

Review Form 1.6

Journal Name:	Asian Journal of Medicine and Health
Manuscript Number:	Ms_AJMAH_90923
Title of the Manuscript:	HIV infection seems to abrogate the protective effect of BCG. A cross sectional descriptive study at the North West Region of Cameroon
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Key words could be: Keywords: Mycobacterium tuberculosis, BCG vaccine, HIV, North West Region of Cameroon	
Minor REVISION comments	I could not see: 1-Running title 2- Informed census 3- Funding declaration	
Optional/General comments	<p>It can be more scientific to replace some of the following references instead of the old ones:</p> <p>Balfour A, Schutz C, Goliath R, Wilkinson KA, Sayed S, Sossen B, Kanyik JP, Ward A, Ndzhukule R, Gela A, Lewinsohn DM, Lewinsohn DA, Meintjes G, Shey M Functional and Activation Profiles of Mucosal-Associated Invariant T Cells in Patients With Tuberculosis and HIV in a High Endemic Setting. Frontiers in immunology. 2021 Ponte C, Hacker M, Moraes M, Castello-Branco L, Silva F, Antas P The patterns of in vitro cell-death and inflammatory cytokines induced by distinct BCG vaccine strains are differentially induced in human mononuclear cells. Human vaccines & immunotherapeutics. 2017 Counoupas C, Pinto R, Nagalingam G, Britton WJ, Triccas JA Protective efficacy of recombinant BCG over-expressing protective, stage-specific antigens of Mycobacterium tuberculosis. Vaccine. 2018 Ng TW, Wirchnianski AS, Wec AZ, Fels JM, Johndrow CT, Saunders KO, Liao HX, Chan J, Jacobs WR, Chandran K, Porcelli SA Exploiting Pre-Existing CD4+ T Cell Help from Bacille Calmette-Guérin Vaccination to Improve Antiviral Antibody Responses. Journal of immunology (Baltimore, Md. : 1950). 2020 Rieckmann A, Villumsen M, Jensen ML, Ravn H, da Silva ZJ, Sørup S, Baker JL, Rodrigues A, Benn CS, Roth AE, Aaby P The Effect of Smallpox and Bacillus Calmette-Guérin Vaccination on the Risk of Human Immunodeficiency Virus-1 Infection in Guinea-Bissau and Denmark. Open forum infectious diseases. 2017 Suliman S, Geldenhuys H, Johnson JL, Hughes JE, Smit E, Murphy M, Toefy A, Lerumo L, Hopley C, Pienaar B, Chheng P, Nemes E, Hoft DF, Hanekom WA, Boom WH, Hatherill M, Scriba TJ Bacillus Calmette-Guérin (BCG) Revaccination of Adults with Latent Mycobacterium tuberculosis Infection Induces Long-Lived BCG-Reactive NK Cell Responses. Journal of immunology (Baltimore, Md. : 1950). 2016 Rivas MN, Ebinger JE, Wu M, Sun N, Braun J, Sobhani K, Van Eyk JE, Cheng S, Arditi M BCG vaccination history associates with decreased SARS-CoV-2 seroprevalence across a diverse cohort of health care workers. The Journal of clinical investigation. 2021 Dow CT Proposing BCG Vaccination for Mycobacterium avium ss. paratuberculosis (MAP) Associated Autoimmune Diseases. Microorganisms. 2020 Back YW, Choi S, Choi HG, Shin KW, Son YJ, Paik TH, Kim HJ Cell wall skeleton of Mycobacterium bovis BCG enhances the vaccine potential of antigen 85B against tuberculosis by inducing Th1 and Th17 responses. PloS one. 2019 Verma D, Parasa VR, Raffetseder J, Martis M, Mehta RB, Netea M, Lerm M Anti-mycobacterial activity correlates with altered DNA methylation pattern in immune cells from BCG-vaccinated subjects.</p>	

