COVID: Its Impact on Migraine and Migraine Management

COVID has exerted an enormous impact upon our society and culture, upon each of us as individuals and upon the practice of medicine. Many of the changes wrought are all too obvious (take a look at your grocery bill), while others are more subtle and may require more time to become evident. Lacking any particular insight, I will leave it to others to opine how the pandemic may permanently alter how we shop, where we work, how/what/and where movies are made and exhibited and the thousand and one other behaviors and activities that weave together to form the fabric of everyday life.

Having practiced medicine for decades prior to the clinical emergence of this cursed spike protein a mere two years ago, however, and having continued to practice throughout the pandemic, I feel I can offer a few observations as to how this chronic crisis has transformed - and will continue to transform – the community of medicine. Also offered are a few suggestions as to how certain of the less desirable of these changes may be managed in a way that will ease the pain without compromising patient service and care.

1. A supply:demand problem

The pandemic-related Great Resignation extended to involve healthcare providers, including physician providers with interest and expertise in managing headache. Physician burn-out is at an all-time high. Many physicians are choosing to retire early, to change course to other medical careers that do not involve direct patient care or to pursue new careers unrelated to medicine. Young people considering the pursuit of a medical career look at the time, cost and effort involved, observe the steady erosion of autonomy that physicians are experiencing and, not surprisingly, either opt for another vocation or, if still selecting the medical path, gravitate to the few remaining high-income specialties and subspecialties. The last is of course their choice, but for those requiring care for migraine a surplus of cosmetic dermatologists will not compensate for the absence of physician expert in the practice of headache medicine.

There has always been a shortage of physicians willing to dedicate all or a large portion of their practices to headache diagnosis and management. Along with the realities that the practice of headache medicine can be uniquely challenging and rarely lucrative, the high prevalence of migraine ensures a chronic supply:demand problem, with far too few headache providers attempting to treat a disproportionately huge patient

population. As the overall supply of physicians declines, this imbalance will only worsen.

Reducing the absurd cost of obtaining a medical degree, modifying the demands currently inherent in medical education and practice and redressing the ever-growing trend towards transforming "physician" into "employee" may help in stemming the tide that is depleting the supply of physicians overall, but it is unlikely to do much to improve the supply:demand imbalance affecting headache medicine. Put simply, there are just too many of you and too few of us.

What to do?

Advanced practice providers (APPs) can be trained to become effective headache providers. Nurse practitioners and physician assistants may receive little formal training in headache medicine during their graduate programs, but subsequent "headache mini-fellowships" involving 3 to 6 months of didactic instruction and supervised clinical experience devoted to headache typically rectifies that deficiency. Whether the APP then practices in a "hub and spoke" manner, working with other APPs supervised by a single physician specialist, or semi-independently with less direct physician supervision, extensive use of APPs in clinical practice would go far towards solving headache's supply:demand problem.

Does it work? You bet it does. Research has indicated that the introduction of well – trained physician extenders into the clinical practice of headache medicine produces a significant increase in patient access, no compromise of clinical outcome and, interestingly, a slightly higher degree of patient satisfaction when compared to the 1:1/patient: physician paradigm.

2. Telemedicine is here to stay

Whether to direct emergency treatment for acute stroke more effectively or to diagnose and manage elective patients lacking the means of access to a physical site, "virtual" medicine has been around for years. With the emergence of COVID, use of telemedicine accelerated like

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a Lamborghini. There will be some tightening of restrictions which were loosened during the worst of the pandemic, and it remains to be seen how reimbursement will compare to the traditional in-clinic visit, but many of us - providers and patients alike - have come to accept telemedicine as an acceptable option for the evaluation and management of many disorders.

Not surprisingly, high amongst those disorders is headache. If more than 95% of headache diagnosis lies in the history and less than 5% in the examination, headache, like psychiatry, lends itself especially well to telemedicine. Barring any regulatory restrictions, even those headache patients who live far from any provider with expertise in managing headache could, via telemedicine, have access to the best headache centers in the nation.

Suggestions

Incorporate into the education of future headache providers instruction in the art of performing initial and follow-up "virtual" headache evaluations.
Provide telemedicine headache patients with instruments and materials that will facilitate their virtual evaluations.

