Cover page

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| Class: 15MGX046H-02 | Group: 1 |

Writer’s Diet assessment (http://writersdiet.com/test.php)(choose in below)

Abstract: lean fit&trim needs toning flabby heart attack

Introduction: lean fit&trim needs toning flabby heart attack

Discussion: lean fit&trim needs toning flabby heart attack

References:

How many papers have you read yourself for this project? (choose in below)

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| 1-5 | 6-10 | 11-15 | 15-20 | more than 20 |

Note: All sections (except References) should be formatted in font size 12, font Times New Roman, line spacing 1.5. All Figures and Tables should be attached to the end of the document, NOT inserted in between the text.

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| Please copy paste your **References (font size 10)** inside this box:  [1] Ashley, E. A., Pyae Phyo, A., & Woodrow, C. J. (2018). Malaria. *The Lancet*, *391*(10130), 1608–1621. https://doi.org/10.1016/S0140-6736(18)30324-6  [2] Bhattarai, A., Ali, A. S., Kachur, S. P., Mårtensson, A., Abbas, A. K., Khatib, R., … Björkman, A. (2007). Impact of Artemisinin-Based Combination Therapy and Insecticide-Treated Nets on Malaria Burden in Zanzibar. *PLoS Medicine*, *4*(11), e309. https://doi.org/10.1371/journal.pmed.0040309  [3] Costa-Giomi, E. (1999). The Effects of Three Years of Piano Instruction on Children’s Cognitive Development. *Journal of Research in Music Education*, *47*(3), 198–212. https://doi.org/10.2307/3345779  [4] Depinay, J.-M. O., Mbogo, C. M., Killeen, G., Knols, B., Beier, J., Carlson, J., … McKenzie, F. E. (2004). A simulation model of African Anopheles ecology and population dynamics for the analysis of malaria transmission. *Malaria Journal*, 21.  [5] Gething, P. W., Patil, A. P., Smith, D. L., Guerra, C. A., Elyazar, I. R., Johnston, G. L., … Hay, S. I. (2011). A new world malaria map: Plasmodium falciparum endemicity in 2010. *Malaria Journal*, *10*(1), 378. https://doi.org/10.1186/1475-2875-10-378  [6] Lafferty, K. D. (2009). The ecology of climate change and infectious diseases. *Ecology*, *90*(4), 888–900. https://doi.org/10.1890/08-0079.1  [7] PIYAPHANEE, W., KRUDSOOD, S., TANGPUKDEE, N., THANACHARTWET, W., SILACHAMROON, U., PHOPHAK, N., … LOOAREESUWAN, S. (n.d.). EMERGENCE AND CLEARANCE OF GAMETOCYTES IN UNCOMPLICATED PLASMODIUM FALCIPARUM MALARIA, 4.  [8] Snow, R. W., Guerra, C. A., Noor, A. M., Myint, H. Y., & Hay, S. I. (2005). The global distribution of clinical episodes of Plasmodium falciparum malaria. *Nature*, *434*(7030), 214–217. https://doi.org/10.1038/nature03342  [9] 冯丽玲;罗晓莉;周耀芳;郭兴伯;李国桥; (2016). 青蒿素复方快速清除疟疾传染源. 中国科学:生命科学, (02), 225–226.  [10] 唐克香;杨恒林; (2011). 疟疾病原学检测研究进展. 中国病原生物学杂志, (09), 694–696.  [11] 宋健平;谈博;DUONG Socheat;SUOU Seila;徐颖;欧凤珍;SRENG Sokunthea;LEAP Sophorn;李国桥; (2008). 青蒿素哌喹片治疗无并发症恶性疟的剂量探索试验. 中国新药与临床杂志, (12), 908–911.  [12] 彭传敏, & Halarou, O. (2009). 国产双氢青蒿素哌喹片治疗非洲恶性疟疾疗效观察. 中国热带医学.  [13] 徐颖, 欧凤珍, 陈沛泉, 宋建平, & 符林春. (2003). 双氢青蒿素两个复方治疗恶性疟的临床对比研究. 中国热带医学.  [14] 李广谦, 范梨盛, 王平西, 阮氏拓, & 段明水. (2000). ARTECOM 10片3天疗程治疗恶性疟与法西嘧的随机比较. In 国际传统医药大会论文摘要汇编.  [15] 王国玲;甘标;陆家海; (2014). 疟疾疫苗研究进展. 中国媒介生物学及控制杂志, (02), 189–192.  [16] 符林春李国桥 %A 郭兴伯 %A. (2017). 青蒿素抗疟研究的不断追求:快速消灭疟疾——纪念执行“523”任务50周年. 广州中医药大学学报, (03), 303-307+299.  [17] 肖丹;龙泳;王善青; (2010). 国内外疟疾疫情的研究进展. 中国热带医学, (01), 113–115.  [18] 谈博;宋健平;Thou Tharith;李国桥; (2007). 含与不含甲氧苄啶的两个双氢青蒿素复方治疗恶性疟的临床对照试验. 广州中医药大学学报, (02), 100–103.  [19] 郭宗儒. (2016). 青蒿素类抗疟药的研制. 药学学报, *51*(1), 157–164. |