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	<p>Scientific reports. 2017 Verma D, Chan ED, Ordway DJ Non-Tuberculous Mycobacteria Interference with BCG-Current Controversies and Future Directions. Vaccines. 2020 Li YP, Cai JW, Liao LJ, Ding H, Cao XJ, Zhu GD, Guo XG Effect of BCG Vaccination against SARS-CoV-2 Infection. Japanese journal of infectious diseases. 2021</p> <p>Zimmermann P, Finn A, Curtis N Does BCG Vaccination Protect Against Nontuberculous Mycobacterial Infection? A Systematic Review and Meta-Analysis. The Journal of infectious diseases. 2018</p> <p>Kato S, Shida H, Okamura T, Zhang X, Miura T, Mukai T, Inoue M, Shu T, Naruse TK, Kimura A, Yasutomi Y, Matsuo K CD8 T Cells Show Protection against Highly Pathogenic Simian Immunodeficiency Virus (SIV) after Vaccination with SIV Gene-Expressing BCG Prime and Vaccinia Virus/Sendai Virus Vector Boosts. Journal of virology. 2021</p> <p>Silva MVT, Dos Santos JC, Figueiredo AMB, Teufel LU, Pereira JX, Matos GG, Pinto SA, Netea MG, Gomes RS, Joosten LAB, Ribeiro-Dias F The role of IL-32 in Bacillus Calmette-Guérin (BCG)-induced trained immunity in infections caused by different Leishmania spp. Microbial pathogenesis. 2021</p> <p>Kim BJ, Kim BR, Kook YH Potential of recombinant Mycobacterium paragordoniae expressing HIV-1 Gag as a prime vaccine for HIV-1 infection. Scientific reports. 2019 Singh MK, Jain M, Shyam H, Shankar P, Singh V Associated pathogenesis of bladder cancer and SARS-CoV-2 infection: a treatment strategy. Virusdisease. 2021</p> <p>Espinosa-Cueto P, Magallanes-Puebla A, Mancilla R Phosphate starvation enhances phagocytosis of Mycobacterium bovis/BCG by macrophages. BMC immunology. 2020</p> <p>Pereira M, Paixão E, Trajman A, de Souza RA, da Natividade MS, Pescarini JM, Pereira SM, Barreto FR, Ximenes R, Dalcomo M, Ichihara MY, Nunes C, Barral-Netto M, Barreto ML The need for fast-track, high-quality and low-cost studies about the role of the BCG vaccine in the fight against COVID-19. Respiratory research. 2020</p> <p>Gormley E, Ní Bhuachalla D, Fitzsimons T, O'Keeffe J, McGrath G, Madden JM, Fogarty N, Kenny K, Messam LLM, Murphy D, Corner LAL Protective immunity against tuberculosis in a free-living badger population vaccinated orally with Mycobacterium bovis Bacille Calmette-Guérin. Transboundary and emerging diseases. 2021</p> <p>Kelleni MT BCG vaccination potential for COVID-19: an analytical approach. Human vaccines & immunotherapeutics. 2021</p> <p>Tran V, Ahn SK, Ng M, Li M, Liu J Loss of Lipid Virulence Factors Reduces the Efficacy of the BCG Vaccine. Scientific reports. 2016</p> <p>Kwon KW, Lee A, Larsen SE, Baldwin SL, Coler RN, Reed SG, Cho SN, Ha SJ, Shin SJ Long-term protective efficacy with a BCG-prime ID93/GLA-SE boost regimen against the hyper-virulent</p>	
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	<p>Mycobacterium tuberculosis strain K in a mouse model. Scientific reports. 2019</p> <p>Wood MP, Wood LF, Templeton M, Fisher B, Lippy A, Jones CI, Lindestam Arlehamn CS, Sette A, Fuller JT, Murapa P, Jaspan HB, Fuller DH, Sodora DL Transient Immune Activation in BCG-Vaccinated Infant Rhesus Macaques Is Not Sufficient to Influence Oral Simian Immunodeficiency Virus Infection. The Journal of infectious diseases. 2020</p> <p>Moreno-Mendieta S, Barrera-Rosales A, Mata-Espinosa D, Barrios-Payán J, Sánchez S, Hernández-Pando R, Rodríguez-Sanoja R Raw starch microparticles as BCG adjuvant: Their efficacy depends on the virulence of the infection strains. Vaccine. 2019</p> <p>Tchakoute CT, Hesseling AC, Kidzeru EB, Gamiieldien H, Passmore JA, Jones CE, Gray CM, Sodora DL, Jaspan HB Delaying BCG vaccination until 8 weeks of age results in robust BCG-specific T-cell responses in HIV-exposed infants. The Journal of infectious diseases. 