Risk Stratification And Outcome of Patients Presenting With Cellulitis

¹Shukla Ashish, ²Mahakalkar Chandreshekhar, ³Yeola Meenakshi, ⁴Dr Shivani KSHIRSAGAR

Abstract--- Background: one of acute skin infection include cellulitis which usually occurs in immunocompromised population having visually indistinct borders majorly involves the dermis and subcutaneous tissue. its sign and symptoms includes erythema, edema, warmth, and tenderness, and usually occurs old age, diabetes mellitus, obesity etc Objectives: 1.To evaluate the risk factors associated with morbidity and mortality in patients with cellulitis 2. To analyze the outcome parameters in patients presented with cellulitis. 3. To compare outcome of patients with various treatment modalities. Methodology: This study will be conducted at AVBRH, Sawangi, Wardha, which is a tertiary care teaching hospital. The duration of the study will be 2 years from July 2019 to August 2021. The study will have the approval of the ethical committee of DMIMS, Sawangi, Wardha. In this study, patients of cellulitis admitted to casualty of AVBR Hospital will be studied prospectively my study design is prospective observational study. Study will be done in AVBR hospital sawangi in 2 years of duration (September 2019 to august 2021) Inclusion criteria: Patients of any age with cellulitis (that is infections that involve the skin and/or infection of subcutaneous tissue.) Exclusion Criteria - Patient presenting with myositis, Local complications, Diabetic foot infections. Average patient admition in our hospital in this duration will be 200000 if we take 95% as confidence level and 5% as margin of error population proportion 16% then my sample size comes as 207. So sample size is 210. Expected Results: During the study period cellulitis cases admit in AVBRH HOSPITAL it is expected that the male population with diagnosed or those ongoing treatment for diabetes mellitus will have a greater risk of developing cellulitis as compared to the female population with similar systemic disease. Conclusion: assessing the risk factors and eliminating the normal population will help in a targeted approach towards the screening, diagnosis and early treatment of cellulitis and will also help to prevent limb damage and tissue loss.

Keywords--- CELLULITIS, DIABETIC FOOT, DIABETIC ULCER

DR ASHISH SHUKLA F5 YASHODA PG BOYS HOSTEL JLNMC SAWANGI MEGHE WARDHA , ashishshuklambbs@gmail.com

^{1,} RESIDENT OF GENERAL SURGERY, JAWAHARLAL NEHRU MEDICAL COLLEGE, DATTA MEGHE INSTITITE OF MEDICAL SCIENCES DEEMED TO BE UNIVERSITY, ashishshuklambbs@gmail.com, 9045536808

^{2,} CMS, PROFESSOR OF GENERAL SURGERY JAWAHARLAL NEHRU MEDICAL COLLEGE, DATTA MEGHE INSTITITE OF MEDICAL SCIENCES DEEMED TO BE UNIVERSITY cmm.generalisecom, 9822369277

^{3,} HEAD OF DEPARTMENT OF GENERAL SURGERY JAWAHARLAL NEHRU MEDICAL COLLEGE, DATTA MEGHE INSTITITE OF MEDICAL SCIENCES DEEMED TO BE UNIVERSITY ion, Department, College, University, dr.meenakshiyeola@gmail.com, 9421534823

^{4,} RESIDENT OF GENERAL SURGERY, JAWAHARLAL NEHRU MEDICAL COLLEGE, DATTA MEGHE INSTITITE OF MEDICAL SCIENCES DEEMED TO BE UNIVERSITY kshirsagarshivani227@gmail.com

ISSN: 1475-7192

I INTRODUCTION:

Cellulitis the most frequent infections requiring hospitalisation. The soft tissue and skin infection because of various infectious agents like bacteria, fungi which occurs when physical barrier of skin breach, impaired circulatory system /the immune system. Comorbidities associated in most of these cases are Diabetes, obesity and old age. Most of time it occurs in extremities but it may involve other part like scrotum thorax among least immune patients (1-5).

Cellulitis is described to be an acute form of infection affecting the skin which usually occurs in immunocompromised population having visually indistinct borders majorly involves the dermis and subcutaneous tissue. its sign and symptoms includes erythema, oedema, warmth, and tenderness, and usually occurs old age, diabetes mellitus, obesity etc. The estimated incidence of cellulitis among hospitalised patient in 16 % (6-10).

