Journal Name : Journal of Controlled Release **IF: 10.8**

Title: Biomimetic bright optotheranostics for metastasis monitoring and multimodal image-guided breast cancer therapeutics

Author: Rajendra Prasad, Berney Peng, Barbara ´ B. Mendes , Hailey I. Kilian, Mahadeo Gorain , Huijuan Zhang c,1 , Gopal Chandra Kundu, Jun Xia, Jonathan F. Lovell , Joao Conde

Details: Volume-367, February 2024, Pages 300-315

Abstract: Nanoparticle formulations blending optical imaging contrast agents and therapeutics have been a cornerstone of preclinical theranostic applications. However, nanoparticle-based theranostics clinical translation faces challenges on reproducibility, brightness, photostability, biocompatibility, and selective tumor targeting and penetration. In this study, we integrate multimodal imaging and therapeutics within cancer cell-derived nanovesicles, leading to biomimetic bright optotheranostics for monitoring cancer metastasis. Upon NIR light irradiation, the engineered optotheranostics enables deep visualization and precise localization of metastatic lung, liver, and solid breast tumors along with solid tumor ablation. Metastatic cell-derived nanovesicles (~80 ± 5 nm) are engineered to encapsulate imaging (emissive organic dye and gold nanoparticles) and therapeutic agents (anticancer drug doxorubicin and photothermally active organic indocyanine green dye). Systemic administration of biomimetic bright optotheranostic nanoparticles shows escape from mononuclear phagocytic clearance with (i) rapid tumor accumulation (3 h) and retention (up to 168 h), (ii) real-time monitoring of metastatic lung, liver, and solid breast tumors and (iii) 3-fold image-guided solid tumor reduction. These findings are supported by an improvement of X-ray, fluorescence, and photoacoustic signals while demonstrating a tumor reduction (201 mm3) in comparison with single therapies that includes chemotherapy (134 mm3), photodynamic therapy (72 mm3), and photothermal therapy (88mm3). The proposed innovative platform opens new avenues to improve cancer diagnosis and treatment outcomes by allowing the monitorization of cancer metastasis, allowing the precise cancer imaging, and delivering synergistic therapeutic agents at the solid tumor site.

URL: https://www.sciencedirect.com/science/article/pii/S0168365924000713?via%3Dihub

SCHOLARLY PUBLICATIONS
Kalinga Institute of Medical Sciences
KIIT Deemed to be University

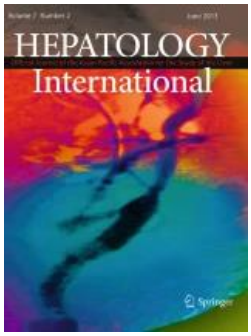
Journal Name: Hepatology International **IF:** 6.6

Title: Expert consensus on the diagnosis and treatment of end-stage liver disease complicated by infections

Author: Chen T., Chen G., Wang G., Treeprasertsuk S., Lesmana C.R.A., Lin H.-C., Al-mahtab M., Chawla Y.K., Tan S.-S., Kao J. -H., Yuen M.-F., Lee G.-H., Alcantara-Payawal D., Nakayama N., Abbas Z., Jafri W., Kim D.-J., Choudhury A., Mahiwall R., Hou J., Hamid S., Jia J., Bajaj J.S., Wang F., Sarin S.K., Ning Q.

Details: 09 March 2024.

Abstract: End-stage liver disease (ESLD) is a life-threatening clinical syndrome and when complicated with infection the mortality is markedly increased. In patients with ESLD, bacterial or fungal infection can induce or aggravate the occurrence or progression of liver decompensation. Consequently, infections are among the most common complications of disease deterioration. There is an overwhelming need for standardized protocols for early diagnosis and appropriate management for patients with ESLD complicated by infections. Asia Pacific region has the largest number of ESLD patients, due to hepatitis B and the growing population of alcohol and NAFLD. Concomitant infections not only add to organ failure and high mortality but also to financial and healthcare burdens. This consensus document assembled up-to-date knowledge and experience from colleagues across the Asia–Pacific region, providing data on the principles as well as evidence-based current working protocols and practices for the diagnosis and treatment of patients with ESLD complicated by infections.



URL:https://link.springer.com/article/10.1007/s12072-023-10637-3#:~:text=If%20the%20clinical%20symptoms%20do,such%20as%20vancomycin%20and%20teicoplanin.

