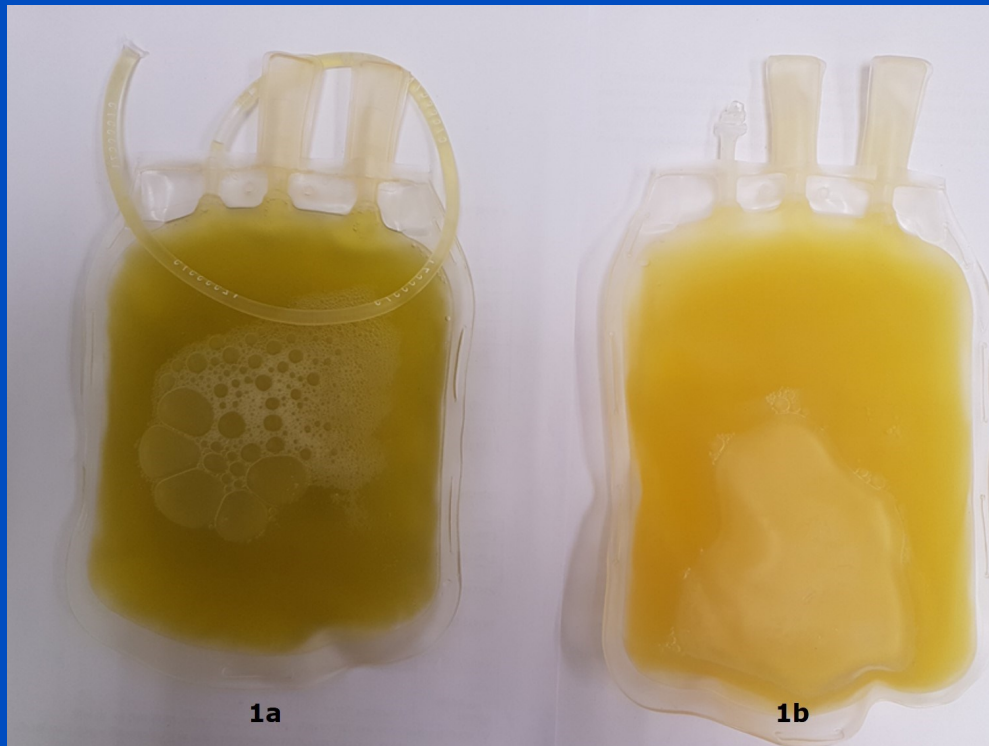


OFFICIAL PUBLICATION OF
THE MINISTRY OF HEALTH,
BRUNEI DARUSSALAM

Brunei International Medical Journal

Volume 15

14 August 2019 (13 Zulhijjah 1440H)



Brunei Int Med J. 2019;15:102-103

Brunei International Medical Journal (BIMJ)

Official Publication of the Ministry of Health, Brunei Darussalam

EDITORIAL BOARD

Editor-in-Chief	William Chee Fui CHONG
Sub-Editors	Vui Heng CHONG Ketan PANDE
Editorial Board Members	Nazar LUQMAN Muhd Syafiq ABDULLAH Alice Moi Ling YONG Ahmad Yazid ABDUL WAHAB Jackson Chee Seng TAN Dipo OLABUMUYI Pemasiri Upali TELISINGHE Roselina YAAKUB Pengiran Khairol Asmee PENGIRAN SABTU Ranjan RAMASAMY Dayangku Siti Nur Ashikin PENGIRAN TENGAH

INTERNATIONAL EDITORIAL BOARD MEMBERS

Lawrence HO Khek Yu (Singapore)	Surinderpal S BIRRING (United Kingdom)
Emily Felicia Jan Ee SHEN (Singapore)	Leslie GOH (United Kingdom)
John YAP (United Kingdom)	Chuen Neng LEE (Singapore)
Christopher HAYWARD (Australia)	Jimmy SO (Singapore)
Jose F LAPENA (Philippines)	Simon Peter FROSTICK (United Kingdom)

Advisor

Wilfred PEH (Singapore)

Past Editors

Nagamuttu RAVINDRANATHAN
Kenneth Yuh Yen KOK

Proof reader

John WOLSTENHOLME (CfBT Brunei Darussalam)

Aim and Scope of Brunei International Medical Journal

The Brunei International Medical Journal (BIMJ) is a six monthly peer reviewed official publication of the Ministry of Health under the auspices of the Clinical Research Unit, Ministry of Health, Brunei Darussalam.