II BACKGROUND/RATIONALE:

We will do this study on patients admit in AVBRH presenting with Cellulitis is defined as acute infection of skin which usually occurs in immunocompromised population having visually indistinct borders majorly involves the dermis and subcutaneous tissue. Its sign and symptoms includes erythema, edema, warmth, and tenderness, and usually occurs old age, diabetes mellitus, obesity etc

III OBJECTIVES:

To evaluate the various risk factors that are found to be associated with the morbidity and mortality of the patients with cellulitis

- To analyze the outcome parameters in patients presented with cellulitis
- To compare outcome of patients with various treatment modalities

IV METHODS:

Average patient admission in our hospital in this duration will be 2 lacs if we consider a confidence level of about 95% with margin of error of about 5% population proportion 16% then my sample size comes as 207.

Study design: This study will be conducted at AVBRH, Sawangi, Wardha, which is a tertiary care teaching hospital. The duration of the study will be 2 years from July 2019 to August 2021. The study will have the approval of the ethical committee of DMIMS, Sawangi, Wardha. In this study, patients of cellulitis admitted to casualty of AVBR Hospital will be studied prospectively my study design is prospective observational study. Study will be done in AVBR Hospital Sawangi in 2 years of duration (September 2019 to august 2021).

Received: 19 Feb 2020 | Revised: 28 Mar 2020 | Accepted: 25 Apr 2020

ISSN: 1475-7192

V EXPECTED OUTCOMES/RESULTS:

During the study period cellulitis cases admit in AVBRH HOSPITAL it is expected that the male population with diagnosed or those ongoing treatment for diabetes mellitus will have a greater risk of developing cellulitis as compared to the female population with similar systemic disease.

VI DISCUSSION:

In this study we will be analysing and keeping follow-up of about 210 patients diagnosed with cellulitis that will be admitted in AVBRH hospital over a period of my 2 year study trying to identify the various parameters associated with the morbidity, the mortality, the prevalence of this disease in Vidarbha area and the various complications and reasons for prolongation of stay of patients in our hospital for the further purpose of clinical trials as planned. A number of studies in this area were reviewed in relation to the factors and geographic contexts of the problem (11-76).

REFERENCES:

- [1] Christensen KL, Holman RC, Steiner CA, Sejvar JJ, Stoll BJ, Schonberger LB. Infectious disease hospitalizations in the United States. Clin Infect Dis. 2009;49:1025-35.
- [2] Office of population censuses and surveys. Morbidity statistics from general practice Fourth National Study; 1992.Located at: hermajesty's stationery offices eries MB5(272).
- [3] Wielink G KS, Oosterhout RM, Wetzels R, Nijman FC, Draijer LW. NHG-Standaard Bacteriële huidinfecties (Eerste herziening). Huisarts Wet. 2007;50:426-44.
- [4] Goettsch WG, Bouwes Bavinck JN, Herings RM. Burden of illness of bacterial cellulitis and erysipelas of the leg in the Netherlands. J Eur Acad Dermatol Venereol. 2006;20:834-9.
- [5] Figtree M, Konecny P, Jennings Z, Goh C, Krilis SA, Miyakis S. Risk stratification and outcome of cellulitis admitted to hospital. J Infect. 2010;60:431-9.
- [6] Weng QY, Raff AB, Cohen JM, et al. Costs and Consequences Associated With Misdiagnosed Lower Extremity Cellulitis. JAMA Dermatol. 2016. Nov 2. doi: 10.1001/jamadermatol.2016.3816. [Epub ahead of print].
- [7] Krasagakis K, Valachis A, Maniatakis P, Kruger-Krasagakis S, Samonis G, Tosca AD. Analysis of epidemiology, clinical features and management of erysipelas. Int J Dermatol. 2010;49:1012-7.
- [8] Lazzarini L, Conti E, Tositti G, de Lalla F. Erysipelas and cellulitis: clinical and microbiological spectrum in an Italian tertiary care hospital. J Infect. 2005;51:383-
- [9] Sehdev, Bhumika, Kiran Kumar Ganji, Manohar Laxmanrao Bhongade, Jin Toriya, Tohru Imanishi, Masahito Shoumura, and Mohammad Khursheed Alam. "Evaluation of the Impact of the Clinical Periodontal Status on Volumetric Features of Gingival Crevicular Fluid by Using Periotron (R) 8000." *JOURNAL OF HARD TISSUE BIOLOGY* 26, no. 2 (April 2017): 187–93. https://doi.org/10.2485/jhtb.26.187.
- [10] Kamble, Ashok Tarachand, Mayuri Khobragade Kamble, and Pratik Abhishek. "A COMPARATIVE STUDY ON WOUND HEALING USING PLACENTREX, COLLAGEN, VITAMIN C AND INSULIN." *JOURNAL OF EVOLUTION OF MEDICAL AND DENTAL SCIENCES-JEMDS* 6, no. 29 (April 10, 2017): 2366–71. https://doi.org/10.14260/jemds/017/510.
- [11] Sharma, Tarun, Bhargav Bhide, and Rabinarayan Acharya. "Ethnomedicinal Claims on Wound Healing Activity of Certain Leaf Drugs A Review." *INTERNATIONAL JOURNAL OF AYURVEDIC MEDICINE* 9, no. 2 (June 2018): 42–78.