Journal Name: Indian Journal Of Pediatrics **IF:** 4.3

Title: Open versus Closed Suctioning Among Mechanically Ventilated Pediatric Patients: A Randomised Control Trial

Author: Dhal, Subhranshu Sekhar; Aggarwal, Rajiv; Sagar, Hiremath; Mohakud, Nirmal Kumar; Sapare, Anilkumar; Padhee, Sourav; Sahoo, Manaswinee

Details: 13 March 2024.

Abstract: Objectives: To compare the difference in efficacy of closed tracheal suction system (CTSS) to open tracheal suction system (OTSS) in reducing incidence of ventilator associated pneumonia (VAP). Also to evaluate their efficacy in stabilizing cardio-respiratory parameters, reducing mortality and duration of intubation. Methods: This study was a single centre, parallel group, open label, randomized controlled study with an equal allocation (1:1) in pediatric patients requiring mechanical ventilation. A specific suction system of CTSS or OTSS was assigned to the two groups based on randomization. All the demographic, clinical, laboratory parameters and treatment outcomes were noted in the preformed sheet. Results: Total 116 eligible pediatric ventilated patients were studied. Total incidence of VAP was 9 (7.75%) of which 3 occurred in open and 6 in closed suction group. Rate of VAP was similar among both the groups with RR 2.11 (95% CI 0.50–8.9). However, significant number of infection-related ventilator associated condition (IVAC) were found in CTSS (17) compared to OTSS (6) group with RR 3.5 (95% CI 1.3–9.9). SpO_2 was better maintained in the CTSS group post-suction (p = 0.001). Incidence of mortality and intubation days were similar between both groups. Conclusions: Incidence of VAP was similar between open and closed suction groups.

URL: https://link.springer.com/article/10.1007/s12098-024-05069-2

SCHOLARLY PUBLICATIONS
Kalinga Institute of Medical Sciences
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Journal Name: Health Research Policy and Systems **IF: 4.0**

Title: To leave no one behind: Assessing utilization of maternal newborn and child health services by all the 13 particularly vulnerable tribal groups (PVTGs) of Odisha, India

Author: Jyoti Ghosal, Madhusmita Bal, Arundhuti Das, Bhuputra Panda, Manoranjan Ranjit, Manas Ranjan Behera, Sonali Kar, Sudhir Kumar Satpathy, Ambarish Dutta and Sanghamitra Pati

Details: Volume-22, Issue- 1, January 2024, Pages 1-11

Abstract: Background Indigenous tribal people experience lower coverage of maternal, newborn and child healthcare (MNCH) services worldwide, including in India. Meanwhile, Indian tribal people comprise a special sub-population who are even more isolated, marginalized and underserved, designated as particularly vulnerable tribal groups (PVTGs). However, there is an extreme paucity of evidence on how this most vulnerable sub-population utilizes health services. Therefore, we aimed to estimate MNCH service utilization by all the 13 PVTGs of the eastern Indian state of Odisha and compare that with state and national rates. Methods A total of 1186 eligible mothers who gave birth to a live child in last 5 years, were interviewed using a validated questionnaire. The weighted MNCH service utilization rates were estimated for antenatal care (ANC), intranatal care (INC), postnatal care (PNC) and immunization (for 12–23-month-old children). The same rates were estimated for state (n=7144) and nationally representative samples (n=176 843) from National Family Health Survey-5. Results The ANC service utilization among PVTGs were considerably higher than national average except for early pregnancy registration (PVTGs 67% versus national 79.9%), and 5 ANC components (80.8% versus 82.3%). However, their institutional delivery rates (77.9%) were lower than averages for Odisha (93.1%) and India (90.1%). The PNC and immunization rates were substantially higher than the national averages. Furthermore, the main reasons behind greater home delivery in the PVTGs were accessibility issues (29.9%) and cultural barriers (23.1%). Conclusion Ours was the frst study of MNCH service utilization by PVTGs of an Indian state. It is very pleasantly surprising to note that the most vulnerable subpopulation of India, the PVTGs, have achieved comparable or often greater utilization rates than the national average, which may be attributable to overall signifcantly better performance by the Odisha state.

