

## Research Highlights (January 2020–May 2020)

### GLOBAL BURDEN OF CHRONIC KIDNEY DISEASE

**Article title:** Global, regional, and national burden of chronic kidney disease, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017

**Author:** GBD Chronic Kidney Disease Collaboration\*

**Journal:** The Lancet, Volume 395, Issue 10225, P709-733, 29 February 2020. Doi: [https://doi.org/10.1016/S0140-6736\(20\)30045-3](https://doi.org/10.1016/S0140-6736(20)30045-3).

**Summary:** This systematic analysis estimated the global, regional and national burden of chronic kidney disease (CKD), as well as the burden of cardiovascular disease and gout attributable to impaired kidney function, for the Global Burden of Diseases, Injuries and Risk Factors Study 2017. The main data sources used were published literature, vital registration systems, end-stage kidney disease registries and household surveys. Estimates of CKD burden were produced using a Cause of Death Ensemble model and a Bayesian meta-regression analytical tool and included incidence, prevalence, years lived with disability, mortality, years of life lost and disability-adjusted life-years (DALYs). A comparative risk assessment approach was used to estimate the proportion of cardiovascular diseases and gout burden attributable to impaired kidney function. It was found that globally, in 2017, 1.2 million people died from CKD. The global all-age mortality rate from CKD increased 41.5% between 1990 and 2017 although there was no significant change in the age-standardised mortality rate. In 2017, 697.5 million cases of all-stage CKD were recorded, for a global prevalence of 9.1%. The global all-age prevalence of CKD increased 29.3% in 1990; CKD resulted in 35.8 million DALYs in 2017, with diabetic nephropathy accounting for almost a third of DALYs. Most of the burden of CKD was concentrated in the three lowest quintiles of socio-demographic index. In several regions, particularly Oceania, Sub-Saharan Africa and Latin America, the burden of CKD was much higher than expected for the level of development, whereas the disease burden in Western, Eastern and Central Sub-Saharan Africa, East Asia, South Asia, Central and Eastern Europe, Australasia and Western Europe was lower than expected. 1.4 million (95% UI 1.2–1.6) cardiovascular disease-related deaths and 25.3 million (22.2–28.9) cardiovascular disease DALYs were attributable to impaired kidney function.

**Comments:** Analysis found that almost a third of patients with CKD lived in two countries: China (132.3 million cases) and India (115.1 million cases). CKD deserves greater attention while making global health policy and holds prospect for extensive research to provide better public healthcare.

### KAWASAKI-LIKE DISEASE UPSURGE DURING COVID-19 PANDEMIC

**Article title:** An Outbreak of Severe Kawasaki-Like Disease at the Italian Epicentre of the SARS-CoV-2 Epidemic: An Observational Cohort Study

**Authors:** Lucio Verdoni, Angelo Mazza, Annalisa Gervasoni, Laura Martelli, Maurizio Ruggeri, Matteo Ciuffreda, Ezio Bonanomi, Lorenzo D'Antiga

**Journal:** Lancet 2020 6-12 June; 395 (10239):1741-1743. Doi: [https://dx.doi.org/10.1016%2FS0140-6736\(20\)31129-6](https://dx.doi.org/10.1016%2FS0140-6736(20)31129-6).

**Summary:** This study aimed to evaluate the incidence and features of patients with Kawasaki-like disease diagnosed during the SARS-CoV-2 epidemic. In the study, all patients diagnosed with Kawasaki-like disease at Bergamo Province Center in the past 5 years were divided according to the symptomatic presentation as before (Group 1) or after (Group 2) the beginning of the SARS-CoV-2 epidemic. Current or previous infection was sought by reverse-transcriptase quantitative polymerase chain reaction in the nasopharyngeal and oropharyngeal swabs and by serological qualitative test detecting SARS-CoV-2 IgM and IgG, respectively. It was observed that Group 1 comprised 19 patients diagnosed between 1 January 2015 and 17 February 2020. Group 2 included ten patients diagnosed between 18 February and 20 April 2020; eight of ten were positive for IgG or IgM, or both. The two groups differed in disease incidence (Group 1 vs. Group 2, 3 vs. 10 per month), mean age (3.0 vs. 7.5 years), cardiac involvement (2 of 19 vs. 6 of 10), Kawasaki disease shock syndrome (zero of 19 vs. 5 of 10), macrophage activation syndrome (zero of 19 vs. 5 of 10) and need for adjunctive steroid treatment (3 of 19 vs. 8 of 10; all  $P < 0.01$ ). It was concluded that in the past month, they found a 30-fold increased incidence of Kawasaki-like disease. Children diagnosed after the SARS-CoV-2 epidemic began showed evidence of immune response to the virus, were older, had a higher rate of cardiac involvement and had features of macrophage activation syndrome. The SARS-CoV-2 epidemic was associated with high incidence of a severe form of Kawasaki disease. A similar outbreak of Kawasaki-like disease is expected in countries involved in the SARS-CoV-2 epidemic.