Received: 19 Feb 2020 | Revised: 28 Mar 2020 | Accepted: 25 Apr 2020

ISSN: 1475-7192

- [12] Khatib, Mahalaqua Nazli, Abhay Gaidhane, Shilpa Gaidhane, and Zahiruddin Syed Quazi. "Ghrelin as a Promising Therapeutic Option for Cancer Cachexia." *CELLULAR PHYSIOLOGY AND BIOCHEMISTRY* 48, no. 5 (2018): 2172–88. https://doi.org/10.1159/000492559.
- [13] Acharya, Sourya, and Samarth Shukla. "Metabolic Healthy Obesity-A Paradoxical Fallacy?" JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH 12, no. 10 (October 2018): OE7–10. https://doi.org/10.7860/JCDR/2018/36809.12165.
- [14] Borle, Rajiv, Pranali Nimonkar, Pawan Hingnikar, Mahalaqua Nazli Khatib, Abhay M. Gaidhane, and Quazi Syed Zahiruddin. "Efficacy and Safety of Different Interpositional Flaps and Grafts for Closing Fibrotomy Wound in Patients of Oral Submucosal Fibrosis: A Systematic Review with Meta-Analysis." *MEDICAL SCIENCE* 23, no. 100 (December 2019): 1031–48.
- [15] Regmi, Pramod R., Edwin van Teijlingen, Preeti Mahato, Nirmal Aryal, Navnita Jadhav, Padam Simkhada, Quazi Syed Zahiruddin, and Abhay Gaidhane. "The Health of Nepali Migrants in India: A Qualitative Study of Lifestyles and Risks." *INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH* 16, no. 19 (October 2019). https://doi.org/10.3390/ijerph16193655.
- [16] Shaheed, Raza, Samarth Shukla, Sourya Acharya, Uplabdh Gopal, and Neema Acharya. "Journey from Fighters to Survivors: Quality of Life and Mental Status in Cancer Patients in a Rural Tertiary Care Hospital." *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH* 13, no. 8 (August 2019): XC1–4. https://doi.org/10.7860/JCDR/2019/41982.13065
- [17] Nair, Rudra Rajesh, Shweta Shaji Mathew, Anna Mary Jose, Suhas Jajoo, and Samarth Shukla. "Reconstruction of Scalp Avulsion in a Resource Restraint Rural Hospital." *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH* 13, no. 10 (October 2019). https://doi.org/10.7860/JCDR/2019/41767.13185.
- [18] Chandankar, Sneha Bhimrao, and Vaishali Kuchewar. "Management of Vipadika through Ayurveda." *INTERNATIONAL JOURNAL OF AYURVEDIC MEDICINE* 10, no. 1 (March 2019): 122–24.