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| Please copy paste your **Abstract** (font size 12) inside this box (ensure that ALL subheadings are clearly visible, i.e. Background/Scientific Question/Results/ Discussion):  **(Bacnkground）**Malaria still puzzles the global health. New safe, efficient, inexpensive drugs for the malaria are urgently needed. In particular, the resistance, course of treatment, and the cost hinders the promotion and use of drugs. **(Scientific Question)**Many low-toxic and high-efficacy medicines like Artecom have been developed, however many patients in poor areas can still not afford the cost. In order to cut the cost, we explore the possibility of shortening the course of therapy to 2 days. **(Results)**By recording and analyzing the result of patient’s hematology and blood biochemical examination and side effects, we find that the cure rate of two-day therapy is still 100%, and most of the patients experienced mild side reactions.**(Discussion)** This analysis would help more patients take efficiency and short-period therapy. |

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| Please copy paste your **Introduction** (font size 12) inside this box (ensure that ALL subheadings are clearly visible):  ***Opening***  Malaria is one of the oldest and deadliest infectious diseases in human.(Depinay et al., 2004)，Since Laveran find the plasmodium, medicine research developed rapidly. However after using different medicines contain Chinese traditional medicine like Artemisinin and modern medicine like Quinine . Malaria remains uncontrolled and is increasing in many areas. Artemisinin used to consist effective drug for malaria, but Long-term use of the same kind of drugs contributes to the drug resistance. Therefore some Artemisinin-based compound medicine such as Artecom are produced to replace the pure Artemisinin medicine. However, the cost of Artecom is a little high, so that many poor areas can not afford it. In order to reduce the cost, we explore whether we can shorten the therapy from 3 days to 2 days  ***Biology***  Malaria infection includes 2 steps, one that plasmodium grows in the liver (exoerythrocytic phase), and one that plasmodium grows in the red blood cells(erythrocytic phase). When an infected mosquito took the blood from one person to another person, the plasmodiums would also transfer to another person with mosquito’s saliva. The plasmodiums accumulated and then cause the red blood cells broken.  The signs and symptoms of malaria typically begin 8–25 days following infection; however, symptoms may occur later in those who have taken antimalarial medications as prevention. | | |
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| Please copy paste your **Introduction** (font size 12) inside this box (ensure that ALL subheadings are clearly visible):  ***History***  Malaria had been threating the world for 50,000–100,000 years，In 1880, Laveran firstly observed parasites inside the red blood, and proposed that malaria is caused by this organism, it was the first time a protist was identified as causing disease. Then a Cuban doctor treating people with yellow fever in Havana, provided strong evidence that mosquitoes were transmitting disease from human to human. Since April 1894, a Scottish physician Sir Ronald Ross and Sir Patrick Manson devoted to the research about malaria for 4 years, and finally they proved the complete life-cycle of the malaria parasite in mosquitoes by dissecting the mosquitos. Nowadays, malaria still do harm to many places in the world.  ***Global Problem***  Africa represents the worst areas for malaria, it has 364.98 millions patients which suffered P. falciparum, and Southeast Asia is the next, which has 118.94 patients. According to the WHO and UNICEF, deaths attributable to malaria in 2015 were reduced by 60% from a 2000 estimate of 985,000, largely due to the widespread use of insecticide-treated nets and artemisinin-based combination.  In China, Hainan, Yunnan are the main infected areas.(Gething et al., 2011)  ***Anti-Malaria Drugs***  In ancient China, the doctors mainly used  Yingzhaosu A, zincpolyanemine, and artemisinin to cure the malaria. Artemisinin used to be very efficient on malaria treatment. The World Health Organization (WHO) currently recommends artemisinin-based combination therapies (ACTs) for malaria control.(Bhattarai et al., 2007)  Recently, the drug resistance became a big problem. And more compound artemisinin based medicines were produced to cure the malaria.  Artemether is one of the medicine that China produced, According to (郭宗儒, 2016), its anti-malarial activities is about 2 times higher than artemisinin, but it needs a long course of treatment (5 days). There is another defect that it only lasts a short period in blood so that plasmodium is easy to survive and recrudesce. The compound artemisinin which combines long-acting and short-acting composition would increase effective time, but more medicine compositions are possible to cause more side effects, and their cost are a little high. |

