H, Zhang YN, Shi L, Jin B, Dong P
- 13373** Recurrence of intratendinous ganglion due to incomplete excision of satellite lesion in the extensor digitorum brevis tendon: A case report
Park JJ, Seok HG, Yan H, Park CH

- 13381** Two methods of lung biopsy for histological confirmation of acute fibrinous and organizing pneumonia: A case report
Liu WJ, Zhou S, Li YX
- 13388** Application of 3D-printed prosthesis in revision surgery with large inflammatory pseudotumour and extensive bone defect: A case report
Wang HP, Wang MY, Lan YP, Tang ZD, Tao QF, Chen CY
- 13396** Undetected traumatic cardiac herniation like playing hide-and-seek-delayed incidental findings during surgical stabilization of flail chest: A case report
Yoon SY, Ye JB, Seok J
- 13402** Laparoscopic treatment of pyogenic liver abscess caused by fishbone puncture through the stomach wall and into the liver: A case report
Kadi A, Tuergan T, Abulaiti Y, Shalayiadang P, Tayier B, Abulizi A, Tuohuti M, Ahan A
- 13408** Hepatic sinusoidal obstruction syndrome induced by tacrolimus following liver transplantation: Three case reports
Jiang JY, Fu Y, Ou YJ, Zhang LD
- 13418** *Staphylococcus aureus* bacteremia and infective endocarditis in a patient with epidermolytic hyperkeratosis: A case report
Chen Y, Chen D, Liu H, Zhang CG, Song LL
- 13426** Compound heterozygous p.L483P and p.S310G mutations in GBA1 cause type 1 adult Gaucher disease: A case report
Wen XL, Wang YZ, Zhang XL, Tu JQ, Zhang ZJ, Liu XX, Lu HY, Hao GP, Wang XH, Yang LH, Zhang RJ
- 13435** Short-term prone positioning for severe acute respiratory distress syndrome after cardiopulmonary bypass: A case report and literature review
Yang JH, Wang S, Gan YX, Feng XY, Niu BL
- 13443** Congenital nephrogenic diabetes insipidus arginine vasopressin receptor 2 gene mutation at new site: A case report
Yang LL, Xu Y, Qiu JL, Zhao QY, Li MM, Shi H
- 13451** Development of dilated cardiomyopathy with a long latent period followed by viral fulminant myocarditis: A case report
Lee SD, Lee HJ, Kim HR, Kang MG, Kim K, Park JR
- 13458** Hoffa's fracture in a five-year-old child diagnosed and treated with the assistance of arthroscopy: A case report
Chen ZH, Wang HF, Wang HY, Li F, Bai XF, Ni JL, Shi ZB

LETTER TO THE EDITOR

- 13467** Precautions before starting tofacitinib in persons with rheumatoid arthritis
Swarnakar R, Yadav SL

ABOUT COVER

Editorial Board Member of *World Journal of Clinical Cases*, Janardhan Mydam, MD, Assistant Professor, Consultant Physician-Scientist, Statistician, Division of Neonatology, Department of Pediatrics, John H. Stroger, Jr. Hospital of Cook County 1969 W. Ogden, Chicago, IL 60612, United States. mydamj@gmail.com

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 abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Journal Citation Reports/Science Edition, Current Contents®/Clinical Medicine, PubMed, PubMed Central, Scopus, Reference Citation Analysis, China National Knowledge Infrastructure, China Science and Technology Journal Database, and Superstar Journals Database. The 2022 Edition of Journal Citation Reports® cites the 2021 impact factor (IF) for *WJCC* as 1.534; IF without journal self cites: 1.491; 5-year IF: 1.599; Journal Citation Indicator: 0.28; Ranking: 135 among 172 journals in medicine, general and internal; and Quartile category: Q4. The *WJCC*'s CiteScore for 2021 is 1.2 and Scopus CiteScore rank 2021: General Medicine is 443/826.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Ying-Yi Yuan*; Production Department Director: *Xu Guo*; Editorial Office Director: *Jin-Lei Wang*.