- [19] Nagoba, B., M. Davane, R. Gandhi, B. Wadher, N. Suryawanshi, and S. Selkar. "Treatment of Skin and Soft Tissue Infections Caused by Pseudomonas Aeruginosa—A Review of Our Experiences with Citric Acid over the Past 20 Years." *Wound Medicine* 19 (2017): 5–9. https://doi.org/10.1016/j.wndm.2017.09.005.
- [20] Nitnaware, A.S., J. Vagha, and R. Meshram. "Clinical Profile of Pediatric Head Injury." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 3 (2017): 191–95. https://doi.org/10.4103/jdmimsu.jdmimsu_83_17.
- [21] Oswal, S., R. Borle, N. Bhola, A. Jadhav, S. Surana, and R. Oswal. "Surgical Staples: A Superior Alternative to Sutures for Skin Closure After Neck Dissection—A Single-Blinded Prospective Randomized Clinical Study." *Journal of Oral and Maxillofacial Surgery* 75, no. 12 (2017): 2707.e1-2707.e6. https://doi.org/10.1016/j.joms.2017.08.004.
- [22] Pakhare, V., C. Khandait, S. Shrivastav, P. Dhadse, V. Baliga, and V. Seegavadi. "Piezosurgery®-Assisted Periodontally Accelerated Osteogenic Orthodontics." *Journal of Indian Society of Periodontology* 21, no. 5 (2017): 422–26. https://doi.org/10.4103/jisp.jisp_255_17.
- [23] Pakhare, V.V., P. Bajaj, M.L. Bhongade, and B.S. Shilpa. "Gingival Depigmentation by Free Gingival Autograft: A Case Series." *Dental Update* 44, no. 2 (2017): 158–62. https://doi.org/10.12968/denu.2017.44.2.158.
- [24] Palan, A., and N.K. Agrawal. "Control of Intraoperative Shivering under Spinal Anaesthesia- A Prospective Randomized Comparative Study of Butorphanol with Tramadol." *Journal of Krishna Institute of Medical Sciences University* 6, no. 1 (2017): 57–65.
- [25] Patel, A., M.N. Khatib, K. Kurhe, S. Bhargava, and A. Bang. "Impact of Neonatal Resuscitation Trainings on Neonatal and Perinatal Mortality: A Systematic Review and Meta-Analysis." *BMJ Paediatrics Open* 1, no. 1 (2017). https://doi.org/10.1136/bmjpo-2017-000183.
- [26] Phadnis, P., M.A. Kamble, S. Daigavane, P. Tidke, and S. Gautam. "Prevalence and Risk Factors Hemoglobin A1c, Serum Magnesium, Lipids, and Microalbuminuria for Diabetic Retinopathy: A Rural