**Comments:** The aetiology of Kawasaki disease is still uncertain, assumed as interaction between a genetic predisposition, immunological factors and numerous environmental factors. This study has the limitations of a relatively small case series, requiring confirmation in larger sample. However, it provides vital insight for Kawasaki-like disease associated with SARS-CoV-2 and alert physician for more cautious approach while treating children during the COVID-19 pandemic.

## CASE REPORT OF BONE MARROW OEDEMA

**Article title:** Individualized Treatment of Bone Marrow Edema of the Knee with the Aid of Classical Homeopathy: A Report of 2 Cases

**Authors:** Dionysis Tsintzas, Seema Mahesh, George Vithoulkas

**Journal:** Clin Med Insights Case Rep 2020;13:1179547620904896. Published 2020 Feb 12. Doi: 10.1177/1179547620904896.

**Summary:** Bone marrow oedema (BME) lesions around the knee are a common magnetic resonance image finding. They constitute an essential component of a varied range of inflammatory and non-inflammatory conditions affecting the knee joint. Those lesions are the significant source of pain and also connected various musculoskeletal pathologies. Authors describe two cases of BME of the knee joint treated with the aid of classical Homoeopathy. In both of the cases, *Arnica montana* was the chosen homoeopathic remedy. Further, they concluded that the results of the treatment are promising and encouraging and more research on this area is necessary.

**Comment:** These BME case reports of a 55-year-old male and a 56-year-old female show that individualised classical Homoeopathy treatment can at times come as aid for difficult to treat condition of BME of the knee, and excessive dependence on surgical treatment for pain can be reduced. However, extensive research is required to prove the efficacy of Homoeopathy in BME.

## COMPLEMENTARY AND ALTERNATIVE MEDICINE FOR TOURETTE SYNDROME

**Article title:** Use of Complementary and Alternative Medicine in Children with Tourette Syndrome

**Authors:** Patel H, Nguyen K, Lehman E, Mainali G, Duda L, Byler D, Kumar A

**Journal:** J Child Neurol 2020 Jul; 35(8):512-516. Doi: 10.1177/0883073820913670. Epub 2020 Apr 1. PMID: 32233737.

**Summary:** This study aim was to identify commonly used complementary and alternative medicine (CAM) therapies for children with Tourette syndrome at Penn State Hershey Medical Center, Pennsylvania. A questionnaire was administered to the caregivers of children (<18 years old) via telephone. The data pertaining to demographics, type of CAM use, duration of use, adverse effects and caregiver's perception of the effectiveness were collected. A total of 110 patients participated in this survey. When inquired about the different CAM methods, 69.1% of the participants reported using one or more CAM therapies, and 58% of those who used CAM informed the doctor about their use. Ninety-three per cent of those who used CAM therapy reported a decrease in tic frequency. The most commonly used CAM therapies

were stress management (44.6%), herbal medicine (18.2%), Homoeopathy (12.7%) and meditation (9.1%). It was observed that the majority of patients interviewed were using CAM therapies, and a significant portion (46%) reported benefit greater than medication. More than half of all participants discussed CAM therapies with their physicians, and 63% of the participants felt that their physicians would support their use of CAM therapies.

**Comments:** Tourette syndrome is a neuropsychiatric condition, and caregivers have concerns regarding the potential side effects of pharmacologic treatments. This study showed rise in the prevalence of various CAM for the management of Tourette syndrome; further, clinical trials are required in such CAM studies on rare diseases to explore wider dimension of integrative medicine and validation of results.