NAME OF JOURNAL

World Journal of Clinical Cases

ISSN

ISSN 2307-8960 (online)

LAUNCH DATE

April 16, 2013

FREQUENCY

Thrice Monthly

EDITORS-IN-CHIEF

Bao-Gan Peng, Jerzy Tadeusz Chudek, George Kontogeorgos, Maurizio Serati, Ja Hyeon Ku

EDITORIAL BOARD MEMBERS

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

PUBLICATION DATE

December 26, 2022

COPYRIGHT

© 2023 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>



Precautions before starting tofacitinib in persons with rheumatoid arthritis

Raktim Swarnakar, Shiv Lal Yadav

Specialty type: Rheumatology

Provenance and peer review:

Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0

Grade B (Very good): 0

Grade C (Good): 0

Grade D (Fair): 0

Grade E (Poor): 0

P-Reviewer: Wang CR, Taiwan

Received: September 14, 2022

Peer-review started: September 14, 2022

First decision: October 13, 2022

Revised: October 30, 2022

Accepted: December 5, 2022

Article in press: December 5, 2022

Published online: December 26, 2022



Raktim Swarnakar, Shiv Lal Yadav, Department of Physical Medicine and Rehabilitation, All India Institute of Medical Sciences, New Delhi, New Delhi 11049, Delhi, India

Corresponding author: Raktim Swarnakar, MBBS, MD, Doctor, Department of Physical Medicine and Rehabilitation, All India Institute of Medical Sciences, New Delhi, All India Institute of Medical Sciences, Ansari Nagar, New Delhi, New Delhi 11049, Delhi, India. raktimswarnakar@hotmail.com

Abstract

Tofacitinib is an immunosuppressive and disease-modifying therapy in rheumatoid arthritis. It may result in many infections flaring up. It is important to take precautions of all kinds (cardiovascular, malignancy, infections etc.) before starting tofacitinib. In this article, we have highlighted important steps where we need to take precautions before starting tofacitinib.

Key Words: Tofacitinib; Rheumatoid arthritis; DMARDs; Disease-modifying; Precaution; Side-effects

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: Tofacitinib is a disease-modifying drug in rheumatoid arthritis. It has many side effects, especially in susceptible people. Before starting tofacitinib we must take precautions regarding cardiovascular status, infections and malignancy.

Citation: Swarnakar R, Yadav SL. Precautions before starting tofacitinib in persons with rheumatoid arthritis. *World J Clin Cases* 2022; 10(36): 13467-13469

URL: <https://www.wjgnet.com/2307-8960/full/v10/i36/13467.htm>

DOI: <https://dx.doi.org/10.12998/wjcc.v10.i36.13467>

TO THE EDITOR

We read with interest the article by Lin *et al*[1] where authors have reported one case report of recurrent herpes zoster (HZ) in rheumatoid arthritis (RA) patients treated with tofacitinib. We would like to highlight important aspects regarding tofacitinib,

Table 1 Precautions before tofacitinib starting in rheumatoid arthritis

Serial No.	Precautions[4,5]	Reasons
1	Persons with moderate-severe renal impairment or moderate hepatic impairment are recommended 5 mg once daily	In RA, multiple NSAIDs (non-steroidal anti-inflammatory drugs)/DMARDs themselves can cause liver or kidney injury. Furthermore, tofacitinib is hepatotoxic. It is metabolized in the liver largely through the cytochrome P450 3A4 pathway (cytochrome P 3A4)
2	Screening of infections like latent Tuberculosis, Hepatitis, cytomegalovirus, Epstein Barr Virus (EBV), BK virus	Reactivation of TB, and hepatitis can occur
3	Screening to check immunosuppressive conditions like human immunodeficiency virus (HIV) infection, Diabetes etc.	Reactivation of latent infections can occur
4	Blood investigations to be done: Routine complete hemogram, Liver function and kidney function tests, lipid profile and C-reactive protein Repeat complete blood count 1 to 2 mo following initiation, and every 12 wk after that Lipid profile should be monitored 4 to 8 wk after initiation of treatment	To rule out latent infections, liver, kidney status
5	Mantoux test, Chest X-ray and at times Interferon gamma release assay may be required.	To rule out latent TB
6	Do not start tofacitinib: If haemoglobin (Hb) levels are below 9 g/dL, absolute lymphocyte count is below 500 cells/mm ³ , and absolute neutrophil count below 1000 cells/mm ³ In presence of any infection.	It may aggravate the infection
7	In renal transplant recipients	Renal transplant subjects receiving tofacitinib alongside immunosuppressive therapy are at increased risk of EBV associated post-transplant lymphoproliferative disorder
8	Reproductive age group: Women of reproductive potential should be counselled on the risk of possible infertility from tofacitinib Pregnancy: Treatment during pregnancy may increase the potential risk to the fetus Lactation: Discontinue breastfeeding as tofacitinib may be excreted in breast milk	Due to potential side effects of tofacitinib
10	Screening for malignancy and cardiovascular diseases	FDA (The United States Food and Drug Administration) released an updated boxed warning in September 2021 regarding the increased risk of death, major adverse cardiovascular events, malignancies and thrombosis with Janus kinase inhibitors compared with tumor necrosis factor-alpha inhibitors[4,5]