URL: https://health-policy-systems.biomedcentral.com/articles/10.1186/s12961-023-01101-7

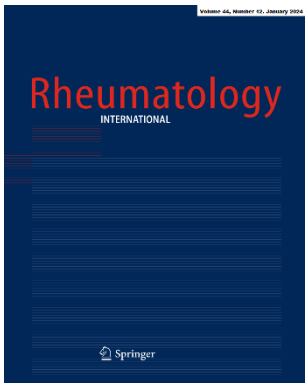
Journal Name: Rheumatology International **IF: 4.0**

Title: SARS-CoV-2 seroprevalence in patients with autoimmune rheumatic diseases versus family controls: a multi-city cross-sectional survey

Author: • Ramnath Misra, • Debdutta Bhattacharya, • Sakir Ahmed, • Sanjiv Amin, • Vineeta Shobha, • Alakendu Ghosh, • Sapan C. Pandya, • Debaprasad Parai, • Prasanta Padhan, • Subhadra Priyadarshini, • Ipsa Mohapatra, • A. Raj Kumar Patro, • Ambika Prasad Mohanty & • Sanghamitra Pati

Details: Volume-44, Article No. 1, January 2024, Pages 81-87

Abstract: There is uncertainty regarding the effect of the SARS-CoV-2 infection on patients with autoimmune rheumatic diseases (AIRD) who are on immunosuppressive drugs. We did a multicity cross-sectional seroprevalence study conducted in five different cities in India before COVID-19 immunization. Patients with a diagnosis of AIRD and DMARDs were included. Relatives of the patients, preferably staying in the same household with no known rheumatic diseases served as controls. Serum IgG antibodies to SARS-CoV-2 Receptor Binding Domain (RBD) of the spike protein and nucleoprotein (NP) were assayed in eight hundred and eighty nine sera (subjects with disease = 379 and in subjects without disease = 510). IgG antibodies to either RBD and/or NP were positive in 135 (36%) subjects with AIRD as compared to 196 (38%) controls. The seroprevalence of anti-RBD and anti-NP varied between different cities but was not significantly different between subjects with and without disease in Mumbai, Ahmedabad, Bengaluru and Bhubaneswar. However, the occurrence of IgG antibodies to RBD was significantly ($p < 0.05$) lower in subjects with disease (28/65;43%) as compared to subjects without disease (42/65;65%) in Kolkata, where the positivity rate was lower in connective tissue disease group than in inflammatory arthritis group. Overall, patients with rheumatic diseases on DMARDs have IgG antibodies to RBD and NP of SARSCoV-2 at a comparable level with that of subjects without disease, but the level of antibodies to RBD is lower in patients with connective tissue disease on immunosuppressive drugs in one centre.



URL: https://link.springer.com/article/10.1007/s00296-023-05489-x

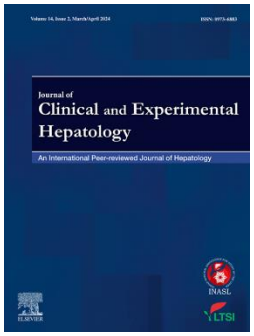
Journal Name: Journal of Clinical and Experimental Hepatology **IF:** 3

Title: Changing Etiological Spectrum of Hepatocellular Carcinoma in India-A Systematic Review and Meta-analysis

Author: Giri S., Choudhury A., Praharaj D.L., Singh A., Vaidya A., Harindranath S., Anirvan P., Kalia S., Shukla A.

Details: Volume 14 Issue 5, Sep-Oct 2024.

Abstract: Background: Recent studies from both India and outside India have shown a change in the etiological profile of hepatocellular carcinoma (HCC). We aimed to analyze the etiological spectrum and changing trends of HCC etiology in India using a systematic review of current literature and meta-analysis. Methods: Electronic databases of PubMed/Medline, Scopus, and Embase were searched from inception to July 2023 for studies reporting the data on the etiology of HCC from India. The pooled proportions with 95% confidence interval were calculated using summative statistics. Results: A total of 60 studies (n = 12,327) were included in the final analysis. The pooled proportions of HCC cases with at least one positive and negative viral marker were 56.0 (49.5–62.6) and 43.1% (36.5–49.8), respectively. The pooled proportion of HCC cases with positive hepatitis B virus (HBV) markers was 41.0 (35.8–46.1), while those with positive markers for hepatitis C virus were 20.3 (17.0–23.6). The pooled proportion of cases with HCC with significant alcohol intake was 19.0% (15.6–22.4), and those related to nonalcoholic fatty liver disease (NAFLD) were 16.9% (12.1–21.7). Around 7.9% (5.8–10.0) of the cases had HCC with multiple etiologies. Subgroup analysis showed a significant variation with the location of the study based on zone. Meta-regression analysis based on publication year (1990–2023) showed a significant reduction in the proportion of cases with HBV and an increase in cases with NAFLD. In contrast, the proportion of cases with hepatitis C virus and alcohol did not change significantly. Conclusion: Viral hepatitis is the most common etiology of HCC in India, predominantly HBV. The proportions of cases with HCC related to NAFLD are increasing, and those related to HBV are declining. © 2024 Indian National Association for Study of the Liver