- Hospital-Based Study." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 2 (2017): 121–32. https://doi.org/10.4103/jdmimsu.jdmimsu_59_17.
- [27] Phatak, S., T. Sadavarte, G. Mishra, S. Yadav, M.D. Ali Jiwani, and N. Patange. "Images: Emphysematous Cystitis." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 2 (2017): 159–60. https://doi.org/10.4103/jdmimsu.jdmimsu_52_17.
- [28] Prasad, S., S. Ravindran, V. Radhakrishnan, P.V. Hazarey, A. Vanka, and B. Rajan. "Initial Experiences with NAM-Assisted Primary Repair of the BCLP Deformity." *Special Care in Dentistry* 37, no. 6 (2017): 304–8. https://doi.org/10.1111/scd.12252.
- [29] Priya, N., Y.R. Lamture, and L. Luthra. "A Comparative Study of Scalpel versus Surgical Diathermy Skin Incisions in Clean and Clean-Contaminated Effective Abdominal Surgeries in AVBRH, Wardha, Maharashtra, India." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 1 (2017): 21–25. https://doi.org/10.4103/jdmimsu.jdmimsu_jtmimsu_15_17.
- [30] Puri, S., S. Fernandez, A. Puranik, D. Anand, A. Gaidhane, Z. Quazi Syed, A. Patel, S. Uddin, and A.M. Thow. "Policy Content and Stakeholder Network Analysis for Infant and Young Child Feeding in India." BMC Public Health 17 (2017). https://doi.org/10.1186/s12889-017-4339-z.
- [31] Raina, R., V. Kumar, M. Krishna, S. Raina, A. Jaiswal, A. Selvan, C. Patil, and S. Kalgotra. "A Comparison of Antibacterial Efficacy of 0.5% Sodium Fluoride Impregnated Miswak and Plain Miswak Sticks on Streprococcus Mutans - A Randomized Controlled Trial." *Journal of Clinical and Diagnostic Research* 11, no. 2 (2017): ZC01–4. https://doi.org/10.7860/JCDR/2017/21250.9165.
- [32] Raniwala, A., D.D. Wagh, A. Dixit-Shukla, N. Shrikhande, and M. Padmawar. "Study and Correlation of Clinical, Radiological, Cytological, and Histopathological Findings in the Diagnosis of Thyroid Swellings." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 2 (2017): 138–42. https://doi.org/10.4103/jdmimsu.jdmimsu_jdmimsu_61_17.
- [33] Rathi, N., R. Baid, S. Baliga, and N. Thosar. "Comparative Evaluation of Nano-Hydroxyapatite Preparation and Calcium Sucrose Phosphate on Microhardness of Deciduous Teeth after Iron Drop Exposure An in-Vitro Study." *Journal of Clinical and Experimental Dentistry* 9, no. 4 (2017): e579–83. https://doi.org/10.4317/jced.53677.
- [34] Roy, M., U.L. Gajbe, B.R. Singh, and P. Thute. "Morphometric Measurement of Fetal Femur Length for the Prediction of Gestational Age in the Ii Nd and Iii Rd Trimester of Pregnancy by Ultrasonography." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 3 (2017): 187–90. https://doi.org/10.4103/jdmimsu.jdmimsu_71_17.
- [35] Roy, M., B.R. Singh, U.L. Gajbe, and P. Thute. "Anatomical Variations of Ureter in Central India: A Cadaveric Study." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 4 (2017): 277–79. https://doi.org/10.4103/jdmimsu.jdmimsu.73 17.
- [36] Sahu, S., K.S. Kher, D.D. Wagh, M. Swarnakar, P. Pandey, and I. Agnihotri. "Endoscopic Evaluation of Patients Presenting with Dysphagia at Rural Hospital AVBRH." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 3 (2017): 196–205. https://doi.org/10.4103/jdmimsu.jdmimsu_85_17.
- [37] Saoji, V., and B. Madke. "Use of Low-Dose Oral Warfarin in Three Cases of Livedoid Vasculopathy." *Indian Journal of Dermatology* 62, no. 5 (2017): 508–11. https://doi.org/10.4103/ijd.IJD 564 16.
- [38] Sarkar, B., and A. Bhake. "Serum Prostate-Specific Antigen as a Tumor Marker for Its Correlation with Histopathological Diagnosis of Prostatomegaly." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 4 (2017): 246–52. https://doi.org/10.4103/jdmimsu.jdmimsu_29_18.
- [39] Sehdev, B., K.K. Ganji, M.L. Bhongade, J. Toriya, T. Imanishi, M. Shoumura, and M.K. Alam. "Evaluation of the Impact of the Clinical Periodontal Status on Volumetric Features of Gingival Crevicular Fluid by Using Periotron® 8000." *Journal of Hard Tissue Biology* 26, no. 2 (2017): 187–94. https://doi.org/10.2485/jhtb.26.187.