especially all the precautions to be taken before starting tofacitinib in cases of rheumatoid arthritis. Tofacitinib is a potent, selective Janus-associated kinase (JAK) inhibitor that preferentially inhibits JAK1 and JAK3. Tofacitinib exerts its mechanism of action by inhibiting intracellular cytoplasmic nonreceptor tyrosine kinase JAK enzymes, which participate in adaptive and innate immune responses in the process of immune-mediated inflammatory diseases[2]. The incidence of herpes zoster is found to be higher with tofacitinib than in the general RA population[3]. Tofacitinib increases the risk of HZ by which mechanism is not well understood but may be related to inhibition of interferon (IFN) signaling. Antiviral defenses depend on type I and II IFN signaling *via* the JAK/STAT pathway and it is inhibited by tofacitinib. Tofacitinib is United States Food and Drug Administration (FDA) approved drug for RA. Oral tofacitinib 5 mg twice daily is indicated for the treatment of moderate to severe active rheumatoid arthritis in adult patients who have responded inadequately to, or who are intolerant of, one or more disease-modifying antirheumatic drugs (DMARDs). It can also be used in sequence with first-line therapy methotrexate or conventional DMARDs or can also be used as monotherapy for RA. Detailed precautions are listed in **Table 1**.

Screening for malignancy and cardiovascular diseases

FDA released an updated boxed warning in September 2021 regarding the increased risk of death, major adverse cardiovascular events, malignancies and thrombosis with JAK inhibitors compared with tumor necrosis factor inhibitors[4,5]. Hence, before starting tofacitinib in a case of rheumatoid arthritis a doctor has to keep in mind those precautionary measures to avoid untoward adverse reactions or incidents.

FOOTNOTES

Author contributions: Swarnakar R and Yadav SL contributed to conception and design; Swarnakar R and Yadav SL contributed to literature search and writing.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external 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: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: India

ORCID number: Raktim Swarnakar 0000-0002-7221-2825.

S-Editor: Xing YX

L-Editor: A

P-Editor: Xing YX

REFERENCES

- 1 **Lin QX**, Meng HJ, Pang YY, Qu Y. Recurrent herpes zoster in a rheumatoid arthritis patient treated with tofacitinib: A case report and review of the literature. *World J Clin Cases* 2022; **10**: 8703-8708 [PMID: 36157812 DOI: 10.12998/wjcc.v10.i24.8703]
- 2 **Tanaka Y**, Luo Y, O'Shea JJ, Nakayamada S. Janus kinase-targeting therapies in rheumatology: a mechanisms-based approach. *Nat Rev Rheumatol* 2022; **18**: 133-145 [PMID: 34987201 DOI: 10.1038/s41584-021-00726-8]
- 3 **Dhillon S**. Tofacitinib: A Review in Rheumatoid Arthritis. *Drugs* 2017; **77**: 1987-2001 [PMID: 29139090 DOI: 10.1007/s40265-017-0835-9]
- 4 **Smolen JS**, Landewé RBM, Bijlsma JWJ, Burmester GR, Dougados M, Kerschbaumer A, McInnes IB, Sepriano A, van Vollenhoven RF, de Wit M, Aletaha D, Aringer M, Askling J, Balsa A, Boers M, den Broeder AA, Buch MH, Buttgeit F, Caporali R, Cardiel MH, De Cock D, Codreanu C, Cutolo M, Edwards CJ, van Eijk-Hustings Y, Emery P, Finckh A, Gossec L, Gottenberg JE, Hetland ML, Huizinga TWJ, Koloumas M, Li Z, Mariette X, Müller-Ladner U, Mysler EF, da Silva JAP, Poór G, Pope JE, Rubbert-Roth A, Ruysen-Witrand A, Saag KG, Strangfeld A, Takeuchi T, Voshaar M, Westhovens R, van der Heijde D. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2019 update. *Ann Rheum Dis* 2020; **79**: 685-699 [PMID: 31969328 DOI: 10.1136/annrheumdis-2019-216655]
- 5 **Dikranian A**, Gold D, Bessette L, Nash P, Azevedo VF, Wang L, Woolcott J, Shapiro AB, Szumski A, Fleishaker D, Wollenhaupt J. Frequency and Duration of Early Non-serious Adverse Events in Patients with Rheumatoid Arthritis and Psoriatic Arthritis Treated with Tofacitinib. *Rheumatol Ther* 2022; **9**: 411-433 [PMID: 34921355 DOI: 10.1007/s40744-021-00405-w]



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>