## VETERINARY HOMOEOPATHY: TREATMENT FOR CANINE ORAL PAPILOMATOSIS

**Article title:** Therapeutic Evaluation of Homoeopathic Treatment for Canine Oral Papillomatosis

**Authors:** Raj PAA, Pavulraj S, Kumar MA, Sangeetha S, Shanmugapriya R, Sabithabanu S

**Journal:** Vet World 2020 Jan; 13(1):206-213. Doi: 10.14202/vetworld.2020.206-213. PMID: 32158174.

**Summary:** The authors conducted this study to evaluate the ameliorative potential of homoeopathic drugs in combination (*Sulphur* 30C, *Thuja* 30C, *Graphite* 30C and *Psorinum* 30C) in 16 dogs affected with oral papillomatosis. Dogs affected with oral papillomatosis, which have not undergone any initial treatment and fed with a regular diet were included. Dogs (total = 16) were randomly divided into two groups, namely, homoeopathic treatment group and placebo control group. Homoeopathic combination of drugs and placebo drug were administered orally twice daily for 15 days. Clinical evaluation in both groups of dogs was performed by the same investigator throughout the period of the study (12 months). Dogs were clinically scored for oral lesions on days at regular interval for 150 days after initiation of treatment. The main outcome of homoeopathic treatment group showed early recovery with a significant reduction in oral lesions reflected by clinical score ( $P < 0.001$ ) in comparison to placebo-treated group. Oral papillomatous lesions regressed in the homoeopathic group between 7 and 15 days and observed for 12-month post-treatment period; no recurrence of oral papilloma was observed. The current study proves that the combination of Homoeopathy drugs aids in fastening the regression of canine oral papilloma and proved to be safe and cost-effective.

**Comments:** Homoeopathy is gaining the reputation of an effective alternative therapy in veterinary practice. Homoeopathic medicine are used for the treatment of several veterinary clinical condition, and research providing effective management of canine oral papillomatosis provides

encouragement for more formal trials in the field of veterinary science.

## CASE SERIES OF RECURRENT CYSTITIS

**Article title:** Individualized Homeopathic Treatment in Women with Recurrent Cystitis: A Retrospective Case Series

**Authors:** Gaertner K, von Ammon K, Frei-Erb M

**Journal:** Complement Med Res 2020;27(3):193-199. Doi: 10.1159/000504317. PMID: 31945769.

**Summary:** The authors reported four female cases with recurrent urinary tract infections (UTIs) who were treated successfully with the homeopathic strategy after several conventional approaches revealed no improvement. The follow-up period was a minimum of 3 years, and the frequency of episodes with UTI as well as of antibiotic treatment was documented. In addition, the patients were asked to assess the treatment outcome retrospectively in a validated questionnaire. It was observed that the homeopathic treatment resulted in a reduction of UTIs and the need for antibiotics from monthly to less than 3 times a year. Three of the four women had no cystitis and related intake of antibiotics for more than 1.5 years. A relapse of symptoms could be treated efficiently with a repetition of the homeopathic remedy. All subjective outcome assessments resulted positive. They concluded in this case series a possible benefit of individualised homeopathic treatment for female patients with recurrent UTIs. Larger observational studies and controlled investigations are warranted.

**Comments:** Individualised homeopathic treatment for recurrent UTI can curb excessive dependence on antimicrobial agent and reduce risk for the development of resistant bacteria. Homeopathy literature gets enriched by evidence-based case series and encourages a clinician to publish their more victories stories on numerous encountered clinical conditions.

## REVIEW ARTICLE ON COMPLEXITY OF HOMOEOPATHIC HEALING RESPONSE

**Article title:** The Complexity of the Homeopathic Healing Response Part 1 and 2: The Role of the Body as a Complex Adaptive System in *Simillimum*-Initiated Recovery from Disease

**Author:** Bell IR

**Journal:** Homeopathy 2020 May; 109(2):42-50. Doi: 10.1055/s-0039-1694998. Epub 2019 Nov 30.

**Summary:** This review article came in two parts: Part 1 discusses relevant concepts from complex adaptive systems science on living systems for the nature of homeopathic healing and Part 2 discusses the complex system nature of homeopathic medicines. The aim of this article is to relate the evidence on the nature and properties of homeopathic medicines to the complex systems model for homeopathic healing. Various studies indicate that homeopathic medicines are complex self-organising nano-scale systems that generate unique low-intensity electromagnetic signals and/or quantum coherence domains. The *Simillimum* medicine conveys a low-intensity, individually salient environmental danger signal (information that captures a low-dose version of the pre-existing disease pattern) to the sensory and cell defence response networks of the body and thereby initiates the adaptive systemic phenomenon of hormesis. Low doses of such complex nano-structures initiate the adaptive processes of hormesis to mobilise endogenous healing of a disease state. This review highlights that the capacity for self-organisation and self-similarity in complex systems is the key to future research on the nature of homeopathic medicines and systemic healing during the individualised homeopathic treatment.

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