URL: https://www.sciencedirect.com/science/article/pii/S0973688324000483?via%3Dihub

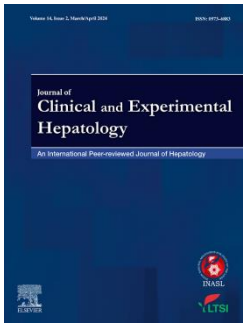
Journal Name: Journal Of Clinical And Experimental Hepatology **IF:** 3

Title: Liver Transplantation in Chronic Liver Disease and Acute on Chronic Liver Failure- Indication, Timing and Practices

Author: Choudhury, Ashok; Adali, Gupse; Kaewdech, Apichat; Giri, Suprabhat; Kumar, Rahul

Details: Volume 14 Issue-3. May-June 2024.

Abstract: Liver transplantation (LT) is the second most common solid organ transplantation worldwide. LT is considered the best and most definitive therapeutic option for patients with decompensated chronic liver disease (CLD), hepatocellular carcinoma (HCC), acute liver failure (ALF), and acute-on-chronic liver failure (ACLF). The etiology of CLD shows wide geographical variation, with viral hepatitis being the major etiology in the east and alcohol-related liver disease (ALD) in the west. Non-alcoholic fatty liver disease (NAFLD) is on an increasing trend and is expected to be the most common etiology on a global scale. Since the first successful LT, there have been radical changes in the indications for LT. In many circumstances, not just the liver disease itself but factors such as extra-hepatic organ dysfunction or failures necessitate LT. ACLF is a dynamic syndrome that has extremely high short-term mortality. Currently, there is no single approved therapy for ACLF, and LT seems to be the only feasible therapeutic option for selected patients at high risk of mortality. Early identification of ACLF, stratification of patients according to disease severity, aggressive organ support, and etiology-specific treatment approaches have a significant impact on post-transplant outcomes. This review briefly describes the indications, timing, and referral practices for LT in patients with CLD and ACLF.



URL: https://www.sciencedirect.com/science/article/pii/S0973688324000045?via%3Dihub

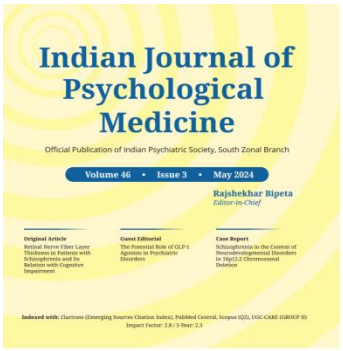
Journal Name: Indian Journal of Psychological Medicine **IF:** 2.8

Title: Case-based Insights into Managing Co-existing Rheumatoid Arthritis and Schizophrenia

Author: Singh K., Panda U.K., Pattnaik J.I., Padhan P., Ravan J.R.

Details: 2024.

Abstract: Rheumatoid arthritis (RA) is a chronic autoimmune disorder characterized by inflammatory synovitis and joint damage that can lead to functional impairment. The estimated prevalence of R A globally is around 0.5%–1%, with a higher incidence in women.[1] Schizophrenia is a chronic and disabling psychiatric illness with a lifetime prevalence of approximately 0.32% worldwide.[2] It is characterized by positive symptoms such as delusions and hallucinations, negative symptoms such as apathy and social withdrawal, and cognitive dysfunction.



While schizophrenia and RA present divergent clinical phenotypes, both conditions commonly require long-term pharmacotherapy to manage symptoms, reduce recurrence risk, and preserve functioning. Antipsychotic medications, especially atypical agents such as risperidone, olanzapine, and clozapine, are the mainstay of schizophrenia treatment. Disease-modifying anti-rheumatic drugs (DMARDs) including methotrexate, leflunomide, hydroxychloroquine, and biologic agents such as etanercept and infliximab have become the standard of care for managing RA.

Some epidemiological studies have suggested an inverse relationship between schizophrenia and RA, meaning schizophrenia patients may have a lower risk of developing RA compared to the general population.[3,4] However, given the prevalence of both disorders, it is not uncommon in clinical practice to encounter patients suffering from both schizophrenia and RA as co-morbid conditions. Managing both illnesses concurrently can be clinically challenging given the potential for complex medication interactions when antipsychotics and DMARDs are prescribed together.

URL: https://journals.sagepub.com/doi/10.1177/02537176241226928