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| Please copy paste your **Introduction** (font size 12) inside this box (ensure that ALL subheadings are clearly visible):  ***Aim of our study***  To investigate a low-cost therapy, which still has high-efficiency, lower toxic and side effects, we try to shorten the course from 3days to 2days.  ***Therapy***  The therapy needs a 2 days’ treatment , and there are no side effects performed locally or generally in most of patients we observed. To evaluate the toxic and side effects, we record the blood and fever condition of the patients. In the first week, the patients lived in the hospital and then they go home, we recorded the condition before and after they take the medicine for the whole 3 weeks. That includes headache, deaf, fever and other side conditions. Within 3 weeks, we continue to track and record all the information such as protozoology examination, hematology and blood biochemical examination about the patients.  ***Results***  Our experiment with the 2-day therapy shows that the cure rate is still 100% and no one recrudesce. All of patients have no intolerant side effects. That means the 2-day therapy can save cost and be recommended to the poor areas. |

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| Please copy paste your **Results** (without Figures or Tables) inside this box (ensure that ALL subheadings are clearly visible): *Curative Effects* Before the treatment, 3 cases still place in the abating fever period, and the other 47 cases place in fever period. Figure 2.1 shows the patients’ temperature distribution.  Table 2.1 shows the Tf, Tp and the condition of the recrudescence from d7 to d28, 46 cases have the detail records from d7 to d28, 3 cases have missed since d21, and the remaining 1 case is missing during the whole observation period. Tf stands for the Average fever clearance time, and Tp stands for the Average parasite clearance time.  7 cases have gametophyte before treatment, but after that, there is only one case with gametophyte. In particular, the gametophyte of 5 cases gradually disappeared after curation, and the remaining 2 cases disappeared after d21. We could find the detail comparation of before and after treatment in Table 2.2 and Table 2.3. *Side Effects* The Figure 2.2 shows that side effects are not performed locally or generally in most of patients, 3 cases have headache, 1 has anorexia, and another one has pruritus. And these symptoms last only 1~2day, and we have no ample evidence to eliminate conditions caused by malaria.  The normal value generally accepted about the ALT place in 8 ~ 40 U·L-¹, about the AST place in 8~40U·L-¹ and about the total bilirubin place in 1.7~17.1μmol·L-¹ |

