



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 65370

Title: Therapy-related myeloid leukemia during erlotinib treatment in an NSCLC patient

Reviewer's code: 03210360

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: South Korea

Manuscript submission date: 2021-03-05

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-09 06:32

Reviewer performed review: 2021-03-09 07:18

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

1. The author should provide a clean version of the manuscript. 2. Under the heading of Case Presentation, the following seven aspects must be presented in this order: 1) Chief complaints; 2) History of present illness; 3) History of past illness; 4) Personal and family history; 5) Physical examination; 6) Laboratory examinations; and 7) Imaging examinations. 3. Please modify according to the annotation in the manuscript carefully.



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 65370

Title: Therapy-related myeloid leukemia during erlotinib treatment in an NSCLC patient

Reviewer's code: 02445408

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor, Doctor

Reviewer's Country/Territory: Cuba

Author's Country/Territory: South Korea

Manuscript submission date: 2021-03-05

Reviewer chosen by: Ya-Juan Ma

Reviewer accepted review: 2021-03-17 14:24

Reviewer performed review: 2021-04-12 00:50

Review time: 25 Days and 10 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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SPECIFIC COMMENTS TO AUTHORS

Name of Journal: World Journal of Clinical Cases Manuscript type: CASE REPORT
Therapy-related myeloid leukemia during erlotinib treatment in an NSCLC patient: A case report
A late complication of cytotoxic chemotherapy and radiotherapy for the treatment of malignant diseases is the development of a therapy-related hematopoietic neoplasm. The World Health Organization have recently recognized the entity of Therapy-related Myeloid malignancies and included it in the Classification of Tumors of Hematopoietic and lymphoid Tissues. In the present report authors presented a case who developed an Acute Mieloid Leukemia after been treated with cytotoxic drugs for a non-small cell lung cancer and radiotherapy and afterward with erlotinib during several months. They considered that the administration of the TKI had an important rol on the development of this desease
Title. Does the title reflect the main subject/hypothesis of the manuscript? Title: Has 13 words that included several of the key words and reflect the main subject of the manuscript.
Abstract. Abstract: is unstructuresd and informative about the work of interest, having 191 words. It summarizes the works described in the manuscript.
Key words reflect the focus of the manuscript
Core tips: With 99 words represents the more important findings of the study
The main text
Contents: Introduction, case report, discussion, acknowlegments and references.
Background. In patients with solid tumors who received several lines of chemotherapy regimens it is difficult to identify the drug that has direct relation. Is the case of a patient with non-small cell lung with mutation of the EGFR who received erlotinib during eleven months. Studies of this drug have been performed and its value has extensively documented, but there are unanswered questions in relation with the association with hematologic malignancies as treatment related complications.
Methods. Authors described with details all the procedures since the diagnostic of an advanced lung Adenocarcinoma with mutation of the EGFR exon 21(L858R) previously treated with 2



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lines of chemotherapy and cranial radiotherapy after cerebral progressive disease. The introduction of Erlotinib was followed by local progression. The appearance of a hematological disease was well documented as the therapeutic actions did. Results. Due to the low frequency of a hematological disease in association with TKI therapy it is important to the medical community to know about the evolution of this case because the majority of patients treated with erlotinib tolerated the treatment and has few adverse reactions. Observations of authors suggest that erlotinib induces myeloid neoplasm. Discussion. The work was done with the support of the current literature. They highlighted the time since chemotherapy and the appearance of the hematologic disease based in the previous knowledge and the chromosomal abnormalities that are similar for those conditions, then they suggested that EGFR-TKI may be related to or shorten the interval to AML development when patients previously received cytotoxic chemotherapy. Illustrations and tables. Table 1 is very illustrative about the findings of therapy related AML after treatment with erlotinib. Figures have a good quality. Both are illustrative enough. References. Authors cite properly latest and important references in the introduction and discussion. That helps to understand better the importance of the problem. Quality of manuscript organization and presentation. Manuscript is well organized, concise and coherent. Language and grammar are appropriate. First, what are the original findings of this manuscript? What are the new hypotheses that this study proposed? What are the new phenomena that were found through experiments in this study? What are the hypotheses that were confirmed through experiments in this study? In patients with solid tumors who received several lines of chemotherapy regimens it is difficult to identify the drug that has a direct relation. In the case of a patient with non-small cell lung cancer mutation of the EGFR who received erlotinib during several months. Studies of this drug have been performed and its value has been extensively documented, but there are unanswered questions in relation



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with the association with hematologic malignancies as treatment related complications. Although erlotinib have shown efficacy in first-second and third line treatment of non-small cell lung cancer the benefit seen is usually transient because NSCLC with EGFR-activating mutations treated with first-generation EGFR-TKIs inevitably develop resistance and lately have been described Acute Myelogenous Leukemia. Authors hypothesis refers to the possibility that TKI treatment could accelerate the appearance of AML. Second, what are the quality and importance of this manuscript? What are the new findings of this study? What are the new concepts that this study proposes? What are the new methods that this study proposed? Do the conclusions appropriately summarize the data that this study provided? What are the unique insights that this study presented? What are the key problems in this field that this study has solved? A patient with mutated non-small cell lung cancer who had received several lines of chemotherapy and radiation due to brain metastases several months after treatment with erlotinib develop AML demonstrated by clinical, hematological and chromosomal analyses. Observations of authors suggest that erlotinib induced myeloid neoplasm in shorter time than traditional chemo/radiotherapy do. Conclusions summarizes the data that the study provided. The insight of the work: to be aware in front of the possible association of early appearance of treatment related Acute Myeloid Leukemia during the treatment with erlotinib; authors consider that it could be some relation with the effects of this drug with the tyrosine kinase pathway. Third, what are the limitations of the study and its findings? What are the future directions of the topic described in this manuscript? What are the questions/issues that remain to be solved? What are the questions that this study prompts for the authors to do next? How might this publication impact basic science and/or clinical practice? Limitation of the study: There are few reported case of therapy- related Myeloid Leukemia but authors are very well oriented about the importance of the problem for future actions like design clinical



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trials to determine if erlotinib is a predisposing factor for t-MN This publication is a challenge for clinical practice. Is necessary to explore a large population and molecular studies that explore the possible relationship of TKIs pathway with the referred disease

I recommend to be published