3. How COVID has contributed to the burden of headache

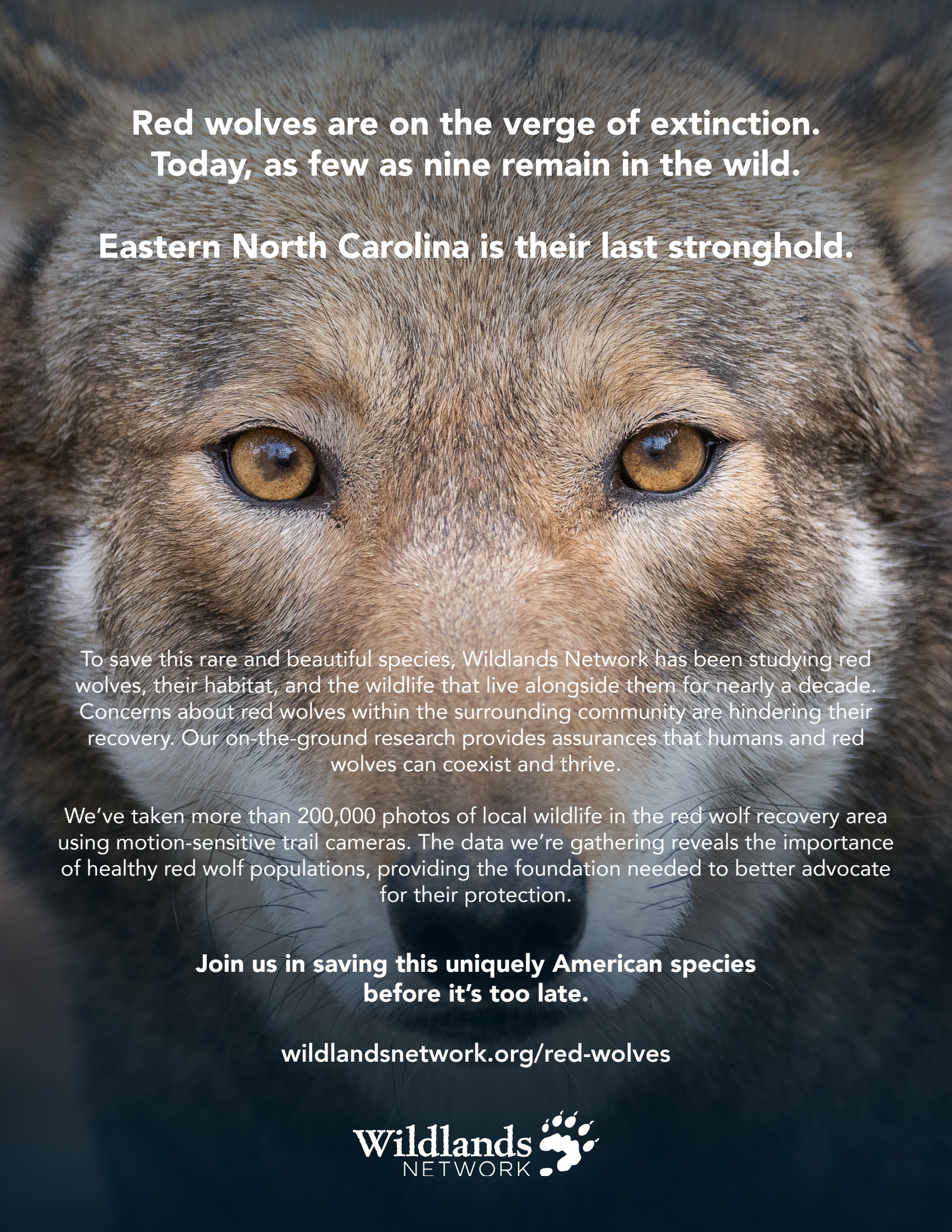
Headache frequently is included in the symptom complex produced by acute COVID infection. In some individuals with pre-existing migraine, COVID infection may produce acute migrainous headache that is atypically (for them) severe, prolonged or both. Individuals with no pre-existing headache history of migraine seem more likely to develop headache with tension- type headache (TTH) features, albeit often more severe than typical TTH.

Some proportion of patients with acute COVID infection and headache will continue to experience chronic, often constant head pain for weeks to months following resolution of the infection. Some report other symptoms associated with "long COVID" (e.g., "brain fog"). Most commonly, these persistent headaches resemble so-called new daily persistent headache.

The biologic mechanism that generates chronic headache persisting after COVID infection is unknown, and not surprisingly there exists no evidence-based therapy for this headache disorder. In the author's experience, the disorder behaves much like NDPH in its response to the various treatments prescribed: the more the chronic daily headache disorder resembles chronic migraine, the more likely respond to acute and prophylactic therapies typically used to treat migraine; the more it resembles chronic TTH, the more refractory to treatment will the headaches prove to be.

Given its increasing prevalence, persistent post COVID headache is emerging from the shadows, and research intended to better define the disorder hopefully will yield more effective therapeutic interventions.

In closing, it is no exaggeration to say the ripples of COVID are reaching out to touch even far distant shores. We in the community of medicine ultimately will be judged by the degree of creativity and flexibility we exhibit in coping with the changes produced by those ripples.



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