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| Please copy paste your **Discussion** inside this box (ensure that ALL subheadings are clearly visible):  ***Summary***  By comparing the average fever clearance time and the average parasite clearance time of 50 cases. And after tracing and recording 46 cases of them within 28 days, no one of the 46 cases recrudesce. Our therapy shortens the course from 3 days to 2 days. Most of these 50 patients have no side effects which performed locally or generally on their bodies, 3 cases have headache, 1 has anorexia, and another one has pruritus, and it only lasts 1~2day. Therefore, considering our therapy targeting to shorten the course to 2 days is better than before which needs 3 days is reasonable.  ***Comparation***  We can know from(李广谦, 范梨盛, 王平西, 阮氏拓, & 段明水, 2000) that in three-day therapy, the patients’ average fever clearance time and average parasite clearance time are respectively 23.9 and 71.9 hour. Compare with this earlier study, here we show that in our two-day therapy, the average fever clearance time and average parasite clearance time are respectively (17.2±9.9) h and（52.0±20.2）h. And the cure rate is also 100%, That means our two-day therapy is efficiency even though it shorten the cure time.  ***Limitation***  The lack of the control group make our experiment could not eliminate the effect of other irrelevant factors such as gender, age, the severity of disease mentioned in the(彭传敏 & Halarou, 2009). In their research, in order to support that efficacy of dihydroartemisinin-piperaquine tablets are better than before, they divided the cases randomly into 2 groups. Then treated them under the same conditions like the same hospital, reasonable stable body temperature range except the types of medicine, recording and analyzing the data with math model. And the experiment does not consider complication, people who get the complication are not suitable for Artecom. |

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| Please copy paste your **Discussion** inside this box (ensure that ALL subheadings are clearly visible):  ***Result***  The results of our experiment show that the 2-day course of Compound Dihydroartemisinin for Falciparum Malaria has high efficacy when treat the non-complication falciparum malaria, most of the patients have no significant side effects and toxic reactions. So it can be recommended as clinical usage. |

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Please copy paste your **Figures and Tables** onto the pages below, including Figure Legends and Table Legends:

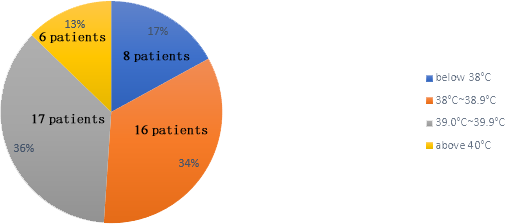


Figure 2.1 The body temperature distribution of patients before the treatment

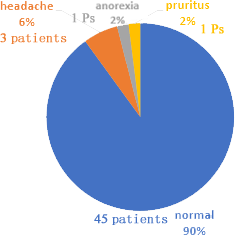


Figure 2.2 The side effects of the patients

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Table 2.1 The detail conditions of patients from d7 to d28

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| Total | cases | Tf(h) | Tp(h) | d7 | d14 | d21 | d28 |
| 50 | 46 | 17.2±9.9 | 52±20.2 | no recrudescence. | | | |
|
| 3 | no recrudescence | | | missing |
| 1 | missing | | | |

Table2.2 The situation of hematology

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|  | N/case | Nwbc/(X 10^9·L-¹) | Nrbc/（x 10^12·L-¹） |
| before treatment | 46 | 6.3±2.5 | 4.6±0.6 |
| after treatment | 46 | 6.1±2.0 | 4.6±0.5 |

Table2.3 The situation of blood biochemical

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| --- | --- | --- | --- | --- | --- | --- |
|  | N/case | Jalt/(U·L-¹) | Jast/(U·L-¹) | Ctb/(μmol·L-¹) | Cdb/(μmol·L-¹) | Ccr/(μmol·L-¹) |
| before treatment | 34 | 15.4±8.8 | 24.2±3.2 | 10.9±5.0 | 3.2±2.3 | 115.9±29.8 |
| after  treatment | 34 | 13.7±8.3 | 18.9±7.7 | 5.8±1.7 | 1.9±1.0 | 106.6±29.9 |

Table 2.4 The condition about abnormality of ALT,AST and total bilirubin

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|  | N/case | Nalt/case | Nast/case | Ntb/case |
| Before the treatment | 34 | 1(42 U/L) | 1(48 U/L) | 4 |
| After the treatment | 34 | 0(27 U/L) | 0(20 U/L) | 0 |