2014</p> <p>Syggelou A, Spyridis N, Benetatou K, Kourkouni E, Kourlaba G, Tsagaraki M, Maritsi D, Eleftheriou I, Tsolia M BCG Vaccine Protection against TB Infection among Children Older than 5 Years in Close Contact with an Infectious Adult TB Case. Journal of clinical medicine. 2020</p> <p>Soleimanpour S, Yaghoubi A, Sadat Seddighinia F, Rezaee SAR A century of attempts to develop an effective tuberculosis vaccine: Why they failed? International immunopharmacology. 2022</p> <p>van Hooij A, van den Eeden SJF, Khatun M, Soren S, Franken KLMC, Chandra Roy J, Alam K, Chowdhury AS, Richardus JH, Geluk A BCG-induced immunity profiles in household contacts of leprosy patients differentiate between protection and disease. Vaccine. 2021</p> <p>Yitbarek K, Abraham G, Girma T, Tilahun T, Woldie M The effect of Bacillus Calmette-Guérin (BCG) vaccination in preventing severe infectious respiratory diseases other than TB: Implications for the COVID-19 pandemic. Vaccine. 2020</p> <p>Sathkumara HD, Pai S, Aceves-Sánchez MJ, Ketheesan N, Flores-Valdez MA, Kupz A BCG Vaccination Prevents Reactivation of Latent Lymphatic Murine Tuberculosis Independently of CD4+ T Cells. Frontiers in immunology. 2019</p> <p>Patella V, Sanduzzi A, Bruzzese D, Florio G, Brancaccio R, Fabbrocini G, Delfino G A Survey Among Italian Physicians During COVID-19 Outbreak. Could Bacillus Calmette-Guérin Vaccine Be Effective Against SARS-CoV2? Frontiers in pharmacology. 2021</p> <p>Gonzalez-Perez M, Sanchez-Tarjuelo R, Shor B, Nistal-Villan E, Ochando J The BCG Vaccine for COVID-19: First Verdict and Future Directions. Frontiers in immunology. 2021</p> <p>Pi J, Zhang Z, Yang E, Chen L, Zeng L, Chen Y, Wang R, Huang D, Fan S, Lin W, Shen H, Xu JF, Zeng G, Shen L Nanocages engineered from Bacillus Calmette-Guerin facilitate protective Vγ2Vδ2 T cell immunity against Mycobacterium tuberculosis infection.</p>	
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	<p>Journal of nanobiotechnology. 2022</p> <p>Madan M, Pahuja S, Mohan A, Pandey RM, Madan K, Hadda V, Tiwari P, Guleria R, Mittal S TB infection and BCG vaccination: are we protected from COVID-19? Public health. 2020</p> <p>Antas PRZ, Ponte CGG, Almeida MR, Albuquerque LHP, Sousa-Vasconcelos PS, Pedro T, Gomes NLS, Moreira OC, Silva FC, Castello-Branco LRR, Pinho RT The in vitro Mycobacterium bovis BCG Moreau infection of human monocytes that induces Caspase-1 expression, release and dependent cell death is mostly reliant upon cell integrity. Journal of inflammation (London, England). 2019</p> <p>Fu W, Ho PC, Liu CL, Tzeng KT, Nayeem N, Moore JS, Wang LS, Chou SY Reconcile the debate over protective effects of BCG vaccine against COVID-19. Scientific reports. 2021</p> <p>Huang W, Fang Z, Luo S, Lin S, Xu L, Yan B, Yang Y, Liu X, Xia L, Fan X, Lu S The effect of BCG vaccination and risk factors for latent tuberculosis infection among college freshmen in China. Int J Infect Dis. 2022</p> <p>Aspatwar A, Gong W, Wang S, Wu X, Parkkila S Tuberculosis vaccine BCG: the magical effect of the old vaccine in the fight against the COVID-19 pandemic. International reviews of immunology. 2021</p>	
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PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Abdolhassan Kazemi
Department, University & Country	Tabriz University of Medical Sciences, Iran