- [40] Sharma, N., S. Shrivastav, R. Kamble, and P. Sharma. "A Tailored Approach for Growth Modification: An Innovative Approach." *World Journal of Dentistry* 8, no. 4 (2017): 334–42. https://doi.org/10.5005/jpjournals-10015-1461.
- [41] Sharma, S.K., J. Chaubey, B.K. Singh, R. Sharma, A. Mittal, and A. Sharma. "Drug Resistance Patterns among Extra-Pulmonary Tuberculosis Cases in a Tertiary Care Centre in North India." *International Journal of Tuberculosis and Lung Disease* 21, no. 10 (2017): 1112–17. https://doi.org/10.5588/ijtld.16.0939.
- [42] Sharma, T., B. Ghewade, U. Jadhav, and S. Chaudhari. "Clinical Profile of Lung Cancer at Acharya Vinoba Bhave Rural Hospital." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 1 (2017): 41–44. https://doi.org/10.4103/jdmimsu.jdmimsu 21 17.
- [43] Shilpa, B.S., P.V. Dhadse, M.L. Bhongade, S. Puri, and J. Nandanwar. "Evaluation of Effectiveness of Platelet-Rich Fibrin for Ridge Preservation after Atraumatic Extraction: A Case Series." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 4 (2017): 294–300. https://doi.org/10.4103/jdmimsu.jdmimsu_20_18.
- [44] Shivakumar, K.M., V. Kadashetti, M. Chaudhary, S. Patil, M. Gawande, and A. Hande. "Prevalence of Oral Mucosal Lesions in Patients with Dermatological Diseases Attending Tertiary Care Hospital in Central India." *Journal of Krishna Institute of Medical Sciences University* 6, no. 3 (2017): 55–61.
- [45] Singh, P., and S. Basak. "Extended Spectrum β-Lactamases Producing Klebsiella Pneumoniae: A Threat to Patient Care." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 4 (2017): 234–37. https://doi.org/10.4103/jdmimsu.jdmimsu. 19—18.
- [46] Singhania, S., A. Singhania, S. Khan, V. Kumar, and P. Singhania. "Prenatal Diagnosis of Cross-Fused Renal Ectopia: Still a Dilemma." *Donald School Journal of Ultrasound in Obstetrics and Gynecology* 11, no. 3 (2017): 225–26. https://doi.org/10.5005/jp-journals-10009_1526.
- [47] Sune, R.V., A.D. Indurkar, R.R. Bhowate, S.S. Degwekar, and V.K. Lohe. "An Evaluation of Field Cancerization in Patients with Oral Cancer by 'Mirror Image' Biopsy." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 2 (2017): 148–53. https://doi.org/10.4103/jdmimsu.jdmimsu 63 17.
- [48] Suryavanshi, P.P., P.V. Dhadse, and M.L. Bhongade. "Comparative Evaluation of Effectiveness of Surgical Blade, Electrosurgery, Free Gingival Graft, and Diode Laser for the Management of Gingival Hyperpigmentation." *Journal of Datta Meghe Institute of Medical Sciences University* 12, no. 2 (2017): 133–37. https://doi.org/10.4103/jdmimsu.jdmimsu_60_17.
- [49] Anjankar, S. "Askin's Tumor in Adult: A Rare Clinical Entity." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 1 (2018): 54–57. https://doi.org/10.4103/jdmimsu.jdmimsu_36_18.
- [50] Anjankar, S.D. "Urethral Protrusion of the Distal End of Shunt." *Journal of Pediatric Neurosciences* 13, no. 3 (2018): 371–72. https://doi.org/10.4103/JPN.JPN_54_18.
- [51] Bagri-Manjrekar, K., M. Chaudhary, G. Sridharan, S. Tekade, A. Gadbail, and K. Khot. "In Vivo Autofluorescence of Oral Squamous Cell Carcinoma Correlated to Cell Proliferation Rate." *Journal of Cancer Research and Therapeutics* 14, no. 3 (2018): 553–58. https://doi.org/10.4103/0973-1482.172710.
- [52] Baliga, S. "A Vision for Pediatric and Preventive Dentistry Oral Health Policy in India." *Journal of Indian Society of Pedodontics and Preventive Dentistry* 36, no. 3 (2018): 223–24. https://doi.org/10.4103/JISPPD_JISPPD_250_18.
- [53] "Emerging Trends in Pediatric Dentistry." *Journal of Indian Society of Pedodontics and Preventive Dentistry* 36, no. 2 (2018): 107. https://doi.org/10.4103/JISPPD_JISPPD_171_18.
- [54] "Pedodontist at Play-"Say Ahh" WHO Campaign." *Journal of Indian Society of Pedodontics and Preventive Dentistry* 36, no. 1 (2018): 1. https://doi.org/10.4103/JISPPD.JISPPD 38 18.
- [55] Baliga, S., M. Chaudhary, S. Bhat, P. Bhansali, A. Agrawal, and S. Gundawar. "Estimation of Malondialdehyde Levels in Serum and Saliva of Children Affected with Sickle Cell Anemia." *Journal of*