The BIMJ publishes articles ranging from original research papers, review articles, medical practice papers, special reports, audits, case reports, images of interest, education and technical/innovation papers, editorials, commentaries and letters to the Editor. Topics of interest include all subjects that relate to clinical practice and research in all branches of medicine, basic and clinical including topics related to allied health care fields. The BIMJ welcomes manuscripts from contributors, but usually solicits reviews articles and special reports. Proposals for review papers can be sent to the Managing Editor directly. Please refer to the contact information of the Editorial Office.

Instruction to authors

Manuscript submissions

All manuscripts should be sent to the Managing Editor, BIMJ, Ministry of Health, Brunei Darussalam; e-mail: editor-in-chief@bimjonline.com. Subsequent correspondence between the BIMJ and authors will, as far as possible via should be conducted via email quoting the reference number.

Conditions

Submission of an article for consideration for publication implies the transfer of the copyright from the authors to the BIMJ upon acceptance. The final decision of acceptance rests with the Editor-in-Chief. All accepted papers become the permanent property of the BIMJ and may not be published elsewhere without written permission from the BIMJ.

Ethics

Ethical considerations will be taken into account in the assessment of papers that have experimental investigations of human or animal subjects. Authors should state clearly in the Materials and Methods section of the manuscript that institutional review board has approved the project. Those investigators without such review boards should ensure that the principles outlined in the Declaration of Helsinki have been followed.

Manuscript categories

Original articles

These include controlled trials, interventional studies, studies of screening and diagnostic tests, outcome studies, cost-effectiveness analyses, and large-scale epidemiological studies. Manuscript should include the following; introduction, materials and methods, results and conclusion. The objective should be stated clearly in the introduction. The text should not exceed 2500 words and references not more than 30.

Review articles

These are, in general, invited papers, but unsolicited reviews, if of good quality, may be considered. Reviews are systematic critical assessments of

literature and data sources pertaining to clinical topics, emphasising factors such as cause, diagnosis, prognosis, therapy, or prevention. Reviews should be made relevant to our local setting and preferably supported by local data. The text should not exceed 3000 words and references not more than 40.

Special Reports

This section usually consist of invited reports that have significant impact on healthcare practice and usually cover disease outbreaks, management guidelines or policy statement paper.

Audits

Audits of relevant topics generally follow the same format as original article and the text should not exceed 1,500 words and references not more than 20.

Case reports

Case reports should highlight interesting rare cases or provide good learning points. The text should not exceed 1000 words; the number of tables, figures, or both should not be more than two, and references should not be more than 15.

Education section

This section includes papers (i.e. how to interpret ECG or chest radiography) with particular aim of broadening knowledge or serve as revision materials. Papers will usually be invited but well written paper on relevant topics may be accepted. The text should not exceed 1500 words and should include not more than 15 figures illustration and references should not be more than 15.

Images of interest

These are papers presenting unique clinical encounters that are illustrated by photographs, radiographs, or other figures. Image of interest should include a brief description of the case and discussion with educational aspects. Alternatively, a mini quiz can be presented and answers will be posted in a different section of the publication. A maximum of

three relevant references should be included. Only images of high quality (at least 300dpi) will be acceptable.

Technical innovations

This section include papers looking at novel or new techniques that have been developed or introduced to the local setting. The text should not exceed 1000 words and should include not more than 10 figures illustration and references should not be more than 10.

Letters to the Editor

Letters discussing a recent article published in the BIMJ are welcome and should be sent to the Editorial Office by e-mail. The text should not exceed 250 words; have no more than one figure or table, and five references.

Criteria for manuscripts

Manuscripts submitted to the BIMJ should meet the following criteria: the content is original; the writing is clear; the study methods are appropriate; the data are valid; the conclusions are reasonable and supported by the data; the information is important; and the topic has general medical interest. Manuscripts will be accepted only if both their contents and style meet the standards required by the BIMJ.

Authorship information

Designate one corresponding author and provide a complete address, telephone and fax numbers, and e-mail address. The number of authors of each paper should not be more than twelve; a greater number requires justification. Authors may add a publishable footnote explaining order of authorship.