- *Indian Society of Pedodontics and Preventive Dentistry* 36, no. 1 (2018): 43–47. https://doi.org/10.4103/JISPPD.JISPPD 87 17.
- [56] Baliga, S.M. "Indian Pediatric Dentistry Blueprint for 2020." *Journal of Indian Society of Pedodontics and Preventive Dentistry* 36, no. 4 (2018): 327–28. https://doi.org/10.4103/JISPPD_JISPPD_277_18.
- [57] Balwani, M., C. Bawankule, V. Ramteke, and A. Pasari. "Hepatitis C Virus, Directly Acting Antivirals and Guillain-Barré Syndrome." *Saudi Journal of Kidney Diseases and Transplantation : An Official Publication of the Saudi Center for Organ Transplantation, Saudi Arabia* 29, no. 5 (2018): 1237–39. https://doi.org/10.4103/1319-2442.243969.
- [58] Balwani, M.R., C. Bawankule, P. Khetan, V. Ramteke, P. Tolani, and V. Kute. "An Uncommon Cause of Rapidly Progressive Renal Failure in a Lupus Patient: Pauci-Immune Crescentic Glomerulonephritis." *Saudi Journal of Kidney Diseases and Transplantation : An Official Publication of the Saudi Center for Organ Transplantation, Saudi Arabia* 29, no. 4 (2018): 989–92. https://doi.org/10.4103/1319-2442.239632.
- [59] Balwani, M.R., A. Pasari, A. Meshram, A. Jawahirani, P. Tolani, H. Laharwani, and C. Bawankule. "An Initial Evaluation of Hypokalemia Turned out Distal Renal Tubular Acidosis Secondary to Parathyroid Adenoma." Saudi Journal of Kidney Diseases and Transplantation: An Official Publication of the Saudi Center for Organ Transplantation, Saudi Arabia 29, no. 5 (2018): 1216–19. https://doi.org/10.4103/1319-2442.243965.
- [60] Bhinder, H.H.P.S., and T.K. Kamble. "The Study of Carotid Intima-Media Thickness in Prediabetes and Its Correlation with Cardiovascular Risk Factors." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 2 (2018): 79–82. https://doi.org/10.4103/jdmimsu.jdmimsu_58_18.
- [61] Chandak, M.G., R.R. Modi, B.J.J. Rathi, R.J. Gogiya, and P. Bhutada. "In Vitro Comparative Assessment of Diffusion of Ion from Calcium Hydroxide with Three Different Phytomedicine Pastes through Dentin." *World Journal of Dentistry* 9, no. 5 (2018): 366–71. https://doi.org/10.5005/jp-journals-10015-1564.
- [62] Chiwhane, A., and Pradeep. "Study of Rhythm Disturbances in Acute Myocardial Infarction." *Journal of Association of Physicians of India* 66, no. January (2018): 54–58.
- [63] Choudhari, M.S., M.I. Sonkusale, and R.A. Deshpande. "Sudden Cardiac Arrest on 5 Th Day after Coronary Artery Bypass Graft Surgery: Diagnostic Dilemma." *Annals of Cardiac Anaesthesia* 21, no. 3 (2018): 341–42. https://doi.org/10.4103/aca.ACA-214-17.
- [64] Choudhary, S., P. Tarafdar, S. Jawade, and A. Singh. "A Point to Note in Pili Torti." *International Journal of Trichology* 10, no. 2 (2018): 95–97. https://doi.org/10.4103/ijt.ijt_111_16.
- [65] Daigavane, S., and M. Prasad. "To Observe the Proportion of Amblyopia among Children Presenting in a Rural Hospital in Central India." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 3 (2018): 119–21. https://doi.org/10.4103/jdmimsu.jdmimsu_50_18.
- [66] Dande, R., A.R. Gadbail, S. Sarode, M.P.M. Gadbail, S.M. Gondivkar, M. Gawande, S.C. Sarode, G.S. Sarode, and S. Patil. "Oral Manifestations in Diabetic and Nondiabetic Chronic Renal Failure Patients Receiving Hemodialysis." *Journal of Contemporary Dental Practice* 19, no. 4 (2018): 398–403. https://doi.org/10.5005/jp-journals-10024-2273.
- [67] Dangore-Khasbage, S., and R. Bhowate. "Utility of the Morphometry of the Maxillary Sinuses for Gender Determination by Using Computed Tomography." *Dental and Medical Problems* 55, no. 4 (2018): 411–17. https://doi.org/10.17219/dmp/99622.
- [68] Deolia, S., S. Agarwal, K.G. Chhabra, G. Daphle, S. Sen, and A. Jaiswal. "Physical and Psychological Dependence of Smokeless and Smoked Tobacco." *Journal of Clinical and Diagnostic Research* 12, no. 3 (2018): ZC01–4. https://doi.org/10.7860/JCDR/2018/28583.11233.
- [69] Deshpande, P., V. Gupta, and A. Bhake. "Methylation Pattern of Retrotransposons: Biomarker for Human Cancer." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 1 (2018): 66–70. https://doi.org/10.4103/jdmimsu.jdmimsu_3_18.