Group authorship

If authorship is attributed to a group (either solely or in addition to one or more individual authors), all members of the group must meet the full criteria and requirements for authorship described in the following paragraphs. One or more authors may take responsibility 'for' a group, in which case the other group members are not authors, but may be listed in an acknowledgement.

Authorship requirement

When the BIMJ accepts a paper for publication, authors will be asked to sign statements on (1) financial disclosure, (2) conflict of interest and (3) copyright transfer. The correspondence author may sign on behalf of co-authors.

Authorship criteria and responsibility

All authors must meet the following criteria: to have participated sufficiently in the work to take public responsibility for the content; to have made substantial contributions to the conception and de-

sign, and the analysis and interpretation of the data (where applicable); to have made substantial contributions to the writing or revision of the manuscript; and to have reviewed the final version of the submitted manuscript and approved it for publication. Authors will be asked to certify that their contribution represents valid work and that neither the manuscript nor one with substantially similar content under their authorship has been published or is being considered for publication elsewhere, except as described in an attachment. If requested, authors shall provide the data on which the manuscript is based for examination by the editors or their assignees.

Financial disclosure or conflict of interest

Any affiliation with or involvement in any organisation or entity with a direct financial interest in the subject matter or materials discussed in the manuscript should be disclosed in an attachment. Any financial or material support should be identified in the manuscript.

Copyright transfer

In consideration of the action of the BIMJ in reviewing and editing a submission, the author/s will transfer, assign, or otherwise convey all copyright ownership to the Clinical Research Unit, RIPAS Hospital, Ministry of Health in the event that such work is published by the BIMJ.

Acknowledgements

Only persons who have made substantial contributions but who do not fulfill the authorship criteria should be acknowledged.

Accepted manuscripts

Authors will be informed of acceptances and accepted manuscripts will be sent for copyediting. During copyediting, there may be some changes made to accommodate the style of journal format. Attempts will be made to ensure that the overall meaning of the texts are not altered. Authors will be informed by email of the estimated time of publication. Authors may be requested to provide raw data, especially those presented in graph such as bar charts or figures so that presentations can be constructed following the format and style of the journal. Proofs will be sent to authors to check for any mistakes made during copyediting. Authors are usually given 72 hours to return the proof. No response will be taken as no further corrections required. Corrections should be kept to a minimum. Otherwise, it may cause delay in publication.

Offprint

Contributors will not be given any offprint of their published articles. Contributors can obtain an electronic reprint from the journal website.

DISCLAIMER

All articles published, including editorials and letters, represent the opinion of the contributors and do not reflect the official view or policy of the Clinical Research Unit, the Ministry of Health or the institutions with which the contributors are affiliated to unless this is clearly stated. The appearance of advertisement does not necessarily constitute endorsement by the Clinical Research Unit or Ministry of Health, Brunei Darussalam. Furthermore, the publisher cannot accept responsibility for the correctness or accuracy of the advertisers' text and/or claim or any opinion expressed.

Siti Salmah NOORDIN, Liyana MANAP.