- [70] Deshpande, S., S. Phatak, G. Marfani, N. Gupta, S. Daga, and S. Samad. "Sonographic Evaluation of Painful Shoulder and Its Comparison with Clinical Diagnosis." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 1 (2018): 12–15. https://doi.org/10.4103/jdmimsu.jdmimsu_52_18.
- [71] Dudhekar, A., S. Nimonkar, V. Belkhode, A. Borle, and R. Bhola. "Enhancing the Esthetics with All-Ceramic Prosthesis." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 3 (2018): 155–57. <a href="https://doi.org/10.4103/jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmimsu.jdmim
- [72] Fidvi, M., A. Jadhav, A. Kasatwar, and R. Borle. "Pleomorphic Adenoma of the Cheek: Report of a Rarity." *Journal of Datta Meghe Institute of Medical Sciences University* 13, no. 1 (2018): 63–65. https://doi.org/10.4103/jdmimsu.jdmimsu 108 17.
- [73] Gadbail, A.R., M. Chaudhary, S.C. Sarode, S. Gondivkar, S.A. Tekade, P. Zade, A. Hande, G.S. Sarode, and S. Patil. "Ki67, CD105, and α-SMA Expression Supports the Transformation Relevant Dysplastic Features in the Atrophic Epithelium of Oral Submucous Fibrosis." *PLoS ONE* 13, no. 7 (2018). https://doi.org/10.1371/journal.pone.0200171.
- [74] Gadge, A., N. Acharya, S. Shukla, and S. Phatak. "Comparative Study of Transvaginal Sonography and Hysteroscopy for the Detection of Endometrial Lesions in Women with Abnormal Uterine Bleeding in Perimenopausal Age Group." *Journal of SAFOG* 10, no. 3 (2018): 155–60. https://doi.org/10.5005/jpjournals-10006-1580.
- [75] Gaidhane, A., A. Sinha, M. Khatib, P. Simkhada, P. Behere, D. Saxena, B. Unnikrishnan, M. Khatib, M. Ahmed, and Q.S. Zahiruddin. "A Systematic Review on Effect of Electronic Media on Diet, Exercise, and Sexual Activity among Adolescents." *Indian Journal of Community Medicine* 43, no. 5 (2018): S56–65. https://doi.org/10.4103/ijcm.IJCM 143 18.
- [76] Girish, M., A. Rawekar, S. Jose, U. Chaudhari, and G. Nanoti. "Utility of Low Fidelity Manikins for Learning High Quality Chest Compressions." *Indian Journal of Pediatrics* 85, no. 3 (2018): 184–88. https://doi.org/10.1007/s12098-017-2473-3.
- [77] Ali, A., Hulipalled, V. R., Patil, S. S., & Kappaparambil, R. A. (2019). DPCCG-EJA: Detection of key pathways and cervical cancer related genes using enhanced Johnson's algorithm. International Journal of Advanced Science and Technology, 28(1), 124-138. Retrieved from www.scopus.com
- [78] Anitha, R., Ramesh, K. V., & Sudheerkumar, K. H. (2019). Synthesis, characterization of CeO2 nanoparticles via eco-friendly green combustion technique and its antimicrobial, anticancer activities. International Journal of Advanced Science and Technology, 28(7), 74-96. Retrieved from www.scopus.com
- [79] Bindu Madhavi, G., & Rakesh Reddy, J. (2019). Detection and diagnosis of breast cancer using machine learning algorithm. International Journal of Advanced Science and Technology, 28(14), 228-237. Retrieved from www.scopus.com
- [80] Kingsly, A. A. S., & Mahil, J. (2019). Effective approach of learning based classifiers for skin cancer diagnosis from dermoscopy images. International Journal of Advanced Science and Technology, 28(20), 1016-1026. Retrieved from www.scopus.com
- [81] Kumar, A., Sushil, R., & Tiwari, A. K. (2019). Feature extraction and elimination using machine learning algorithm for breast cancer biological datasets. International Journal of Advanced Science and Technology, 28(20), 425-435. Retrieved from www.scopus.com
- [82] Lakshmi Prasanna, K., & Ashwini, S. (2019). Automatic breast cancer detection and classification using deep learning techniques. Test Engineering and Management, 81(11-12), 5505-5510. Retrieved from www.scopus.com
- [83] Shin, B., Wang, B., & Lim, J. S. (2019). Feature selection and machine learning method for classification of lung cancer types. Test Engineering and Management, 81, 2307-2314. Retrieved from www.scopus.com
- [84] Ghuge, K. S., Korabu, K. S., & Somani, A. (2020). Breast cancer detection using clustering and SVM. Test Engineering and Management, 83, 2196-2205.