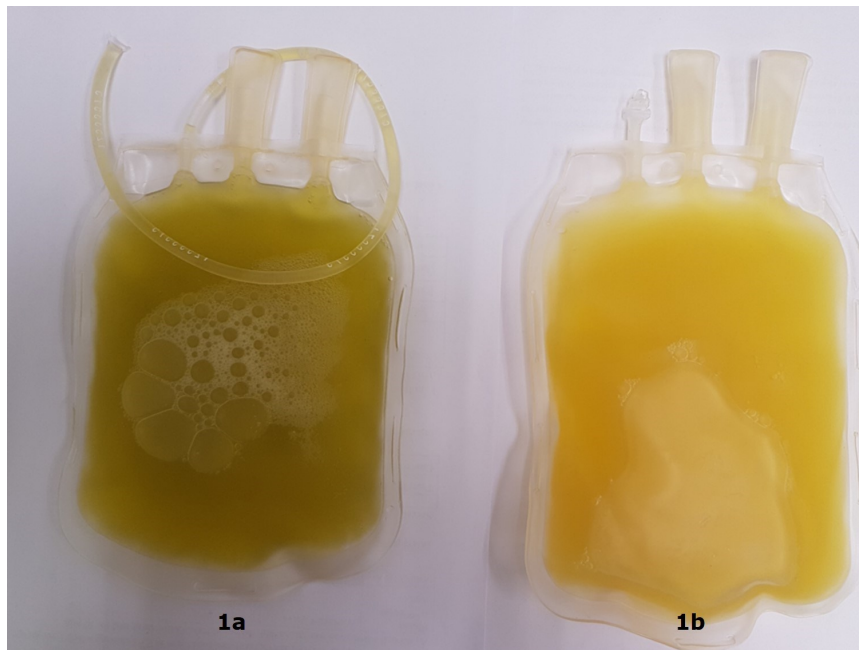


Figure 1

A 30- year old woman donated 350 mL of blood to our blood bank. She had no underlying medical illness and met all the criteria for blood donation. Her blood bag was processed into fresh frozen plasma and packed red blood cells. However, her plasma was light green (Figure 1a) as compared to other blood donor's plasma (Figure 1b). No other visual appearance abnormalities detected.

What is the diagnosis?

Answer: refer to page 103

Correspondence author: Dr. Siti Salmah Noordin, Regenerative Medicine Cluster, Advanced Medical and Dental Institute, Universiti Sains Malaysia, Bertam, 13200 Kepala Batas, Pulau Pinang, Malaysia
Tel : +604-5622121; Fax : +604-5622349
Email: ssalmah@usm.my

DISCLOSURE: There are no conflicts of interest to declare. Consent has been obtained from patient in regards to the images and details included in the report.

(Refer to page 102)

ANSWER: GREEN DISCOLOURATION OF PLASMA SECONDARY TO ETHINYL OESTRADIOL CONTRACEPTIVE PILL

The donor was contacted, and further history revealed that she had taken ethinyl oestradiol on the day of the donation. Moreover, she had been taking these pills for the past two months. The donor's blood group was B RhD positive. All transfusion microbiology screening results were negative. Her plasma was sent for culture and sensitivity analysis, and the result was reported negative.

Normally, plasma is yellow in colour due to the presence of carotenoids, haemoglobin, iron transferrin and yellow pigments of bilirubin. Nevertheless, there have been reported cases of green discolouration of plasma among female blood donors who take contraceptive pills. This is due to the elevated ceruloplasmin level in those blood donors. Ceruloplasmin is an acute phase protein that contains mostly copper. An elevated ceruloplasmin level with an increased in copper level is also found in rheumatoid arthritis patients and in women with a high oestrogen level, such as pregnant women and those who take oral contraceptive pills.¹

Furthermore, contamination of the blood product by *Pseudomonas* may also cause green discolouration of plasma. This is due to the release of pyocyanin, which is a blue redox-active secondary metabolite following *Pseudomonas* infection.² Occasionally, incorporation of sulphur atoms into the porphyrin ring of the haem group in the haemoglobin leads to the formation of sulfhaemoglobin which subsequently causes green discoloration of plasma. Sulfhaemoglobin formation is attributed to medications that contain sulphonamides.

Although, green discolouration may hinder the use of plasma by clinicians, previous study had demonstrated that green-coloured plasma had significantly more coagulation factors II, VII, IX, X and XI; better hypercoagulable thrombelastography profile; higher lag time; and more endogenous thrombin potential as compared to normal-coloured plasma.³ Therefore, plasma tinted green due to oral contraceptive intake is considered safe and acceptable for transfusion.

For this blood donor, the ceruloplasmin level of her plasma could not be measured due to the cost constraint. However, her plasma was discarded following institution policy. It is important to have a uniform policy about the acceptability of blood products with abnormal visual appearance, and the existing regulation prohibits its usage.

REFERENCES

- 1: Derrick Tovey LA, Lathe GH. Ceruloplasmin and green plasma in women taking oral contraceptives, in pregnant women and in patients with rheumatoid arthritis. *The Lancet*. 1968;292(7568):596-600.
- 2: Lau GW, Hassett DJ, Ran H, Kong F. The role of pyocyanin in *Pseudomonas aeruginosa* infection. *Trends Mol Med*. 2004;10(12):599-606.
- 3: Cotton B, Cardenas J, Hartwell E, Wade C, Holcomb J, Matijevic N. 62.03 Green plasma has a superior hemostatic profile compared with standard color plasma. 2015 [Accessed on 5 January 2019]. Pdf available from: <https://www.asc-abstracts.org/abstracts/62-03-green-plasma-has-a-superior-hemostatic-profile-compared-with-standard-color-plasma/>